ADMINISTRATIVE DRAFT
ENVIRONMENTAL IMPACT REPORT

THE BROOKSIDE PROJECT

SCH NO. 2016061030

Lead Agency:

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July 29, 2016

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2.0 INTRODUCTION AND PURPOSE

2.1 PURPOSE

The City of Walnut is the Lead Agency under the *California Environmental Quality Act* (*CEQA*), and is responsible for preparing the Environmental Impact Report (EIR) for The Brookside Project (State Clearinghouse No. 2016051030). This EIR has been prepared in conformance with *CEQA* (*California Public Resources Code* [*PRC*] Section 21000 et seq.); *CEQA Guidelines* (*California Code of Regulations* [*CCR*], *Title 14*, Section 15000 et seq.); and the rules, regulations, and procedures for implementation of CEQA, as adopted by the City of Walnut. The principal *CEQA Guidelines* sections governing content of this document are Sections 15120 through 15132 (Content of an EIR), and Section 15161 (Project EIR).

CEQA requires the preparation of an objective, full disclosure document to inform agency decision-makers and the public of the direct and indirect environmental effects of the proposed action. The main purposes of an EIR are further clarified in *CEQA Guidelines* Section 15121:

- Provide decision-makers and the public with specific information regarding the environmental effects associated with the proposed project.
- Identify ways to minimize the significant effects of the proposed project.
- Describe reasonable alternatives to the proposed project.

PURPOSE OF THIS EIR

The purpose of this EIR is to review the existing conditions, analyze potential environmental impacts, and identify feasible mitigation measures and alternatives to avoid or lessen potentially significant effects of the proposed Brookside Project (proposed project), located south of Meadow Pass Road, east of North Lemon Avenue, and west of Broken Lance Road in the City of Walnut. The project site is the former Brookside Equestrian Center. The project site is developed with the former equestrian buildings and facilities, and is presently not being utilized for any specific land use. For more detailed information regarding the proposed project, refer to Section 3.0, Project Description.

Mitigation measures are provided that may be adopted as conditions of approval to avoid or minimize the significance of impacts resulting from the project. In addition, this EIR is the primary reference document in the formulation and implementation of a mitigation monitoring program for the proposed project.

The City of Walnut (which has the principal responsibility of processing and approving the project) and other public (i.e., responsible and trustee) agencies that may use this EIR in the decision-making or permit process will consider the information in this EIR, along with other information that may be presented during the CEQA process. Environmental impacts are not always able to be mitigated to a level considered less than significant; in those cases, impacts are considered significant unavoidable impacts. In accordance with *CEQA Guidelines* Section 15093(b), if a public agency approves a project that has significant impacts that are not substantially mitigated (i.e., significant unavoidable impacts), the agency shall state in writing the specific reasons for approving the project, based on the Final EIR and any other information in the public record for the project. This is termed per *CEQA Guidelines* Section 15093, a "statement of overriding considerations."

This document analyzes the environmental effects of the project to the degree of specificity appropriate to the current proposed actions, as required by *CEQA Guidelines* Section 15146. The analysis considers the activities associated with the project to determine the short-term and long-term effects associated with its implementation. This EIR discusses both the direct and indirect impacts of the proposed project, as well as the cumulative impacts associated with other past, present, and reasonably foreseeable future projects.

2.2 COMPLIANCE WITH CEQA

2.2.1 EIR SCOPING PROCESS

In compliance with *CEQA* and the *CEQA Guidelines*, the City of Walnut has provided opportunities for various agencies and the public to participate in the environmental review process. During preparation of the EIR, efforts were made to contact various Federal, State, regional, and local government agencies and other interested parties to solicit comments on the proposed project. This included the preparation of an Initial Study and Notice of Preparation (NOP).

INITIAL STUDY

In accordance with *CEQA Guidelines* Section 15063(a), the City undertook the preparation of an Initial Study. The Initial Study determined that a number of environmental issue areas may be impacted by implementation of the proposed project. As a result, the Initial Study determined that this EIR should address the proposed project's potentially significant impacts on the following environmental issue areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Seismic Hazards
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology, Drainage and Water Quality
- Land Use
- Noise
- Fire Protection
- Police Protection
- Water
- Wastewater
- Solid Waste
- Electricity
- Natural Gas

Based on the Initial Study, issues for which no significant impacts are anticipated to occur include the following environmental issues areas:

- Agriculture and Forestry Resources
- Mineral Resources
- Population and Housing
- Schools
- Parks and Recreation

The analysis supporting that conclusion is described in detail in the Initial Study (Appendix A) and summarized in Section 8.0, Effects Found Not To Be Significant, in this EIR.

NOTICE OF PREPARATION

Pursuant to *CEQA Guidelines* Section 15082, the City of Walnut circulated a Notice of Preparation (NOP) directly to public agencies (including the Office of Planning and Research's State Clearinghouse), special districts, and members of the public who had requested such notice. The NOP and Initial Study were distributed on May 10, 2016, with the 30-day public review period concluding on June 8, 2016.

The purpose of the NOP was to formally announce the preparation of a Draft EIR for the proposed project, and as the Lead Agency, the City solicited input regarding the scope and content of the environmental information to be included in the EIR. The NOP and Initial Study provided preliminary information regarding the anticipated range of impacts to be analyzed within the EIR.

The NOP is provided as Appendix A, Initial Study and Notice of Preparation, of this EIR, and NOP comments are provided as Appendix B, Notice of Preparation/Scoping Meeting Comments.

SCOPING MEETING

In order to obtain input from affected agencies and interested parties, including members of the public, one scoping meeting was held. During this meeting, individuals were given background information on the proposed project and provided input regarding specific environmental concerns.

One public scoping meeting was held at the Walnut Senior Center at 21215 La Puente Road in Walnut on Wednesday, May 18, 2016. A total of xxxxx individuals attended the meeting.

The meeting was held with the specific intent of affording interested individuals, groups, and public agencies a forum in which to provide input pertaining to the environmental effects of the proposed project in an effort to assist in further refining the intended scope and focus of the EIR, as described in the NOP.

NOP AND SCOPING RESULTS

The City of Walnut received a total of four comment letters from State, regional, and local public and private agencies:

- South Coast Air Quality Management District
- County Sanitations Districts of Los Angeles County
- State of California, Department of Transportation, District 7
- Los Angeles County Fire Department

The following environmental concerns were raised in response to the NOP or the public scoping meeting. The NOP comments are contained in Appendix B. The numerical reference in parenthesis is the Initial Study or EIR section in which the analysis is provided.

Written Responses to Notice of Preparation

South Coast Air Quality Management District (Refer to EIR Section 5.2)

- Recommends use of District's CEQA Air Quality Handbook (1993) in preparation of analysis.
- Identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project.
- Compare project impacts to the District's regional and localized significance thresholds.
- Use available resource documents cited in letter in developing mitigation measures.

Los Angeles County Fire Department (Refer to EIR Section 5.11)

- Provided updated information regarding Fire Department stations and services.
- Identified that project site is within Very High Fire Hazard Zone or Fire Zone 4 and impacts should be studied.
- No comments from Land Development Unit or the Health Hazards Materials Division at this time.

State of California, Department of Transportation, District 7 (Refer to EIR Section 5.13)

- Utilize Freeway Impact Analysis Screening Criteria Agreement, dated October 1, 2013 and amended December 15, 2015 for guidance to determine if freeway mainline and off ramps analysis is needed.

County Sanitation Districts of Los Angeles County (Refer to EIR Section 5.15)

- Provided flow factors for land use types to use in estimating project impacts.
- Provided information regarding wastewater treatment plants.
- Provided information regarding connection fees.

Verbal and Written Comments from Scoping Meeting

Traffic/Site Access (Refer to EIR Section 5.13)

- Increased traffic on Meadow Pass Road
- Traffic impacts on Pierre/Amar/Meadow Pass Road /Lemon Avenue
- Already tough to get out of neighborhood with church
- Site access and driveway conflicts on Meadow Pass Road with proposed project, St. Lorenzo Ruiz Catholic church, and Colt Lane
- Consider installation of traffic signal at project entry that would align with St. Lorenzo Ruiz Catholic church easternmost driveway
- Site access: 1) access to project from Meadow Pass Road and 2) emergency vehicle access off La Puente Road
- What is extent of the traffic study area?
- Will street lights be installed?
- Install a safe passage (crossing) across Meadow Pass Road from project site to the north (St. Lorenzo's church). Would this crossing include a stop sign, traffic signal, or flashing lights?
- Ensure that trail from the south to the north of Istik Bridge and up to Meadow Pass Road remains open.

Lemon Creek (Refer to EIR Sections 5.3 and 5.8)

- Ensure project does not cause either on- or off-site flood issues
- Sink holes and flooding have occurred in Von's shopping center parking lot in the past
- Will creek remain in natural state or be covered?
- Will natural flow be maintained?
- What if trees fall or other debris get into creek and block drainage such that flow does not continue downstream, including into Lemon Creek Park?
- Will project-generated water flow into creek impact biological resources (plants and animals) that surround or use the creek?

Biological Resources (Refer to EIR Section 5.3)

Trees

- A tree survey/study will be prepared.
- Wants no on-site tree removal
- What is the health of on-site trees? Trees are not presently being irrigated.
- Who will maintain on-site trees?

Wildlife

- Birds – are there nesting gnatcatchers?
- Biological study should account for migrating birds in spring and fall (difference species)

Noise (Refer to EIR Section 5.10)

- Increased noise from project

EIR Alternatives (Refer to EIR Section 6.0)

- Suggestions for alternatives to project that would be in addition to no project alterative:
  - Difference access to site
  - Consideration of sustainable design methods for home and site design for air quality and greenhouse gas emissions

2.2.2 PUBLIC REVIEW OF DRAFT EIR

The Draft EIR is subject to a 45-day review period by responsible and trustee agencies and interested parties. In accordance with the provisions of *CEQA Guidelines* Sections 15085(a) and 15087(a)(1), the City: 1) publishes a Notice of Availability (NOA) of a Draft EIR in a newspaper of general circulation for the project area; and 2) prepares and transmits a Notice of Completion (NOC) to the State Clearinghouse. Further, an electronic copy of the Draft EIR is available for review on the City's official website (www.ci.walnut.ca.us), and hard copies of the Draft EIR are available for review at the City of Walnut City Hall, located at 21201 La Puente Road. Proof of publication is available at the City of Walnut.

Any public agency or members of the public desiring to comment on the Draft EIR must submit their comments in writing to the individual identified on the document's NOC/NOA prior to the end of the public review period. Upon the close of the public review period, the lead agency will then proceed to evaluate and prepare responses to all written comments regarding CEQA-related issues received from both citizens and public agencies during the public review period.

2.2.3 FINAL EIR

The Final EIR will consist of the Draft EIR, revisions to the Draft EIR (if any), and responses to all written comments addressing concerns raised by responsible agencies and any other reviewing parties. After the Final EIR is completed and at least ten days prior to its certification, a copy of the response to comments made by public agencies on the Draft EIR will be provided to the commenting agencies.

2.3 FORMAT OF THE EIR

The Draft EIR is organized into 10 sections.

Section 1.0, Executive Summary, provides a brief project description and summary of the environmental impacts and mitigation measures.

Section 2.0, Introduction and Purpose, provides CEQA compliance information.

Section 3.0, Project Description, provides a detailed project description indicating project location, background and history, and project characteristics and objectives, as well as associated discretionary actions requested.

Section 4.0, Basis of Cumulative Analysis, describes the approach and methodology for the cumulative analysis.

Section 5.0, Environmental Analysis, contains a detailed environmental analysis of the existing conditions, project impacts, recommended mitigation measures, and unavoidable adverse impacts for a number of environmental topic areas.

Section 6.0, Alternatives to the Proposed Action, describes a reasonable range of alternatives to the project or the location of the project that could avoid or substantially lessen the significant impacts of the project and still feasibly attain the basic project objectives.

Section 7.0, Other CEQA Consideration, discusses the long-term implications of the proposed project. The project's growth-inducing impacts, including the potential for population growth are discussed.

Section 8.0, Effects Found Not to Be Significant, provides an explanation of potential impacts which have been determined not to be significant.

Section 9.0, Significant Environmental Effects Which Cannot be Avoided if the Proposed Action is Implemented, discusses the potential for irreversible environmental changes and energy conservation impacts.

Section 10.0, References, identifies the Lead Agency and preparers of the EIR, as well as organizations and individuals consulted.

A total of 18 Appendices contain the technical documentation for the EIR.

The Final EIR will include two additional sections:

Section 11.0, Mitigation Monitoring Program, summarizes all mitigation measures for the project, the party responsible for implementation of the mitigation, and when the mitigation must be implemented.

Section 12.0, Comments and Responses, includes responses to all written comments, and identifies errata necessary for the Final EIR.

2.4 RESPONSIBLE AND TRUSTEE AGENCIES

Certain projects or actions undertaken by a Lead Agency require subsequent oversight, approvals, or permits from other public agencies in order to be implemented. Such other agencies are referred to as Responsible Agencies and Trustee Agencies. Pursuant to *CEQA Guidelines* Sections 15381 and 15386, Responsible Agencies and Trustee Agencies are respectively defined as follows:

"Responsible Agency" means a public agency, which proposes to carry out or approve a project, for which [a] Lead Agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA, the term "responsible agency" includes all public agencies other than the Lead Agency, which have discretionary approval power over the project (Section 15381).

"Trustee Agency" means a state agency having jurisdiction by law over natural resources affected by a project, which are held in trust for the people of the State of California. Trustee Agencies include the California Department of Fish and Wildlife, State Lands Commission; State

Department of Parks and Recreation and University of California with regard to sites within the Natural Land and Water Reserves System (Section 15386).

Public agencies with jurisdiction over the project site, or from which approval of the project is required, include the following:

- Los Angeles County Department of Public Works
- Los Angeles County Fire Department
- Los Angeles County Sheriff's Department
- Los Angeles Regional Water Quality Control Board
- California Department of Fish and Wildlife
- County Sanitation Districts of Los Angeles County
- South Coast Air Quality Management District
- Walnut Valley Water District

2.5 INCORPORATION BY REFERENCE

Pertinent documents relating to this EIR have been cited in accordance with *CEQA Guidelines* Section 15150, which encourages "incorporation by reference" as a means of reducing redundancy and length of environmental reports. The following documents are available for public review at the City of Walnut Community Development Department, located at 21201 La Puente Road, Walnut, California 917789 and are hereby incorporated by reference into this EIR. Information contained within these documents has been utilized for this EIR.

- *City of Walnut General Plan* (July 1978). The Walnut General Plan is the primary source of long-range planning and policy direction that guides growth and preserves the quality of life within the community. The General Plan estimates the maximum level of development within the City that can occur. The General Plan includes the following elements: Land Use; Circulation; Housing; Environmental Resources Management – Conservation, Open Space, Recreation & Scenic Highways; Public Safety; Noise; and Sewer.

  The General Plan was utilized throughout this document as the fundamental planning document governing development at the project site. Background information and policy information from the General Plan is cited in several sections of this document.

- *Walnut 2013-2021 Housing Element* (January 2014). The Housing Element is one of the seven State-mandated elements of the City's General Plan and must be updated for the established 2014-2021 planning period. The Housing Element identifies and assesses existing and projected housing needs and provides an analysis of constraints and resources relevant to meeting these needs. The Housing Element also establishes Walnut's goals, policies, and programs for addressing its needs during the 2014-2021 periods.

- *City of Walnut General Plan EIR and Foundation Document* (July 1978). The Walnut General Plan EIR evaluated the impacts of implementing the General Plan and the consideration of broad policy alternatives. The General Plan EIR was intended to be used for subsequent environmental review, and included an analysis for the following topics: Soils; Geology-Seismicity; Archaeology; Paleontology; Topography and Drainage; Water Quality; Air Quality; Vegetation and Wildlife; Population, Schools, and Recreation; Economic

Factors; Land Use – Planning Considerations; Traffic and Transportation; Historical Resources; Visual and Aesthetic Resources; and Public Services and Utilities.

- *Initial Study and Negative Declaration, City of Walnut 2013-2021 Housing Element* (December 2013). The Initial Study analyzed the potential impacts associated with the updates to the Housing Element and concluded that impacts were at less than significant levels; thus a Negative Declaration was prepared.

- *City of Walnut City Code* (current through Ordinance 16-01 and the April 2016 code supplement). The City of Walnut City Code (City Code) consists of regulatory, penal, and administrative ordinances of the City. It is the method the City uses to implement control of land uses, in accordance with General Plan goals and policies. Title VI, Planning and Zoning includes Chapter 25, Zoning, which identifies land uses permitted and prohibited according to the zoning category of particular parcels. Title II, Building and Regulations specifies rules and regulations for construction, alteration, and buildings.

3.0 PROJECT DESCRIPTION

3.1 INTRODUCTION

The project sponsor, Alpine Pointe Development, LLC is proposing The Brookside Project on the 25.84-acre site.

3.2 PROJECT LOCATION

Regionally, the project site is located in the City of Walnut. The City of Walnut is located in the San Gabriel Valley, approximately 25 miles east of the City of Los Angeles in the County of Los Angeles. The City of Walnut is situated in the San Jose Hills and is bordered by the City of West Covina to the west and northwest, unincorporated County of Los Angeles to the north, California State Polytechnic University, Pomona and the City of Pomona to the east, and the City of Industry to the south. The project site is approximately two miles north of the Pomona Freeway (State Route 60). Refer to *Exhibit 3-1*, *Regional Vicinity*.

Locally, the project site is located north of La Puente Road, south of Meadow Pass Road, east of North Lemon Avenue, and west of Broken Lance Road within the City of Walnut, County of Los Angeles. The address associated with the project site is 800 Meadow Pass Road. Refer to *Exhibit 3-2*, *Local Vicinity*.

3.3 ENVIRONMENTAL SETTING

EXISTING LAND USES

The approximate 25.84-acre project site is comprised of three parcels, and is currently occupied by the Brookside Equestrian Center, which is no longer operating. On-site topography consists of rolling foothills and is primarily associated with the heavily incised Lemon Creek which flows south through the central portion of the subject site. The site consists of various equestrian-related structures including three covered barns, stables, fenced corrals, maintenance storage facilities, feed sheds, and a covered arena. Additional land uses include a trail riding network, improved and unimproved (gravel) roads, parking facilities, large irrigated lawns, horse paddocks, and vacant undeveloped land.

The majority of the structures are located within the northern portion of the subject site with the exception of two single-horse stables located within the central portion of the proposed site. Two roadways exist on-site. An unimproved road enters the subject site along the northern boundary from Meadow Pass Road and traverses south through the site transitioning into a riding trail. San Vicente Road, an improved road, borders the southeastern boundary of the subject site proceeding in a north to south direction and provides access to adjoining residential properties. Additionally, a network of riding trails exists on-site. The unimproved (dirt) riding trails also provide access for maintenance vehicles.

SURROUNDING LAND USES

The project site is surrounded by the following uses:

North: Meadow Pass Road is immediately adjacent to the project site. Single-family homes and institutional (St. Lorenzo Ruiz Catholic Community church) land uses are located to the north across Meadow Pass Road.

East: Single-family homes that back up to the project site and front onto Broken Lance Road.

South: La Puente Road is immediately adjacent to the project site. Single-family homes and commercial land uses are located to the south across La Puente Road.

West: The Los Angeles County Fire Department Station No. 61 backs up to the project site and fronts onto North Lemon Avenue. North Lemon Avenue is immediately adjacent to the project site. Single-family homes are located to the west across North Lemon Avenue.

3.4 EXISTING GENERAL PLAN AND ZONING DESIGNATIONS

GENERAL PLAN

The *City of Walnut General Plan* Land Use & Circulation Map designates the project site as Hillside Single-Family Residential, and is defined in the *City of Walnut General Plan* Land Use Element.

> *The intent of this land use category is to provide for single-family residential developments designed at low density levels. Maximum consideration should be given to the physical, environmental and social characteristics deemed desirable for preservation and inclusion in developments permitted in these areas. Provision should be made for the various forms of recreation and open space land uses so that these areas are complementary or integral parts of the residential development.*
>
> *A maximum dwelling unit per acre assignment is proposed within each area. The proposed maximum level of development is arrived at after determination that the nature of Walnut as a suburban residential area with a rural character can best be preserved by evaluating the development capability of the remaining undeveloped portions of the community.*

The develop capability is evaluated in terms of topography, open space desires, natural constraints, and public services. The capability of the land to accommodate residential development while retaining its present topographic character is determined by assigned a unit density (dwelling units per acre) to a slope classification. To preserve the rural character of the community requires that a significantly high percentage of remaining undeveloped areas be devoted to some form of open space.

The project site falls into Hillside Single-Family Residential Area F with the following suggested guidelines:

> *Moderately good access and relatively small ownerships characterize this area. The potential for extensive grading should be carefully controlled. The application of the City's present auxiliary use relating to animals should be maintained and extended within this area consistent with its compatibility with healthful and high quality residential uses.*

Area F has an area of 480 acres with a unit density of 1.3 dwelling units per an acre according to the *City of Walnut General Plan*.

ZONING

The Zoning Map designates the project site as Residential Planned Development Zone (RPD). The Walnut Zoning Ordinance, *Title VI, Chapter 25, Article VIII* of the *Walnut Municipal Code*, defines the RPD zoning district.

> *The intent and purpose of a Residential Planned Development Zone is to create a better living environment; to promote the achievement of residential land use amenities than could otherwise be obtained under conventional development; to achieve greater design flexibility of residential acreage than could otherwise be possible through the application of conventional residential zone regulations; to encourage well planned developments through creative and imaginative planning encourage well planned developments through creative and imaginative planning principals, practice and techniques; to reserve a greater proportion of open space land for recreation, conservation, parking and other similar uses than is otherwise required by conventional residential zone regulations; to provide for a more efficient, appropriate and desirable use of land which is sufficiently unique in its physical characteristics and other circumstances to warrant special methods of development; to provide areas of natural scenic beauty, vistas, land marks, promontories and other environmental features through integrated land planning, design and unified control of physical development patterns, and, to set forth use regulations and property development regulations that will best assure that the intent and purpose of this chapter is carried out.*

The project site is specifically located in zone designation RPD – 28,500 – 1.3 DU. The zone is designated to decide the lot size and dwelling units per an acre when the property is developed.

> *In the changing of zone classification to a designation of residential planned development, hereafter also referred to as RPD, the planning commission and city council shall set forth for each parcel or lot of land in the RPD Zone, the minimum lot area to be applied, in the event the property is developed in a conventional R-1 manner as opposed to a residential planned development. This designation shall conform to one of the R-1 minimum lot areas of this code, i.e., R-1 (7200), R-1 (8500), R-1 (10,000), R-1 (15,000) or R-1 (20,000). In the event property is thereafter developed in a conventional manner, the development shall conform to the same limitations and conditions of the R-1 lot area.*
>
> *In addition thereto, at the time of change of zone to RPD, the planning commission and the city council shall also designate the overall net acre density of the proposed residential planned development, which in no event shall exceed four and two tenths dwelling units per acre. The density factor, as well as the minimum lot area, shall be set*

forth in the following manner at time of the change of zone, e.g., RPD (10,000) — 3.5. (Ord. No. 237, § 2).

Property in an RPD Zone may be used for:

(a) Any use permitted in an R-1 Zone, of the specific minimum lot size specified at the time of change of zone, e.g., RPD (10,000) — 3.5, under the same limitations and conditions including area requirements, front, side, and rear yards, garages and auxiliary uses.

(b) A residential planned development, if a conditional use permit has first been obtained as provided in article XIX, which will provide the same or a lesser density of dwelling units than specified in the RPD Zone designation as applicable to the subject property.

3.5 PROJECT OBJECTIVES

The Brookside Project is designed to implement the goals and objectives of the City of Walnut General Plan. The proposed project is designed to ensure that new residential development will occur in a manner responsive to the unique characteristics of the site and preserve the City's suburban residential area and rural character. The project's objectives are identified below.

1. Create a residential neighborhood of appropriate density and scale that respects the existing topography and natural backdrop of the project site and adjacent residential neighborhoods.

2. Create a residential neighborhood that is compatible with and complementary to other existing adjacent neighborhoods in the area.

3. Enhance open space systems through sensitive landscaping throughout the neighborhood and adjacent to a sensitive riparian habitat.

4. Ensure that the proposed project adequately addresses the City of Walnut's General Plan requirements for the provision of public facilities and services.

5. Provide areas of natural scenic beauty, vistas, and other environmental features through integrated land planning, design, and unified control of physical development patterns.

6. Ensure that the type and form of development is compatible with the surrounding residential development, the community as a whole, and meets the requirements of the Walnut City Code.

7. Encourage development that is attractive and aesthetically pleasing as seen from adjacent properties and public rights-of-way.

8. Protect water quality through implementation of Best Management Practices on-site.

9. Retain and incorporate existing walnut, oak, and other mature trees within the proposed plan, where feasible.

10. Minimize impacts to the existing Lemon Creek floodway.

3.6 PROJECT CHARACTERISTICS

PROPOSED SITE DEVELOPMENT

Currently, the project site is developed with the Brookside Equestrian Center, which is no longer operating. The site consists of various equestrian-related structures including two horse barns with stables, fenced riding rings, maintenance storage facilities, feed sheds, and a covered riding arena. Additional land uses include a trail riding network, improved and unimproved (gravel) roads, parking facilities, large irrigated lawns, horse paddocks, and vacant undeveloped land.

As part of the proposed project, two of the Winnett Farm's San Vicente Ranch and Brookside Equestrian Center structures will be retained: Main Barn and Stables and Minor Barn. All other on-site buildings, parking lots, and grass and landscaped areas will be demolished and removed. In addition, mature on-site trees not subject to the Walnut City Code and not located within open space areas will be removed

.

The proposed project is a large lot residential community that involves the development of 28 detached single-family graded home lots and 10 open space lots located along a central street system with access to Meadow Pass Road and San Vicente Drive (refer to *Table 3-1*, *Land Use Summary*) and *Exhibit 3*, *Tentative Tract Map*. One lot – lot 4 would retain two of the existing equestrian center structures.

Table 3-1
Land Use Summary

Use	Acres	Unit	Residential Density
Single-Family Residential	12.69	28 Lots/Dwelling Units	
Open Space Lots	9.55	10 Lots	--
Private Streets (Street B)	2.21	--	
Public Streets (San Vicente Drive and A Street)	1.39	--	
Total	25.84	28 Dwelling Units 10 Open Space Lots	1.08 DU/AC
DU=dwelling unit; AC = acres			

OPEN SPACE

A total of 10 open space lots will be created with the intention of maintaining natural open space and Lemon Creek, and the existing equestrian trail that traverses the site. In addition, two of the original barns will be retained in the northeastern part of the site.

Natural Open Space

Natural Open Space consists of the ungraded areas of Lemon Creek within the footprint of the jurisdictional area under the jurisdiction of the regulatory agencies. A number of existing oak and walnut trees are present within this natural open space. Areas of natural open space which occur within private residential lots will be placed within an open space easement or otherwise delineated to 1) limit the homeowner from disturbing the creek edge and 2) provide for maintenance.

Manufactured Open Space

Manufactured open space consists of graded slopes within the project area, Bioretention areas, and landscaped lots associated with streetscape and signage.

Trails

The project proposes retention of an existing trail along the western boundary of the site. The existing trail currently parallels Lemon Creek in a north-south direction.

SITE ACCESS

A singular vehicular ingress and egress to the project site will be provided via Meadow Pass Road. An emergency vehicle access (EVA) location is proposed at La Puente Road on the southern property boundary.

On-site circulation will be provided by a public and private street system. The private street system will be owned and maintained by the Homeowner's Association. The public streets include Street A in the northern portion of the site and San Vicente Road in the southern portion. One private street, Street B, will connect with Street A, and run north-south through the site.

Public Street A includes a 60-foot right-of way with a 36-foot roadway and a 12-foot parkway on both sides of the streets, which includes a 5-foot sidewalk. Private Street B includes a 38-foot right-of way with a 36-foot roadway and 1-foot easement on both sides of the street.

GRADING PLAN

The proposed project would be graded in one phase, and would require approximately 55,000 cubic yards of balanced cut and fill on-site. The earthwork would be balanced on-site, with no need for import or export of soil.

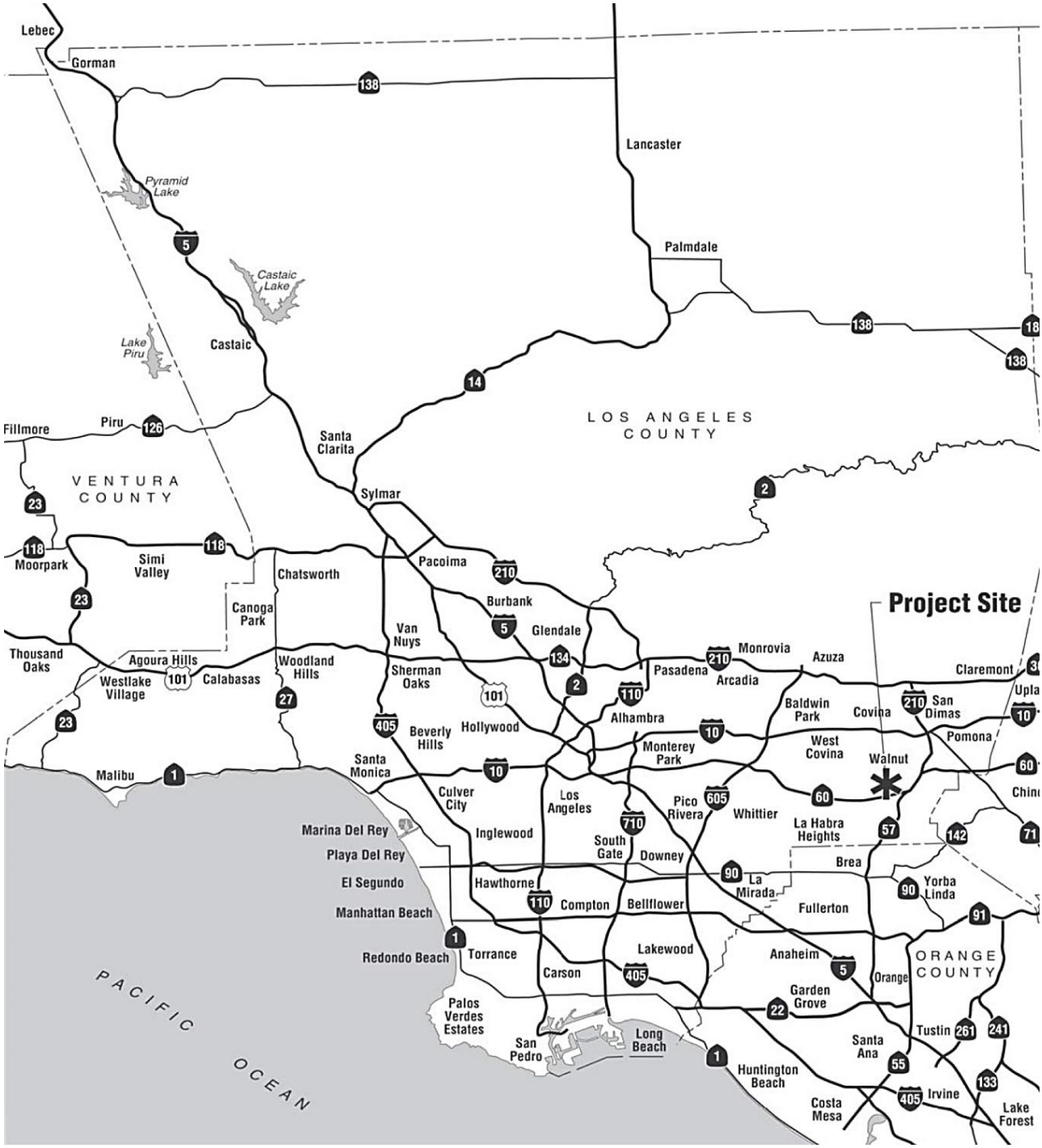
3.7 PROJECT PHASING

Site preparation and grading would be implemented in one phase for a six-month period beginning in late 2016. Construction of the custom homes would be completed in 2017.

3.8 AGREEMENTS, PERMITS, AND APPROVALS

It is anticipated that the proposed project will require the following discretionary and ministerial approvals from the City of Walnut:

- Conditional Use Permit 2015-006
- Tentative Tract Map No. 72798



Source: Michael Baker International, 2015

The Brookside Project
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Exhibit 3-1

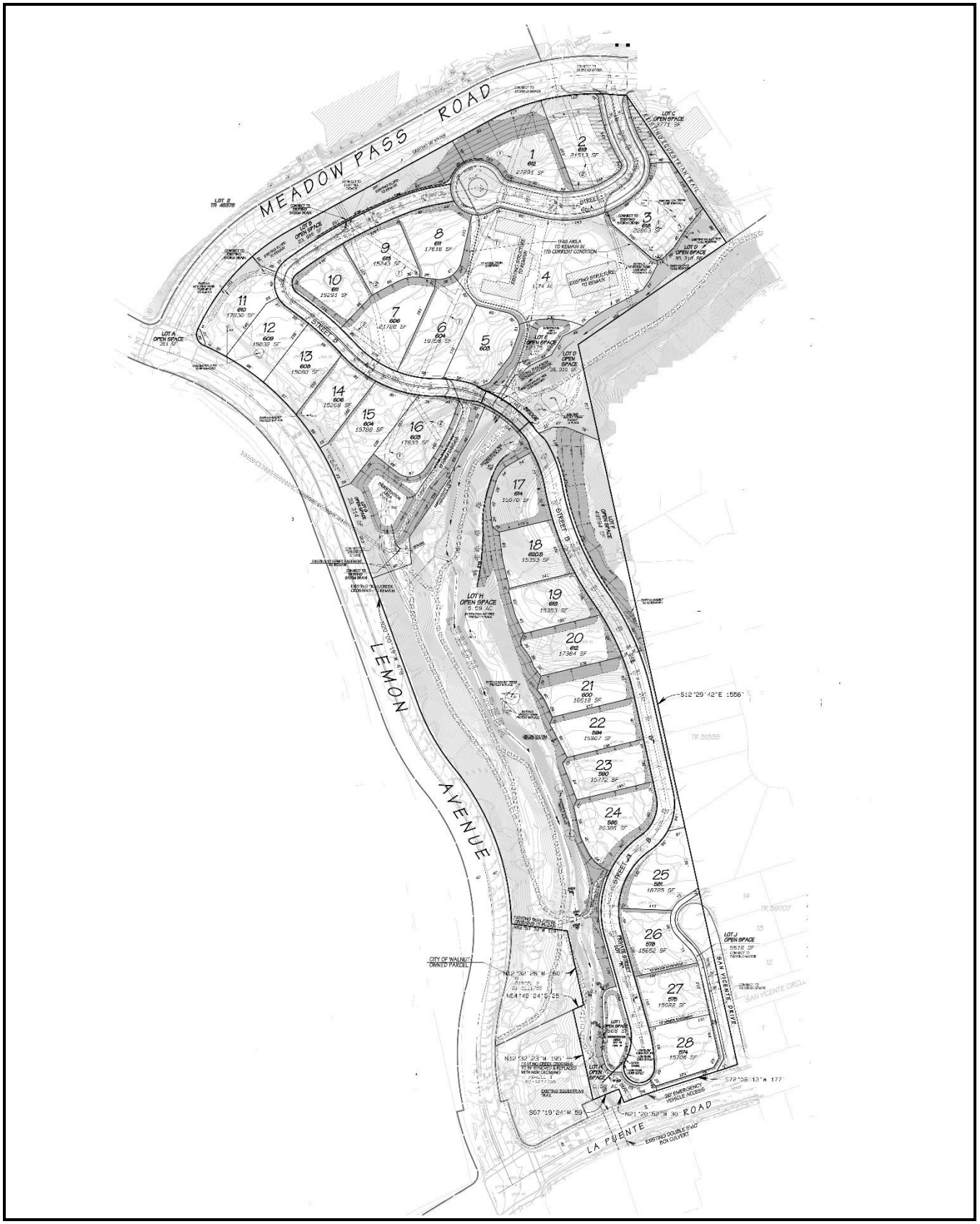
REGIONAL LOCATION

Source: Michael Baker International, 2015

The Brookside Project
Environmental Impact Report

Exhibit 3-2

LOCAL VICINITY



Source: Michael Baker International
January 8, 2016

The Brookside Project
Environmental Impact Report

Exhibit 3-3

TENTATIVE TRACT MAP

4.0 BASIS OF CUMULATIVE ANALYSIS

4.1 INTRODUCTION

CEQA Guidelines Section 15355 provides the following definition of cumulative impacts:

> *"Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.*

Pursuant to *CEQA Guidelines* Section 15130(a), cumulative impacts of a project shall be discussed when they are "cumulatively considerable," as defined in *CEQA Guidelines* Section 15065(a)(3). Section 5.0, Environmental Analysis, of this EIR assesses cumulative impacts for each applicable environmental issue, and does so to a degree that reflects each impact's severity and likelihood of occurrence.

As indicated above, a cumulative impact involves two or more individual effects. Per *CEQA Guidelines* Section 15130(b), the discussion of cumulative impacts shall be guided by the standards of practicality and reasonableness, and should include the following elements:

1. *Either:*

   A. *A list of past, present and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the Agency, or*

   B. *A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projects may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.*

2. *When utilizing a list, as suggested in paragraph (1) of subdivision (b), factors to consider when determining whether to include a related project should include the nature of each environmental resource being examined, the location of the project and its type. Location may be important, for example, when water quality impacts are at issue since projects outside the watershed would probably not contribute to a cumulative effect. Project type may be important, for example, when the impact is specialized, such as a particular air pollutant or mode of traffic.*

3. *Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.*

4. *A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and*

5. *A reasonable analysis of the cumulative impacts of the relevant projects, including examination of reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.*

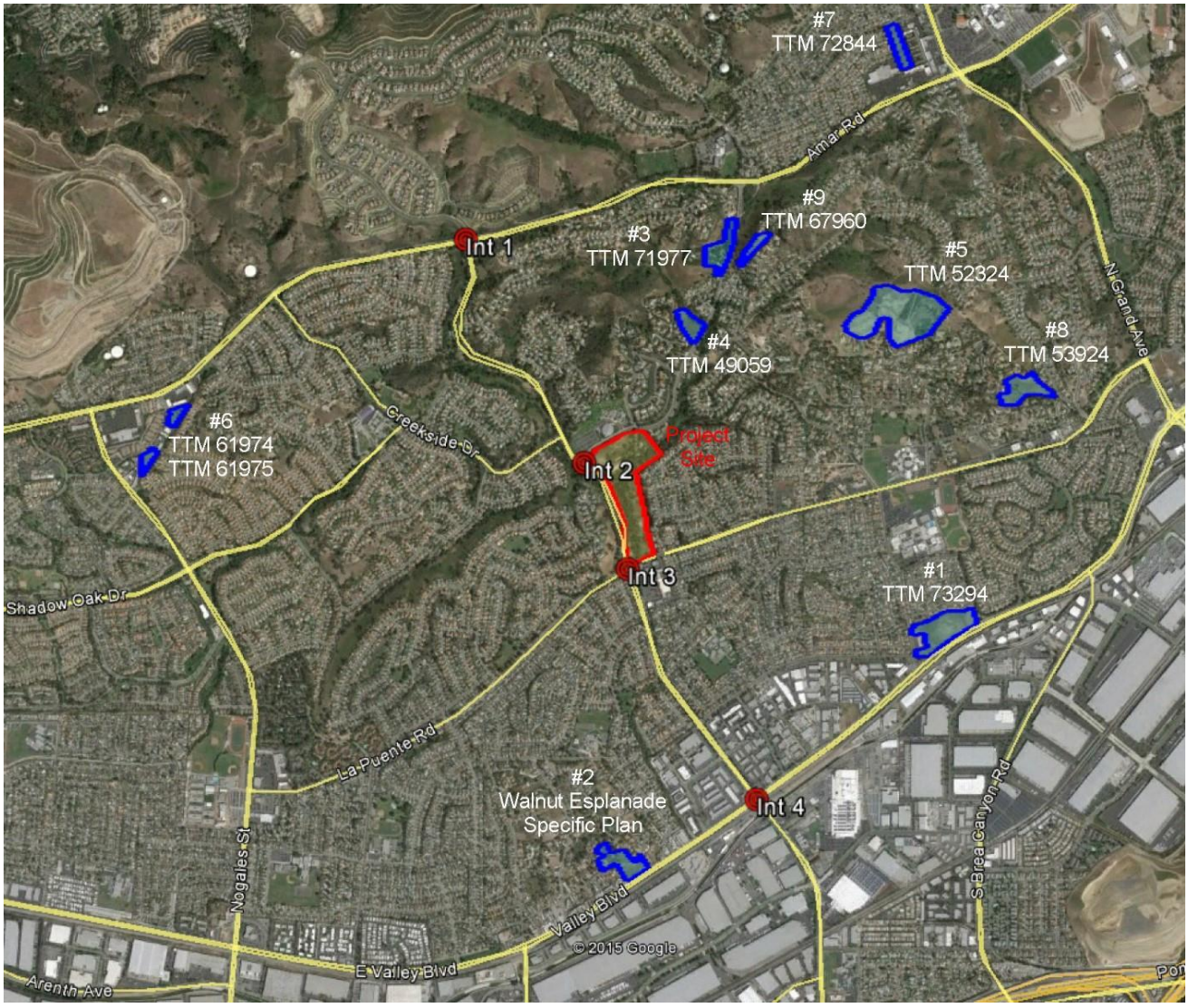
4.2 CUMULATIVE ANALYSIS IN THIS EIR

Table 4-1, *Cumulative Projects List* and *Exhibit 4-1*, *Location of Cumulative Projects* identify the related projects and other possible development in the area determined as having the potential to interact with the proposed project to the extent that a significant cumulative effect may occur. This list of projects was determined based on the scope of the proposed project as well as the anticipated area in which the project could contribute to an incremental increase in cumulatively considerable impacts (as discussed throughout Section 5.0). The implementation of each project represented in *Table 4-1* was determined to be reasonably foreseeable by the City.

Table 4-1
Cumulative Projects

Map No.	Project Name	Single-Family Detached Residential (DU)	Condominium/ Townhouse (DU)	Senior Adult Housing – Attached (DU)	Commercial (Shopping Center [SF])
1	Tentative Tract Map 73294	37	61		
2	Walnut Esplanade Specific Plan	13			
3	Tentative Tract Map 71977	13			
4	Tentative Tract Map 49059	6			
5	Tentative Tract Map 52324	10			
6	Tentative Tract Map 61974 & 61975	0		86	3,810
7	Tentative Tract Map 72844	25			
8	Tentative Tract Map 52924	6			
9	Tentative Tract Map 67960	7			
	Total	**117**	**61**	**86**	**3,810**

Notes:
DU = Dwelling Unit
SF = Square Feet



Source: Michael Baker International

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Exhibit 4-1

LOCATION OF CUMULATIVE PROJECTS

5.0 ENVIRONMENTAL ANALYSIS

The next subsections of the EIR contain a detailed environmental analysis of the existing conditions, project impacts (including direct and indirect, short-term and long-term, and cumulative), recommended mitigation measures, and unavoidable adverse impacts. This EIR analyzes those environmental issue areas as stated in the Notice of Preparation and Initial Study (Appendix A, Initial Study/Notice of Preparation) where potentially significant impacts have the potential to occur.

The EIR will examine the following environmental factors:

5.1 Aesthetics
5.2 Air Quality
5.3 Biological Resources
5.4 Cultural Resources
5.5 Greenhouse Gas Emissions
5.6 Geology
5.7 Hazards and Hazardous Materials
5.8 Hydrology, Drainage, and Water Quality
5.9 Land Use
5.10 Noise
5.11 Fire Protection
5.12 Police Protection
5.13 Traffic
5.14 Water
5.15 Wastewater
5.16 Solid Waste
5.17 Electricity and Natural Gas

Each environmental issue is addressed in a separate section of the EIR, and is generally organized into seven, as follows:

- Regulatory Setting
- Environmental Setting
- Significance Threshold Criteria
- Project Impacts and Mitigation Measures
- Cumulative Impacts and Mitigation Measures
- Significant Unavoidable Impacts
- Sources Cited

“Regulatory Setting” describes existing regulations applicable to the project.

“Environmental Setting” describes the physical conditions that exist at this time and that may influence or affect the issue under investigation.

“Significance Threshold Criteria” provides the thresholds that are the basis of conclusions of significance, which are primarily the criteria in the *CEQA Guidelines* Appendix G, Environmental Checklist.

Major sources used in crafting criteria include the *CEQA Guidelines*; local, state, federal, or other standards applicable to an impact category; and officially established significance

thresholds. "…*An ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting."* (*CEQA Guidelines* Section 15064[b]). Principally, *"…a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance"* constitutes a significant impact (*CEQA Guidelines* Section 15382).

"Project Impacts and Mitigation Measures"

- Project impacts are the potential environmental changes to the existing physical conditions that may occur if the proposed project is implemented.

  Evidence, based on factual and scientific data, is presented to show the cause and effect relationship between the proposed project and the potential changes in the environment. The exact magnitude, duration, extent, frequency, range, or other parameters of a potential impact are ascertained, to the extent possible, to determine whether impacts may be significant; all of the potential direct and reasonably foreseeable indirect effects are considered.

- Mitigation measures are those project-specific measures that would be required of the project to avoid a significant adverse impact; to minimize a significant adverse impact; to rectify a significant adverse impact by restoration; to reduce or eliminate a significant adverse impact over time by preservation and maintenance operations; or to compensate for the impact by replacing or providing substitute resources or environment.

- The "Level of Significance" identifies the impacts that will remain after the application of mitigation measures, if applicable, and whether the remaining impacts are or are not considered significant. When these impacts, even with the inclusion of mitigation measures, cannot be mitigated to a level considered less than significant, they are identified as "unavoidable significant impacts."

"Cumulative Impacts and Mitigation Measures" describes potential environmental changes to the existing physical conditions that may occur with the proposed project together with all other reasonably foreseeable, planned, and approved future projects, as listed in *Table 4-1*.

"Significant Unavoidable Impacts" describes impacts that would be significant, but cannot be feasibly mitigated to less than significant, so would be unavoidable. To approve a project with unavoidable significant impacts, the lead agency must adopt a Statement of Overriding Considerations. In adopting such a statement, the lead agency is required to balance the benefits of a project against its unavoidable environmental impacts in determining whether to approve the project. If the benefits of a project are found to outweigh the unavoidable adverse environmental effects, the adverse effects may be considered "acceptable" and the project approved (*CEQA Guidelines* Section 15093[a]).

"Sources Cited" identifies the sources utilized in the section.

5.1 AESTHETICS

This section describes the existing visual environment in and around the project area and analyzes potential impacts to the aesthetic character/visual quality of the area and the creation of new sources of light and glare with implementation of the proposed project.

5.1.1 REGULATORY SETTING

STATE

California Scenic Highway Program

The California Scenic Highway Program was created in 1963 to preserve and protect highway corridors located in areas of outstanding natural beauty from changes that would diminish the aesthetic value of the adjacent lands. The California Department of Transportation (Caltrans) designates highways based on how much of the landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which views are compromised by development.

LOCAL

Walnut General Plan

The *City of Walnut General Plan* (*General Plan*) contains goals and policies that guide growth and development within the City. City policies pertaining to visual character are contained in the Land Use and Environmental Resources Management Elements of the *General Plan*. The goals and policies that pertain to the project include the following:

Land Use

1. Promote the concept of attractive, quality residential environments that meet the individual, social and cultural needs of the residents of each neighborhood.

3. Determine intensities and form of land use on the basis of natural land characteristics, efficient supporting services capabilities, and the goals of the community to generally maintain a low-density single family residential in the City.

5. Minimize alteration of the natural terrain.

Open Space

3. Protect scenic, historic, natural wildlife, archaeological and cultural resources of this area.

Walnut City Code

Walnut City Code Title VI Planning and Zoning, Chapter 25 Zoning, Article VIII RPD Residential Planned Development Zone states that the purpose of a Residential Planned Development (RPD) Zone is to create a better living environment; to promote the achievement of residential land use amenities than could otherwise be obtained under conventional development; to achieve greater design flexibility of residential acreage than could otherwise be possible through

the application of conventional residential zone regulations; to encourage well planned developments through creative and imaginative planning encourage well planned developments through creative and imaginative planning principals, practice and techniques; to reserve a greater proportion of open space land for recreation, conservation, parking and other similar uses than is otherwise required by conventional residential zone regulations; to provide for a more efficient, appropriate and desirable use of land which is sufficiently unique in its physical characteristics and other circumstances to warrant special methods of development; to provide areas of natural scenic beauty, vistas, land marks, promontories and other environmental features through integrated land planning, design and unified control of physical development patterns, and, to set forth use regulations and property development regulations that will best assure that the intent and purpose of this chapter is carried out.

Walnut City Code Title VI Planning and Zoning, Chapter 25 Zoning, Article XXIV Site Plan and Architectural Review promotes the orderly development of the City, to conserve property values, to preserve the architectural character of the area, to encourage the most appropriate use of land and to protect the health, safety, comfort and general welfare of the community.

Section 25-248 Basis for Approval identifies the criteria the planning commission is to consider prior to the approval of a site plan and architectural review application, including:

(a) The application should implement the goals and objectives of the General Plan to provide an attractive, high quality, residential environment with a rural character. Industrial, agricultural and commercial land uses should meet high quality development standards. To the extent possible, development should minimize alteration of the natural terrain.

Site plan and architectural review consider compatibility, architectural design and detail, landscaping, lighting, parking, signs, and other design details.

5.1.2 ENVIRONMENTAL SETTING

SCENIC VIEWS AND VISTAS

Scenic vistas are panoramic views of natural features – such as mountains, oceans or lakes, or forests. The City of Walnut is located within the southeastern portion of the San Gabriel Valley. There are no *General Plan* designated scenic views or vistas within the City.

STATE SCENIC HIGHWAYS

The State Scenic Highway System includes a list of highways that are either currently designated as scenic highways by the State or are eligible for that designation. The California Department of Transportation (Caltrans) does not identify designated scenic highways (or eligible scenic highways) within the City or in its immediate vicinity.[1] Therefore, the project site is not located in the viewshed of a State scenic highway.

[1] State of California Department of Transportation, *California Scenic Highway Mapping System*, http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm, accessed July 18, 2016.

VISUAL CHARACTER/QUALITY

The current site grade varies from approximately 572 feet on the south boundary adjacent to La Puente Road to approximately 640 feet on the north boundary. There are 30- to 40-feet-high descending slopes on the north and west property line, adjacent to Meadow Pass Road and N. Lemon Avenue. On-site topography consists of sloping topography primarily associated with the heavily incised Lemon Creek, which flows south through the central portion of the project site.

The site consists of various commercial recreation/equestrian-related structures including three covered barns, stables, fenced corrals, maintenance storage facilities, feed sheds, and a covered arena. Additional land uses include a trail riding network, improved and unimproved (gravel) roads, parking facilities, large irrigated lawns, horse paddocks, and vacant undeveloped land. An existing pedestrian bridge crosses Lemon Creek in the central and southern portions of the site.

The majority of the existing structures are located within the northern portion of the project site with the exception of two single-horse stables located within the central portion. Two roadways exist on-site. An unimproved road enters the subject site along the northern boundary from Meadow Pass Road and traverses south through the site transitioning into a riding trail. San Vicente Road, an improved road, borders the southeastern boundary of the subject site proceeding in a north to south direction and provides access to adjoining residential properties. Additionally, a network of riding trails exists on-site. The unimproved (dirt) riding trails also provide access for maintenance vehicles.

The project site includes a mixed forest plant community that is multi-canopied and includes, but is not limited to eucalyptus, Peruvian pepper, California Walnut, Coast Live Oak, Valley Oak, white alder, common fig, and Mexican fan palm.

Prominent factors influencing the character of the project site and its surroundings are the variety of uses that occur within the area including the residential neighborhoods to the west, north, and east; the St. Lorenzo Ruiz Catholic Community church to the north; the Los Angeles County Fire Department Station 61 to the immediate south; and the Lemon Creek Village commercial center south of La Puente Road.

Views of the site from Lemon Avenue and residential uses to the west along Meadow Pass Heights are obstructed by the existing mixed forest near the property's western boundary and the lower elevation of the site. The hillside and vegetation on the west side of Lemon Avenue also serve to block views of the site. In addition, the site's topography is lower than Lemon Avenue for most of the street's length north of Fire Station 61 to Meadow Pass Road.

Views of the site from Meadow Pass Road and the church are similarly obstructed by the mixed forest near the property's northern boundary and topography of the site being lower than Meadow Pass Road. This is also true for residential units that are directly east of the northeast project boundary along Meadow Pass Road.

Views of the site from San Vicente Drive are slightly obstructed by the on-site vegetation, mixed forest, and fencing. Views of the site from Rim Ridge Road, Falling Springs Road, Broken Lance Road, and Red Cedar Road are less obstructed due to the higher elevation of the homes located on these streets, as well as less dense vegetation and mixed forest along the eastern project boundary in this area.

Refer to *Exhibit 5.1-1a* through *Exhibit 5.1-1f* for site photographs of the project site and surrounding uses.

LIGHT AND GLARE

Lighting effects are associated with the use of artificial light during the evening and nighttime hours. There are two primary sources of light: light emanating from building interiors passing through windows and light from exterior sources (i.e., street lighting, building illumination, security lighting, parking lot lighting and landscape lighting). Light introduction can be a nuisance to adjacent residential areas, diminish the view of the clear night sky, and if uncontrolled, can cause disturbances. Uses such as residences and hotels are considered light sensitive since occupants have expectations of privacy during evening hours and may be subject to disturbance by bright light sources. Light spill is typically defined as the presence of unwanted light on properties adjacent to the property being illuminated. With respect to lighting, the degree of illumination may vary widely depending on the amount of light generated, height of the light source, presence of barriers or obstructions, type of light source and weather conditions.

Glare is primarily a daytime occurrence caused by the reflection of sunlight or artificial light by highly polished surfaces, such as window glass or reflective materials and, to a lesser degree, from broad expanses of light-colored surfaces. Perceived glare is the unwanted and potentially objectionable sensation as observed by a person as they look directly into the light source of a luminaire. Daytime glare generation is common in urban areas and is typically associated with buildings with exterior facades largely or entirely comprised of highly reflective glass. Glare can also be produced during evening and nighttime hours by the reflection of artificial light sources such as automobile headlights. Glare-sensitive uses include residences, hotels, transportation corridors, and aircraft landing corridors.

Lighting within the project site and surrounding area is typical of developed urban areas. Primary sources of light and glare in the area include motor vehicle headlights, streetlights, parking lot and exterior security lighting, and interior building lighting. Currently, light and glare are being emitted from existing residential, institutional, commercial uses located within the area. The location of the project site, adjacent to roadways, results in car headlights and street lighting that affect the project site and its surroundings.

5.1.3 SIGNIFICANCE THRESHOLD CRITERIA

Environmental impact thresholds as indicated in *CEQA Guidelines* Appendix G (Environmental Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it would:

- Have a substantial adverse effect on a scenic vista (refer to Section 8.0, Effects Found Not To Be Significant).

- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway (refer to Section 8.0, Effects Found Not To Be Significant).

- 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.

Based on these standards, the proposed project's effects have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.1.4 PROJECT IMPACTS AND MITIGATION MEASURES

SHORT-TERM VISUAL CHARACTER/QUALITY

- **CONSTRUCTION ACTIVITIES ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT COULD RESULT IN SIGNIFICANT IMPACTS RELATED TO TEMPORARY DEGRADATION OF THE VISUAL CHARACTER/QUALITY OF THE SITE AND ITS SURROUNDINGS.**

Impact Analysis: Short-term construction-related activities associated with future development of the proposed project would temporarily alter the existing visual character of the development sites and their surroundings. The visual impact associated with construction activities would involve graded surfaces, construction materials, equipment, and truck traffic. Soil would be stockpiled and equipment for grading activities would be staged at various locations. In addition, temporary structures could be located on the respective development site during various stages of construction, within materials storage areas, or associated with construction debris piles on-site. Exposed trenches, roadway bedding, spoils/debris piles, and steel plates would be visible during construction of proposed street and utility infrastructure improvements. These construction activities and equipment could temporarily degrade the existing visual character and quality of the project site and its surroundings during the construction phase.

Construction-related activities are not considered significant, because they would be short-term and temporary; construction activity would not be continuous and would proceed on a project-by-project basis. Temporary screening of a particular construction staging site would partially relieve the visual impacts typically associated with construction activities. Compliance with Mitigation Measure AES-1, which would be incorporated into construction documents, would reduce potential construction-related visual impacts to less than significant.

Level of Significance Before Mitigation: Potentially Significant Impact.

Mitigation Measures:

AES-1 Prior to the issuance of a grading permit, the Applicant shall submit a Construction Management Plan for review and approval by the City of Walnut Community Development Director. The Construction Management Plan shall, at a minimum, indicate the equipment and vehicle staging areas, stockpiling of materials, fencing (i.e., temporary fencing with opaque material), and construction haul route(s). Staging areas shall be screened from view from residential properties. Construction worker parking may be located off-site with prior approval by the City; however, on-street parking of construction worker vehicles on residential streets shall be prohibited. Vehicles shall be kept clean and free of mud and dust before leaving the

development site. Surrounding streets shall be swept daily and maintained free of dirt and debris.

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.

LONG-TERM VISUAL CHARACTER/QUALITY

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD RESULT IN SIGNIFICANT IMPACTS RELATED TO THE LONG-TERM DEGRADATION OF THE VISUAL CHARACTER/QUALITY OF THE SITE AND ITS SURROUNDINGS.**

Impact Analysis:

Visual Quality/Character

The visual analysis of a proposed project must consider its visual quality and compatibility in consideration of surrounding uses and the area's visual sensitivity.

The project site is located within a developed area of the City and is surrounded on all sides by residential, institutional, or commercial land uses. The proposed project would remove the majority of the existing equestrian-related uses with the exception of Lot 4 where two structures would be retained. In addition, the proposed project would provide open space areas primarily along Lemon Creek, as well as maintain existing on-site riding trails and pedestrian bridge crossings.

Presently, views of the site vary from slightly obstructed to obstructed mainly due to the site's topography and existing on-site trees located on the exterior of the property as well as along Lemon Creek. As discussed in Section 5.3, Biological Resources, the proposed project would impact 19 southern California walnuts, one coast live oak, and six valley oaks that are protected under the Oak/Walnut Tree Preservation Ordinance. The analysis concluded that the proposed project would remove and replace seven walnut trees, two of which are Heritage Trees. The impacts to the heritage trees would be reduced through Mitigation Measures BIO-4 through BIO-8 and compliance with *Walnut City Code* Section 25-178 et seq.

As previously noted, the project site includes a mixed forest plant community that includes, but is not limited to eucalyptus, Peruvian pepper, California Walnut, Coast Live Oak, Valley Oak, white alder, common fig, and Mexican fan palm. The proposed project would need to remove some of these mature trees (not subject to the *Walnut City Code*) along Meadow Pass Road to ensure sight distance criteria is meet for traffic safety purposes. The exact number of trees to be removed for this purpose has not yet been determined. In addition, the Applicant has not conducted a tree survey of mature trees within the project site and along the project boundary that are not oak or walnut trees. Thus, for purposes of this analysis, it is assumed that all or most of the mature trees located within Lots 1 through 28, which are proposed for residential units, would be removed. It is assumed that all other trees within the open space lots would be preserved.

Single-family residential uses are located directly to the west and east of the project site. The surrounding residences are primarily two-story.

Residential uses west of the project site currently have limited views onto the site. However, removal of mature trees in the northwestern portion of the site along Lemon Avenue for Lots 11 through 16 and the northern portion of the site along Meadow Pass Road for Lots 1, 2, 8, 9, and 10 would provide the residential uses west of the site, depending upon their orientation and location, with partial or full views of the proposed residential units. This is due to the residential uses west of the site being at a higher elevation than the project site and the removal of mature trees that currently block the site from their view.

Residential units directly east of the northeast project boundary along Meadow Pass Road currently have no view or limited views onto the site. However, removal of mature trees in the northern portion of the site along Meadow Pass Road for Lots 1, 2, 8, 9, and 10 would provide the residential uses east of the site, depending upon their orientation and location, with partial or full views of the proposed residential units. This is due to the removal of mature trees that currently block the site from their view.

Residential units directly east of the site along San Vicente Drive have slightly obstructed views onto the site. However, the removal of mature trees, landscaping and fencing along the southeastern property boundary would provide these residential units with full views of the proposed residential units, specifically Lots 25 through 28.

Residential units directly east of the project site along Rim Ridge Road, Falling Springs Road, Broken Lance Road, and Red Cedar Road have limited views onto the site. However, removal of mature trees in the eastern portion of the site for Lots 3 through 10 and Lots 17 through 24 would provide the residential uses east of the site, depending upon their orientation and location, with partial or full views of the proposed residential units. This is due to the residential uses east of the site being at a higher elevation than the project site and the removal of mature trees that currently block the site from their view.

The existing visual character/quality of the project site would be altered with implementation of the proposed project, as the proposed project would increase urban development in the area with the removal of the commercial recreation/equestrian-related uses and the development of single-family residential development with 28 lots and 10 open space lots. A new interior roadway supporting potential development would also be provided. In addition, this analysis assumes that mature on-site trees (not subject to the Walnut City Code) would be removed. Also, since the proposed project include only a Tentative Tract Map, no building elevations or architectural details are available at this time.

Development of the proposed project would be required to adhered to development standards identified for the proposed use (R1-15,000) within the *Walnut City Code* (Title VI Planning and Zoning, Chapter 25, Article 2). As per *Walnut City Code* Section 25-40, Standards of Development, required building setbacks would take into consideration the streets that the setbacks are adjacent to, the intensity of proposed land uses, proposed building mass and scale, and the surrounding context. The minimum required lot area is 15,000 square feet with a minimum width for interior lots of 75 feet, a minimum width for cul-de-sac and knuckle curve lots of 50 feet, and a minimum l depth of 120 feet. The maximum building height for the residential units would be two stories or 35 feet with a maximum lot coverage of 40 percent.

The proposed single-family residential and open space uses are compatible with the character of the surrounding community. However, the removal of mature on-site trees that currently serve to limit or block views of the site from surrounding uses does result in a degradation of the visual character or quality of the project site and would result in substantial alteration of existing views across the site. Therefore, implementation of the proposed project would result in significant unavoidable long-term visual character impacts.

Level of Significance Before Mitigation: Significant Unavoidable Impact.

Mitigation Measures: No mitigation measures are available.

Level of Significance After Mitigation: Significant Unavoidable Impact.

LIGHT AND GLARE

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD CREATE A NEW SOURCE OF LIGHT AND/OR GLARE, WHICH COULD AFFECT DAYTIME AND/OR NIGHTTIME VIEWS IN THE AREA.**

Impact Analysis:

Short-Term Construction Impacts

Construction activities are anticipated to occur during the day hours; however, security lighting would result in short-term light and glare impacts associated with construction activities. Residential uses are currently located adjacent to the Plan Area to the west and north, and are considered light sensitive since occupants have expectations of privacy during evening hours and may be subject to disturbance by bright light sources. Implementation of the recommended mitigation (Mitigation Measures AES-2 and AES-3) would reduce the potential impact to a less than significant level.

Long-Term Operational Impacts

Lighting and Glare from Proposed Structures

Implementation of the proposed project would introduce additional sources of light and glare including light from proposed residential uses, as well as security lighting and vehicle headlights at proposed roads and driveways. The project site currently generates light from building interiors and security lighting around buildings and within surface parking areas. Lighting is also being emitted from street lamps and car headlights associated with adjacent roadways.

The proposed residential uses have the potential to create new sources of light and glare in the form of lighting emanating from building interiors, streetlights, exterior lighting, and lighting for the purposes of safety, as well as glare effects caused by reflective surfaces. These new sources of light and glare would be most visible from development along adjacent roadways, and to receptors such as residents and traveling motorists. It is anticipated that proposed lighting fixtures would generally be similar to those utilized in surrounding residential areas.

While the proposed project would introduce new sources of light, these new light sources from the residential uses to adjacent residential areas would not result in a substantial new source of light that would affect daytime or nighttime views in the area As part of site plan and

architectural review for the residential units, the exterior surfaces of the residences should be finished with a combination of architectural coatings, trim, glazing, or other building materials that would not produce glare. Compliance with the *Walnut City Code* requirements for building materials along with Mitigation Measure AES-4 would reduce potential light and glare impacts from proposed structures to a less than significant level.

Vehicle Headlights

Implementation of the proposed project would introduce new roadways and/or extension of existing roadways on the project site. Vehicles entering and existing the project site may introduce new or increased nighttime lighting, potentially impacting adjacent residential uses.

In order to reduce potential impacts on adjacent residential uses associated with vehicle headlights, vehicular access locations should not be sited directly across from residential uses. In the event access is located directly across from residential uses, existing screening (i.e., landscaping, perimeter walls, etc.) should remain in place or new screening should be installed to reduce vehicle headlights from directly shining onto adjacent residential uses (Mitigation Measure AES-5). With implementation of mitigation, potential impacts associated with vehicle headlights would be reduced to a less than significant level.

Level of Significance Before Mitigation: Potentially Significant Impacts for construction and operations.

Mitigation Measures:

AES-2 Construction equipment staging areas shall use appropriate screening (i.e., temporary fencing with opaque material) to buffer views of construction equipment and material, when feasible. Staging locations shall be indicated on Final Development Plans and Grading Plans.

AES-3 All construction-related lighting shall include shielding in order to direct lighting down and away from adjacent hotel and residential uses and consist of the minimal wattage necessary to provide safety at the construction site. A construction safety lighting plan shall be submitted to the City for review concurrent with Grading Permit application.

AES-4 Prior to the issuance of building permits, the City of Walnut Community Development Department shall ensure that the following elements are included in project plans, as appropriate

- All exterior lighting shall be designed and located as to avoid intrusive effects on adjacent residential properties and undeveloped areas adjacent to the project site. Low-intensity street lighting and low-intensity exterior lighting shall be used throughout the development to the extent feasible. Lighting fixtures shall use shielding, if necessary to prevent spill lighting on adjacent off-site uses;
- Design and placement of site lighting shall minimize glare affecting adjacent properties, buildings, and roadways;
- Fixtures and standards shall conform to state and local safety and illumination requirements;

- Development projects shall use minimally reflective glass and all other materials used on exterior building and structures shall be selected with attention to minimizing reflective glare; and
- Automatic timers on lighting shall be designed to maximize personal safety during nighttime use while saving energy.

AES-5 Prior to the issuance of grading permits, site access locations shall be reviewed to ensure that vehicle access locations are not sited in a manner that would result in vehicle headlights directly shining onto residential uses. If siting of vehicle access locations would result in headlights directly shining onto residential uses, the Applicant shall implement screening, to reduce lighting impacts.

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.

5.1.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT AND OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN CUMULATIVELY CONSIDERABLE AESTHETICS IMPACTS.**

Impact Analysis: The aesthetic-related impacts associated with visual character/quality and light and glare to the surrounding area are not considered cumulatively considerable, as the closest cumulative project in the immediate project vicinity is Tentative Tract Map 49059 for six single-family residential units, located to the northeast. Impacts to visual character would be unique to each respective development site. Impacts to visual character, light and glare, and shade/shadow (both during construction and operations of the project) would be dependent upon project- and site-specific variables, including proximity to visually sensitive receptors, the visual sensitivity of the respective development sites, and duration of demolition and construction. The potential visual impacts of other projects would be evaluated on a project-by-project basis. It is assumed that cumulative development would progress in accordance with the *Walnut City Code*. Cumulative impacts to visual character/quality or the substantial increase in light and glare to the surrounding area would be less than significant, and the proposed project would not be cumulatively considerable.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.1.6 SIGNIFICANT UNAVOIDABLE IMPACTS

With implementation of the proposed Brookside Plan, significant unavoidable project impacts would occur with respect to long-term visual character impacts on adjacent existing residential uses. All other aesthetics impacts associated with implementation of the proposed Brookside Project are either at less than significant levels or can be mitigated to less than significant levels.

If the City of Walnut approves the proposed Brookside Project, the City shall be required to cite their findings in accordance with *CEQA Guidelines* Section 15091 and prepare a Statement of Overriding Considerations in accordance with *CEQA Guidelines* Section 15093.

5.1.7 SOURCES CITED

City of Walnut, *City of Walnut General Plan,* adopted July 1978 (amendments through 2002).

City of Walnut, *Walnut City Code,* Title IV Planning and Zoning, Chapter 25 Zoning.

San Vicente Drive – view looking northwest of project site.

San Vicente Drive – view looking north.

San Vicente Drive – view looking west of project site.

San Vicente Drive – view looking northeast.

Source: Morse Planning Group
July 2016

The Brookside Project
Environmental Impact Report

Exhibit 5.1-1a

SITE PHOTOGRAPHS

Lemon Avenue – view looking north; project site is to the east.

Lemon Avenue – view looking west.

Lemon Avenue - view looking northeast towards project site.

Lemon Avenue- view looking west.

Source: Morse Planning Group
July 2016

The Brookside Project
Environmental Impact Report

Exhibit 5.1-1b

SITE PHOTOGRAPHS

Lemon Avenue – view looking east towards project site.

Lemon Avenue – view looking east towards project site.

Lemon Avenue – view looking east towards project site.

Lemon Avenue – view looking east towards project site.

Source: Morse Planning Group
July 2016

The Brookside Project
Environmental Impact Report

Exhibit 5.1-1c

SITE PHOTOGRAPHS

View on La Puente Road of Fire Station 61 and residential uses, south and east of project site.

View on Meadow Pass Road of St. Lorenzo Ruiz Catholic Community Church, north of project site.

View on Rim Ridge Road looking east of existing residences, east of project site.

View of Meadow Pass Road looking east of existing residences, east of project site.

Source: Morse Planning Group
July 2016

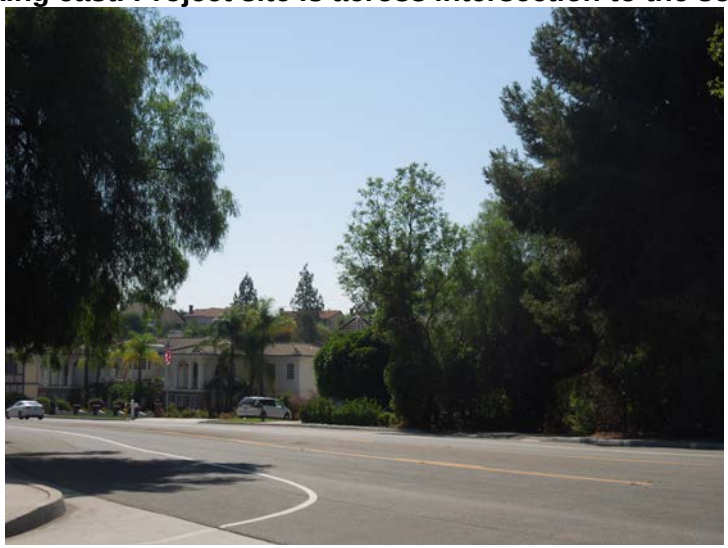
The Brookside Project
Environmental Impact Report

Exhibit 5.1-1d

SITE PHOTOGRAPHS

View of Meadow Pass Road/Lemon Avenue intersection looking east. Project site is across intersection to the south.

View of Meadow Pass Road, looking east. Project site is south of street.



View from Colt Lane looking southeast to site's easternmost driveway and adjacent residences.

View from Meadow Pass Road looking southeast to site's westernmost driveway.

Source: Morse Planning Group
July 2016

The Brookside Project
Environmental Impact Report

Exhibit 5.1-1e

SITE PHOTOGRAPHS

View from Meadow Pass Road looking southeast to project site.

View from Meadow Pass Road looking south to project site.

View from Meadow Pass Road looking south to project site.

View from Meadow Pass Road looking south to project site.

Source: Morse Planning Group
July 2016

The Brookside Project
Environmental Impact Report

Exhibit 5.1-1f

SITE PHOTOGRAPHS

5.2 AIR QUALITY

This section addresses the air emissions generated by the construction and operation of the proposed project, and the potential impacts to air quality. Information in this section is based on information and conclusions contained in the following study:

- Michael Baker International, Inc., Air Quality Assessment for The Brookside Project, City of Walnut, Michael Baker International, March 28, 2016 (included in its entirety as Appendix C).

5.2.1 REGULATORY SETTING

This section discusses the Federal, State, and regional air quality policies and requirements applicable to the project site.

FEDERAL LEVEL

Air quality is protected by the Federal Clean Air Act (FCAA) and its amendments. Under the Federal Clean Air Act (FCAA), the United States Environmental Protection Agency (US EPA) developed the primary and secondary National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants including ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter less than 10 microns (PM_{10}), particulate matter less than 2.5 microns ($PM_{2.5}$), and lead (Pb). Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements. The Clean Air Act requires each state to prepare a State Implementation Plan (SIP) to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The US EPA can withhold certain transportation funds from states that fail to comply with the planning requirements of the FCAA. If a state fails to correct these planning deficiencies within two years of Federal notification, the EPA is required to develop a Federal implementation plan for the identified nonattainment area or areas. The provisions of *40 Code of Federal Regulations* (CFR) Parts 51 and 93 apply in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan. The US EPA has designated enforcement of air pollution control regulations to the individual states.

STATE LEVEL

In 1988, the California Clean Air Act (CCAA) was adopted and led to the establishment of the California Ambient Air Quality Standards (CAAQS) for the same major pollutants, as the NAAQS and to standards for visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. There are currently no NAAQS for these latter pollutants. The California Air Resources Board (CARB) is responsible for enforcing air pollution regulations in California. The CCAA requires all air pollution control districts in California to endeavor to achieve and maintain state ambient air-quality standards by the earliest practicable date and to develop plans and regulations specifying how they will meet this goal.

REGIONAL LEVEL

South Coast Air Quality Management District

The *2012 Air Quality Management Plan* (*2012 AQMP*), which was adopted in December 2012, proposes policies and measures to achieve federal and state standards for improved air quality in the South Coast Air Basin and those portions of the Salton Sea Air Basin (formerly named the Southeast Desert Air Basin) that are under the South Coast Air Quality Management District's (SCAQMD's) jurisdiction. The Air Quality Management Plan (AQMP) relies on a regional and multi-level partnership of governmental agencies at the federal, state, regional, and local level. These agencies (US EPA, CARB, local governments, Southern California Association of Governments [SCAG] and the SCAQMD) are the primary agencies that implement the AQMP programs. The *2012 AQMP* incorporates the latest scientific and technical information and planning assumptions, including the *2012 Regional Transportation Plan/Sustainable Communities Strategy*, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts.

The *2012 AQMP* addresses several state and federal planning requirements, incorporating new scientific information, primarily in the form of updated emissions inventories, ambient measurements, and new meteorological air quality models. The *2012 AQMP* highlights the reductions and the interagency planning necessary to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the timeframes allowed under Federal Clean Air Act. The primary task of the *2012 AQMP* is to bring the Basin into attainment with federal health-based standards. It is noted that the SCAQMD is currently in the process of developing the 2016 AQMP, which is a comprehensive and integrated plan primarily focused on addressing the ozone and $PM_{2.5}$ standards. The *2016 AQMP* will incorporate the latest scientific and technical information and planning assumptions, including the latest applicable growth assumptions, Regional Transportation Plan/Sustainable Communities Strategy, and updated emission inventory methodologies for various source categories.

5.2.2 STATE AND FEDERAL AMBIENT AIR QUALITY STANDARDS

CARB and the US EPA establish ambient air quality standards for major pollutants at thresholds intended to protect public health. The standards for some pollutants are based on other values such as protection of crops or avoidance of nuisance conditions. *Table 5.2-1*, *State and National Ambient Air Quality Standards and Attainment Status*, summarizes the State CAAQS and the Federal NAAQS.

CARB designates all areas within the State as either attainment (having air quality better than the CAAQS) or nonattainment (having a pollution concentration that exceeds the CAAQS more than once in three years). Likewise, the US EPA designates all areas of the U.S. as either being in attainment of the NAAQS or nonattainment if pollution concentrations exceed the NAAQS. Because attainment/nonattainment is pollutant-specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the State and national standards differ, an area could be classified as attainment for the Federal standard of a pollutant while it may be nonattainment for the State standard of the same pollutant. Some areas are unclassified, which means no monitoring data are available. Unclassified areas are considered to be in attainment. The attainment status of SCAQMD for CAAQS and NAAQS for the area where the proposed project is located is shown in *Table 5.2-1* and is discussed in more detail below under the heading Ambient Air Monitoring.

Table 5.2-1
State and National Ambient Air Quality Standards and Attainment Status

Pollutant	Averaging Time	California[1]		Federal[2]	
		Standard[3]	Attainment Status	Standards[3, 4]	Attainment Status
Ozone (O_3)	1 Hour	0.09 ppm (180 μg/m³)	**Nonattainment**	N/A	N/A
	8 Hours	0.070 ppm (137 μg/m³)	N/A	0.070 ppm (137 μg/m³)	**Extreme Nonattainment**
Particulate Matter (PM_{10})	24 Hours	50 μg/m³	**Nonattainment**	150 μg/m³	Attainment
	Annual Arithmetic Mean	20 μg/m³	**Nonattainment**	N/A[6]	N/A
Fine Particulate Matter ($PM_{2.5}$)[5]	24 Hours	No Separate State Standard		35 μg/m³	**Nonattainment**
	Annual Arithmetic Mean	12 μg/m³	**Nonattainment**	12.0 μg/m³	**Nonattainment**
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Attainment	35 ppm (40 mg/m³)	Attainment/Maintenance
	8 Hours	9.0 ppm (10 mg/m³)	Attainment	9 ppm (10 mg/m³)	Attainment/Maintenance
Nitrogen Dioxide (NO_2)[6]	1 Hour	0.18 ppm (339 μg/m³)	**Nonattainment**	100 ppb (188 μg/m³)	Unclassified/Attainment
	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)	**Nonattainment**	0.053 ppm (100 μg/m³)	Attainment/Maintenance
Sulfur Dioxide (SO_2)[7]	1 Hour	0.25 ppm (655 μg/m³)	Attainment	75 ppb (196 μg/m³)	N/A
	3 Hours	N/A	N/A	N/A	N/A
	24 Hours	0.04 ppm (105 μg/m³)	Attainment	0.14 ppm	Unclassified/Attainment
	Annual Arithmetic Mean	N/A	N/A	0.030 ppm (for certain areas)	N/A
Lead (Pb)[8, 9]	30 days average	1.5 μg/m³	Attainment	N/A	N/A
	Calendar Quarter	N/A	N/A	1.5 μg/m³	Attainment
Visibility-Reducing Particles[10]	8 Hours (10 a.m. to 6 p.m., PST)	Extinction coefficient = 0.23 km@<70% RH	Unclassified	**No Federal Standards**	
Sulfates	24 Hour	25 μg/m³	Attainment		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m³)	Unclassified		
Vinyl Chloride[9]	24 Hour	0.01 ppm (26 μg/m³)	N/A		

μg/m³ = micrograms per cubic meter; ppm = parts per million; ppb = parts per billion; km = kilometer(s); RH = relative humidity; PST = Pacific Standard Time; N/A = Not Applicable

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, suspended particulate matter-PM_{10} and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. 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 mg/m³ is equal to or less than one. For $PM_{2.5}$, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
5. On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 μg/m³ to 12.0 μg/m³. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 μg/m³, as was the annual secondary standard of 15 μg/m³. The existing 24-hour PM_{10} standards (primary and secondary) of 150 μg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
6. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).
7. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
8. CARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
9. National lead standard, rolling 3-month average: final rule signed October 15, 2008.
10. In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: California Air Resources Board and U.S. Environmental Protection Agency, October 1, 2015.

AMBIENT AIR MONITORING

CARB monitors ambient air quality at approximately 250 air monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The project site is located within Source Receptor Area (SRA) 10, Pomona/Walnut Valley. The closest air monitoring station to the project site is the Pomona-Garey Avenue monitoring station. PM_{10} and $_{PM2.5}$ data was unavailable at the Pomona-Garey Avenue monitoring station; therefore, this data was collected from the Azusa – North Loren Avenue Monitoring Station. Local air quality data from 2012 to 2014 is provided in *Table 5.2-2*, *Summary of Air Quality Data*. This table lists the monitored maximum concentrations and number of exceedances of Federal/State air quality standards for each year.

Table 5.2-2
Summary of Air Quality Data

Pollutant	California Standard	Federal Primary Standard	Year[7]	Maximum Concentration[3]	Days (Samples) State/Federal Std. Exceeded
Ozone (O_3)[1] (1-hour)	0.09 ppm for 1 hour	NA[6]	2012 2013 2014	0.117 ppm 0.125 0.123	21/0 12/1 22/0
Ozone (O_3)[1] (8-hour)	0.070 ppm for 8 hours	0.070 ppm for 8 hours	2012 2013 2014	0.093 ppm 0.100 0.100	30/15 22/15 56/33
Carbon Monoxide (CO)[1] (1-hour)	20 ppm for 1 hour	35 ppm for 1 hour	2012 2013 2014	2.49 ppm 2.18 2.00	0/0 0/0 0/0
Carbon Monoxide (CO)[1] (8-hour)	9.0 ppm for 8 hours	9.0 ppm for 8 hours	2012 2013 2014	1.47 ppm NA NA	0/0 NA/NA NA/NA
Nitrogen Dioxide (NO_2)[1]	0.18 ppm for 1 hour	0.100 ppm for 1 hour	2012 2013 2014	0.082 ppm 0.079 0.089	0/0 0/0 0/0
Fine Particulate Matter ($PM_{2.5}$)[2, 4, 6]	No Separate Standard	35 µg/m^3 for 24 hours	2012 2013 2014	39.6 µg/m^3 29.6 32.4	NA/1 NA/0 NA/0
Particulate Matter (PM_{10})[2, 4, 5]	50 µg/m^3 for 24 hours	150 µg/m^3 for 24 hours	2012 2013 2014	78.0 µg/m^3 76.0 96.0	6/0 6/0 21/0

Source: Aerometric Data Analysis and Measurement System (ADAM), summaries from 2012 to 2014, http://www.arb.ca.gov/adam.

ppm = parts per million; PM_{10} = particulate matter 10 microns in diameter or less; NM = not measured; µg/m^3 = micrograms per cubic meter; $PM_{2.5}$ = particulate matter 2.5 microns in diameter or less; NA = not applicable; * = data not available.

Notes:

1. Data collected from the Pomona – Garey Avenue Monitoring Station located at 924 North Garey Avenue, Pomona, CA 91767.
2. Data collected from the Azusa – North Loren Avenue Monitoring Station located at 803 North Loren Avenue, Azusa, CA 91702.
3. Maximum concentration is measured over the same period as the California Standards.
4. PM_{10} exceedances are based on State thresholds established prior to amendments adopted on June 20, 2002.
5. PM_{10} and $PM_{2.5}$ exceedances are derived from the number of samples exceeded, not days.
6. The Federal standard was revoked in June 2005.
7. Data for 2015 is not available as of the date of this study.

Ozone. Ozone (O_3) occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. The troposphere extends approximately 10 miles above ground level, where it meets the second layer, the stratosphere. The stratospheric (the "good" ozone) layer extends upward from about ten to 30 miles and protects life on earth from the sun's harmful ultraviolet rays (UV-B). "Bad" ozone is a photochemical pollutant, and needs volatile organic compounds (VOCs), Nitrogen Oxides (NO_X) and sunlight to form; therefore, VOCs and NO_X are ozone precursors. VOCs and NO_X are emitted from various sources throughout the City. Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight.

Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems (such as forests and foothill plant communities) and damages agricultural crops and some man-made materials (such as rubber, paint, and plastics). Societal costs from ozone damage include increased healthcare costs, the loss of human and animal life, accelerated replacement of industrial equipment and reduced crop yields.

Carbon Monoxide. Carbon monoxide (CO) is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. At high concentrations, CO can reduce the oxygen-carrying capacity of the blood and cause headaches, dizziness, and unconsciousness.

Nitrogen Dioxide. Nitrogen oxides (NO_X) are a family of highly reactive gases that are a primary precursor to the formation of ground-level O_3, and react in the atmosphere to form acid rain. NO_2 (often used interchangeably with NO_X) is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations).

NO_2 can irritate and damage the lungs, and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO_2 concentrations that are typically much higher than those normally found in the ambient air may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may aggravate eyes and mucus membranes and cause pulmonary dysfunction.

Coarse Particulate Matter (PM_{10}). PM_{10} refers to suspended particulate matter, which is smaller than ten microns or ten one-millionths of a meter. PM_{10} arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM_{10} scatters light and significantly reduces visibility. In addition, these particulates penetrate the lungs and can potentially damage the respiratory tract. On June 19, 2003, CARB adopted amendments to the statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (SB 25).

Fine Particulate Matter ($PM_{2.5}$). Due to increased concerns over health impacts related to fine particulate matter (particulate matter 2.5 microns in diameter or less), both State and Federal $PM_{2.5}$ standards have been created. Particulate matter impacts primarily affect infants, children, the elderly, and those with pre-existing cardiopulmonary disease. In 1997, the EPA announced new $PM_{2.5}$ standards. Industry groups challenged the new standard in court and the

implementation of the standard was blocked. However, upon appeal by the EPA, the U.S. Supreme Court reversed this decision and upheld the EPA's new standards.

On June 20, 2002, CARB adopted amendments for statewide annual ambient particulate matter air quality standards. These standards were revised/established due to increasing concerns by CARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current State standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.

Reactive Organic Gases and Volatile Organic Compounds. Hydrocarbons are organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including reactive organic gases (ROGs) and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive populations (sensitive receptors) that are in proximity to localized sources of toxics and CO are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. *Table 5.2-3*, *Sensitive Receptors*, lists the distances and locations of sensitive receptors within the project vicinity. The distances depicted in *Table 5.2-3* are based on the distance from the project site to the outdoor activity area of the closest receptor.

5.2.3 ENVIRONMENTAL SETTING

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The project site lies within the northwestern portion of the South Coast Air Basin (Basin). The Basin is a 6,600-square mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The Basin's terrain and geographical location (i.e., a coastal plain with connecting broad valleys and low hills) determine its distinctive climate.

CLIMATE

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. The climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the Basin.

Table 5.2-3
Sensitive Receptors

Type	Name	Distance from Project Site (feet)[1]	Direction from Project Site	Location
Residential	Residential Uses	Adjacent	East	East of San Vicente Road
		105 feet	Southeast	South of La Puente Road
		170 feet	North	North of Meadow Pass Road.
		258 feet	West	West of Lemon Avenue
		385 feet	Southwest	Southwest of La Puente Road and Lemon Avenue intersection
Schools	Vejar Elementary School	1,655 feet	South	20222 East Vejar Road
	Cyrus J Morris Elementary School	2,628 feet	Southwest	19875 Calle Baja
	Walnut United Methodist Pre-School	3,088 feet	East	20601 La Puente Road
	Stanley G. Oswalt Academy	3,200 feet	Northwest	19501 Shadow Oak Drive
	Montessori of Walnut	3,234 feet	South	20121 Alisu Court
	Cross Schools	3,470 feet	East	20675 La Puente Road
	Suzanne Middle School	3,850 feet	East	525 Suzanne Road
	Walnut High School	3,900 feet	East	400 Pierre Road
	Westhoff Elementary	4,550 feet	Northeast	20151 Amar Road
Places of Worship	St. Lorenzo Ruiz Catholic Parish Community Church	170 feet	North	747 Meadow Pass Road
	Walnut Valley First Baptist Church	2,290 feet	East	20425 La Puente Road
	Evangelical Formosan Church of East Valley	3,260 feet	East	20625 La Puente Road
	Walnut Blessing Church-Nazarene	4,650 feet	East	20801 La Puente Road
	The Church of Jesus Christ of Latter-day Saints	4,682 feet	East	20801 Marcon Drive
	Christ the King Lutheran Church	5,350 feet	East	555 Gartel Drive
Parks/Recreational Areas	Arroyo Park	1,625 feet	West	19891 Camino Arroyo
	Lemon Creek Park	2,115 feet	South	130 Avenida Alipaz
	Butterfield Park	2,555 feet	West	19730 Camino Arroyo
	Creekside Park	2,940 feet	West	780 Creekside Drive
	Suzanne Park	3,660 feet	East	625 Suzanne Road
	Walnut Hills Park	4,355 feet	West	19475 Avenida Del Sol
	Walnut Ranch Park	4,366 feet	Northeast	20101 Amar Road

Source: Google Earth, 2016.

Note:
1. Distances are measured from the exterior project boundary only and not from individual construction areas within the interior of the project site.

The average annual temperature varies little throughout the Basin, averaging 75 degrees Fahrenheit (°F). However, with a less-pronounced oceanic influence, the eastern inland portions of the Basin show greater variability in annual minimum and maximum temperatures. All portions of the Basin have had recorded temperatures over 100°F in recent years.

Although the Basin has a semi-arid climate, the air near the surface is moist due to the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the Basin by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as “high fog,” are a characteristic climate feature. Annual average relative humidity is 70 percent at the coast and 57 percent in the eastern part of the Basin. Precipitation in the Basin is typically nine to 14 inches annually

and is rarely in the form of snow or hail due to typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the Basin.

The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet, the terrain prevents the pollutants from entering the upper atmosphere, resulting in a settlement in the foothill communities. Below 1,200 feet, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the day. Mixing heights for inversions are lower in the summer and more persistent, being partly responsible for the high levels of ozone (O_3) observed during summer months in the Basin. Smog in southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods of time, allowing them to form secondary pollutants by reacting with sunlight. The Basin has a limited ability to disperse these pollutants due to typically low wind speeds.

The area in which the project is located offers clear skies and sunshine, yet is still susceptible to air inversions. These inversions trap a layer of stagnant air near the ground, where it is then further loaded with pollutants. These inversions cause haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources.

Walnut experiences average high temperatures of up to 92 degrees (˚) Fahrenheit (F) during the month of August, and average low temperatures of 42˚F during the month of December. The City experiences approximately 17.30 inches of precipitation per year, with the most precipitation occurring in the month of February.[1]

5.2.4 SIGNIFICANCE THRESHOLD CRITERIA

AIR QUALITY THRESHOLD CRITERIA

Under CEQA, the SCAQMD is an expert commenting agency on air quality within its jurisdiction or impacting its jurisdiction. Under the FCAA, the SCAQMD has adopted Federal attainment plans for O_3 and PM_{10}. The SCAQMD reviews projects to ensure that they would not: (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of any Federal attainment plan.

The *CEQA Air Quality Handbook* also provides significance thresholds for both construction and operation of projects within the SCAQMD jurisdictional boundaries. If the SCAQMD thresholds are exceeded, a potentially significant impact could result. However, ultimately the lead agency determines the thresholds of significance for impacts. If a project proposes development in excess of the established thresholds, as outlined in *Table 5.2-4*, *South Coast Air Quality Management District Emissions Thresholds*, a significant air quality impact may occur and additional analysis is warranted to fully assess the significance of impacts.

[1] The Weather Channel, *Walnut, CA*, https://weather.com/weather/monthly/l/Walnut+CA+91789:4:US, accessed on March 23, 2016.

Table 5.2-4
South Coast Air Quality Management District Emissions Thresholds

Phase	Pollutant (lbs/day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Construction	75	100	550	150	150	55
Operational	55	55	550	150	150	55
Source: South Coast Air Quality Management District, CEQA Air Quality Handbook, November 1993.						

Local Carbon Monoxide Standards

In addition, the significance of localized project impacts depends on whether ambient CO levels in the vicinity of the project are above or below State and Federal CO standards, as follows:

- If the project causes an exceedance of either the State one-hour or eight-hour CO concentrations, the project would be considered to have a significant local impact.

- If ambient levels already exceed a State or Federal standard, then project emissions would be considered significant if they increase one-hour CO concentrations by 1.0 ppm or more, or eight-hour CO concentrations by 0.45 ppm or more.

Localized Significance Thresholds

Localized Significance Thresholds (LSTs) were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated July 2008) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific level proposed projects. The SCAQMD provides the LST lookup tables for one-, two-, and five-acre projects emitting CO, NO_X, or PM_{10}. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The SCAQMD recommends that any project over five acres should perform air quality dispersion modeling to assess impacts to nearby sensitive receptors.

Cumulative Emissions Thresholds

The SCAQMD's 2012 AQMP was prepared to accommodate growth, meet State and Federal air quality standards, and minimize the fiscal impact that pollution control measures have on the local economy. According to the SCAQMD *CEQA Air Quality Handbook*, project-related emissions that fall below the established construction and operational thresholds should be considered less than significant unless there is pertinent information to the contrary. If a project exceeds these emission thresholds, the SCAQMD *CEQA Air Quality Handbook* states that the significance of a project's contribution to cumulative impacts should be determined based on whether the rate of growth in average daily trips exceeds the rate of growth in population.

CEQA SIGNIFICANCE CRITERIA

Environmental impact thresholds as indicated in *CEQA Guidelines* Appendix G (Environmental Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it would:

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

Based on these standards, the proposed project's effects have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.2.5 PROJECT IMPACTS AND MITIGATION MEASURES

AIR QUALITY MANAGEMENT PLAN CONSISTENCY

● **IMPLEMENTATION OF THE PROPOSED PROJECT COULD CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF THE SCAQMD AIR QUALITY MANAGEMENT PLAN.**

Impact Analysis: On December 7, 2012, the SCAQMD Governing Board approved the *2012 AQMP*, which outlines its strategies for meeting the NAAQS for $PM_{2.5}$ and ozone. The *2012 AQMP* was forwarded to CARB for inclusion into the California *State Implementation Plan* (*SIP*) in January 2013. Subsequently, the *2012 AQMP* was submitted to the U.S. EPA as the 24-hour $PM_{2.5}$ SIP addressing the 2006 $PM_{2.5}$ NAAQS and as a limited update to the approved 8-hour ozone SIP. The 1-hour ozone attainment demonstration and vehicle miles traveled (VMT) emissions offset demonstration was submitted through CARB to the U.S. EPA. According to the *2012 AQMP*, two main criteria must be addressed and are analyzed below.

Criterion 1

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) Would the project result in an increase in the frequency or severity of existing air quality violations?

Since the consistency criteria identified under the first criterion pertain to pollutant concentrations, rather than to total regional emissions, an analysis of a project's pollutant emissions relative to localized pollutant concentrations is used as the basis for evaluating project consistency. As discussed later in this impact analysis, localized concentrations of CO, NO_X, PM_{10}, and $PM_{2.5}$ would be less than significant during proposed project operations. Therefore, the proposed project would not result in an increase in the frequency or severity of existing air quality violations. Because reactive organic gases (ROGs) are not a criteria pollutant, there is no ambient standard or localized threshold for ROGs. Due to the role ROG plays in ozone formation, it is classified as a precursor pollutant and only a regional emissions threshold has been established.

b) Would the project cause or contribute to new air quality violations?

As discussed later in this impact analysis, operations of the proposed project would result in emissions that would be below the SCAQMD operational thresholds. Therefore, the proposed project would not have the potential to cause or affect a violation of the ambient air quality standards.

c) Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?

The proposed project would result in less than significant impacts with regard to localized concentrations during project operations. As such, the proposed project would not delay the timely attainment of air quality standards or *2012 AQMP* emissions reductions.

Criterion 2

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that air quality planning within the Basin focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining a project's consistency focuses on whether or not the proposed project exceeds the assumptions utilized in preparing the forecasts presented in the *2012 AQMP*. Determining whether or not a project exceeds the assumptions reflected in the *2012 AQMP* involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

a) Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?

In the case of the *2012 AQMP*, three sources of data form the basis for the projections of air pollutant emissions: *City of Walnut General Plan* (*General Plan*), SCAG's *Growth Management* Chapter of the *Regional Comprehensive Plan* (*RCP*), and SCAG's *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy* (*RTP/SCS*). The *RTP/SCS* also provides socioeconomic forecast projections of regional population growth. The *General Plan* Land Use Map designates the project site as Hillside Single-family Residential and Residential Planned Development Zone (RPD) on the City's Zoning Map. The project proposes the development of 28 single-family residential homes. According to the *General Plan*, the intent of

the Hillside Single-family Residential land use category is to provide for single-family residential developments designed at low density levels. The *City of Walnut Municipal Code* (*Municipal Code*) describes the intent and purpose of the RPD zoning designation, as shown below.

> *"The intent and purpose of a Residential Planned Development Zone is to create a better of opportunity living environment; to promote the achievement of residential land use amenities than could otherwise be obtained under conventional development; to achieve greater design flexibility of residential acreage than could otherwise be possible through the application of conventional residential zone regulations; to encourage well planned developments through creative and imaginative planning encourage well planned developments through creative and imaginative planning principals, practice and techniques; to reserve a greater proportion of open space land for recreation, conservation, parking and other similar uses than is otherwise required by conventional residential zone regulations; to provide for a more efficient, appropriate and desirable use of land which is sufficiently unique in its physical characteristics and other circumstances to warrant special methods of development; to provide areas of natural scenic beauty, vistas, land marks, promontories and other environmental features through integrated land planning, design and unified control of physical development patterns, and, to set forth use regulations and property development regulations that will best assure that the intent and purpose of this chapter is carried out."*

The proposed project is considered consistent with the *General Plan* and *Zoning Code* designations as the proposed project involves residential uses and open space lots. Thus, the proposed project is consistent with the types, intensity, and patterns of land use envisioned for the site vicinity in the *RCP*. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the City; these are used by SCAG in all phases of implementation and review. Additionally, as the SCAQMD has incorporated these same projections into the *2012 AQMP*, it can be concluded that the proposed project would be consistent with the projections.

b) Would the project implement all feasible air quality mitigation measures?

Compliance with all feasible emission reduction measures identified by the SCAQMD would be required as identified later in this impact analysis. As such, the proposed project would meet this AQMP consistency criterion.

c) Would the project be consistent with the land use planning strategies set forth in the AQMP?

The proposed project would serve to implement various SCAG policies. The proposed project is located within a developed portion of the City, and is considered to be an infill development.

In conclusion, the determination of *2012 AQMP* consistency is primarily concerned with the long-term influence of a project on air quality in the Basin. The proposed project would not result in a long-term impact on the region's ability to meet State and Federal air quality standards. Also, the proposed project would be consistent with the goals and policies of the AQMP for control of fugitive dust. As discussed above, the proposed project's long-term influence would also be consistent with the SCAQMD and SCAG's goals and policies and is, therefore, considered consistent with the *2012 AQMP*.

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures: Refer to Mitigation Measure AQ-1. No additional mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.

SHORT-TERM CONTRUCTION AND LONG-TERM OPERATIONAL EMISSIONS

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD VIOLATE AIR QUALITY STANDARDS DURING CONSTRUCTION AND OPERATION.**

Impact Analysis:

Short-Term Construction Emissions

Short-term air quality impacts are predicted to occur during grading and construction operations associated with implementation of the proposed project. Temporary air emissions would result from the following activities:

- Particulate (fugitive dust) emissions from grading and building construction
- Exhaust emissions from the construction equipment and the motor vehicles of the construction crew

Construction activities would include demolition, site preparation, grading, building construction, paving, and architectural coating. Site grading would require approximately 55,000 cubic yards of balanced cut and fill on-site. Emissions for each construction phase have been quantified based upon the phase durations and equipment types. The analysis of daily construction emissions has been prepared utilizing the California Emissions Estimator Model (CalEEMod). Refer to Appendix C for the CalEEMod outputs and results. *Table 5.2-5*, *Short-Term (Construction) Emissions*, presents the anticipated daily short-term construction emissions.

Fugitive Dust Emissions

Construction activities are a source of fugitive dust (PM_{10} and $PM_{2.5}$) emissions that may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project area. Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill, and truck travel on unpaved roadways (including demolition as well as construction activities). Fugitive dust emissions vary substantially from day to day, depending on the level of activity, specific operations, and weather conditions. Fugitive dust from grading and construction is expected to be short-term and would cease upon project completion. Additionally, most of this material is inert silicates, rather than the complex organic particulates released from combustion sources, which are more harmful to health.

Table 5.2-5
Short-Term Construction Emissions

Emissions Source	Pollutant (pounds/day) [1, 2]					
	ROG[3]	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
2016						
Unmitigated Emissions	5.16	54.74	42.28	0.04	21.21	12.69
Mitigated Emissions	5.16	54.74	42.28	0.04	9.79	6.43
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Is Threshold Exceeded After Mitigation?	***No***	***No***	***No***	***No***	***No***	***No***
2017						
Unmitigated Emissions	11.32	67.58	62.93	0.07	10.61	7.17
Mitigated Emissions	11.32	67.58	62.93	0.07	6.60	5.05
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Is Threshold Exceeded After Mitigation?	***No***	***No***	***No***	***No***	***No***	***No***

Source: Michael Baker International, March 2016

Notes:
1. Emissions were calculated using CalEEMod, as recommended by the SCAQMD.
2. The reduction/credits for construction emission mitigations are based on mitigation included in CalEEMod and as typically required by the SCAQMD. The mitigation includes the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.
3. Both ROGs and VOCs are subsets of organic gases that are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. Although they represent slightly different subsets of organic gases, they are used interchangeably for the purposes of this analysis.

Refer to Air Quality Emissions Data in Appendix C, for assumptions used in this analysis.

Dust (larger than 10 microns) generated by such activities usually becomes more of a local nuisance than a serious health problem. Of particular health concern is the amount of PM_{10} (particulate matter smaller than 10 microns) generated as a part of fugitive dust emissions. PM_{10} poses a serious health hazard alone or in combination with other pollutants. Fine Particulate Matter ($PM_{2.5}$) is mostly produced by mechanical processes. These include automobile tire wear, industrial processes such as cutting and grinding, and re-suspension of particles from the ground or road surfaces by wind and human activities such as construction or agriculture. $PM_{2.5}$ is mostly derived from combustion sources, such as automobiles, trucks, and other vehicle exhaust, as well as from stationary sources. These particles are either directly emitted or are formed in the atmosphere from the combustion of gases such as NO_X and SO_X combining with ammonia. $PM_{2.5}$ components from material in the earth's crust, such as dust, are also present, with the amount varying in different locations.

Although construction emissions are expected to be below SCAQMD thresholds without mitigation, Mitigation Measure AQ-1 requires implementation of dust control techniques (i.e., daily watering), limitations on construction hours, and adherence to SCAQMD Rules 402 and 403, which require watering of inactive and perimeter areas, track out requirements, etc., to ensure that PM_{10} and $PM_{2.5}$ concentrations are below SCAQMD thresholds. These are standard dust control measures that the SCAQMD requires for all projects. As indicated in *Table 5.2-5*, total PM_{10} and $PM_{2.5}$ emissions would be below the SCAQMD threshold with the implementation of Mitigation Measure AQ-1. Therefore, particulate matter impacts during construction would be less than significant.

ROG Emissions[2]

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. In accordance with the methodology prescribed by the SCAQMD, the ROG emissions associated with paving have been quantified with CalEEMod. Architectural coatings were also quantified with CalEEMod based upon the size of the buildings.

The highest concentration of ROG emissions would be generated during the application of architectural coatings on the building. As required by law, all architectural coatings for the proposed project structures would comply with SCAQMD Regulation XI, Rule 1113 – Architectural Coating.[3] Rule 1113 provides specifications on painting practices as well as regulates the ROG content of paint. As shown in *Table 5.2-5*, proposed project construction would not result in an exceedance of ROG emissions during any years of construction. Therefore, impacts would be less than significant in this regard.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to and from the site. Construction contractors would be required to adhere to standard SCAQMD regulations, such as maintaining all construction equipment in proper tune, shutting down equipment when not in use for extended periods of time, and implementing SCAQMD Rule 403. As noted in *Table 5.2-5*, construction equipment exhaust would not exceed SCAQMD thresholds. Therefore, impacts are less than significant in this regard.

Naturally Occurring Asbestos

Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by State, Federal, and international agencies and was identified as a toxic air contaminant by the California Air Resources Board in 1986.

Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed. According to the Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to*

[2] ROGs and VOCs are subsets of organic gases that are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. Although they represent slightly different subsets of organic gases, they are used interchangeably for the purposes of this analysis.

[3] South Coast Air Quality Management District, *Regulation XI Source Specific Standards,* http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf?sfvrsn=15, accessed on March 23, 2016.

Contain Naturally Occurring Asbestos Report (August 2000), serpentinite and ultramafic rocks are not known to occur within the project area. Thus, there would be no impact in this regard.

Construction Odors

Potential odors could arise from the diesel construction equipment used on-site, as well as from architectural coatings and asphalt off-gassing. Odors generated from the referenced sources are common in the man-made environment and are not known to be substantially offensive to adjacent receptors. Additionally, odors generated during construction activities would be temporary. Therefore, construction odors are considered to be a less than significant impact.

Total Daily Construction Emissions

In accordance with the SCAQMD Guidelines, CalEEMod was utilized to model construction emissions for ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Construction would occur over a six-month period with the greatest emissions being generated during the initial stages of construction. Additionally, the greatest amount of ROG emissions would typically occur during the final stages of development due to the application of architectural coatings.

CalEEMod allows the user to input mitigation measures such as watering the construction area to limit fugitive dust. Mitigation measures that were input into CalEEMod allow for certain reduction credits and result in a decrease of pollutant emissions. Reduction credits are based upon studies developed by CARB, SCAQMD, and other air quality management districts throughout California, and were programmed within CalEEMod. As indicated in *Table 5.2-5*, CalEEMod calculates the reduction associated with recommended mitigation measures.

As depicted in *Table 5.2-5*, construction emissions would be less than significant with implementation of Mitigation Measure AQ-1. Thus, construction-related air emissions would be less than significant.

Long-Term Operational Emissions

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern (NO_X and ROG react with sunlight to form O_3 [photochemical smog], and wind currents readily transport SO_X, PM_{10}, and $PM_{2.5}$). However, CO tends to be a localized pollutant, dispersing rapidly at the source.

Both existing and project-generated vehicle emissions have been estimated using CalEEMod in order to obtain the net increase. Trip generation rates associated with the proposed project were based on traffic data within the *Brookside Project Traffic Impact Analysis* (Traffic Impact Analysis), prepared by Michael Baker International, dated November 20, 2015. The proposed project would result in approximately 267 new daily trips. *Table 5.2-6*, *Long-Term Air Emissions*, presents the anticipated mobile source emissions. As shown in *Table 5.2-6*, unmitigated emissions generated by vehicle traffic associated with the proposed project would not exceed established SCAQMD regional thresholds.

Table 5.2-6
Long-Term Air Emissions

Source	Estimated Emissions (pounds/day) [1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Sources	8.52	0.21	16.41	0.02	2.15	2.15
Energy Sources	0.02	0.21	0.09	0.00	0.02	0.02
Mobile Sources	1.07	3.18	12.17	0.03	2.09	0.59
Total Emissions	***9.61***	***3.60***	***28.67***	***0.05***	***4.26***	***2.76***
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Is Threshold Exceeded? (Significant Impact)	**No**	**No**	**No**	**No**	**No**	**No**
Source: Michael Baker International, March 2016.						
Notes: 1. Based on CalEEMod modeling results, worst-case seasonal emissions for area and mobile emissions have been modeled.						
Refer to Air Quality Emissions Data in Appendix C, for assumptions used in this analysis.						

Area Source Emissions

Area source emissions would be generated due to an increased demand for consumer products, architectural coating, and landscaping. The proposed project would not include wood burning fireplaces or other devices per SCAQMD Rule 445 (Wood Burning Devices). As shown in *Table 5.2-6*, unmitigated area source emissions from the proposed project would not exceed SCAQMD thresholds for ROG, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$.

Energy Source Emissions

Energy source emissions would be generated as a result of electricity and natural gas (non-hearth) usage associated with the proposed project. The primary use of electricity and natural gas by the proposed project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. As shown in *Table 5.2-6*, unmitigated energy source emissions from the proposed project would not exceed SCAQMD thresholds for ROG, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$.

Operational Emissions Conclusion

As indicated in Table 5.2-6, unmitigated operational emissions from the proposed project would not exceed SCAQMD thresholds. As such, the proposed project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation. Thus, operational air quality impacts would be less than significant.

Level of Significance Before Mitigation: Potentially significant impact for fugitive dust and total construction emissions. Less than significant impact for ROG emissions, construction odors, construction equipment and worker vehicle exhaust, and operational emissions. No impact for naturally occurring asbestos.

Mitigation Measures:

AQ-1 Prior to Grading Permit issuance, the Project Applicant/Contractor shall demonstrate, to the satisfaction of the City of Walnut Planning Division that the project plans and specifications stipulate that, in compliance with SCAQMD Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures, as specified in the SCAQMD's Rules and Regulations. In addition, SCAQMD Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Implementation of the following measures would reduce short-term fugitive dust impacts on nearby sensitive receptors:

- All active portions of the construction site shall be watered every three hours during daily construction activities and when dust is observed migrating from the project site to prevent excessive amounts of dust.
- Pave or apply water every three hours during daily construction activities or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas. More frequent watering shall occur if dust is observed migrating from the site during site disturbance.
- Any on-site stockpiles of debris or on-site haul roads, dirt, or other dusty material shall be enclosed, covered, or watered twice daily, or non-toxic soil binders shall be applied.
- All grading and excavation operations shall be suspended when wind speeds exceed 25 miles per hour.
- Disturbed areas shall be replaced with ground cover or paved immediately after construction is completed in the affected area.
- Track-out devices such as gravel bed track-out aprons (3 inches deep, 25 feet long, 12 feet wide per lane and edged by rock berm or row of stakes) shall be installed to reduce mud/dirt trackout from unpaved truck exit routes. Alternatively, a wheel washer shall be used at truck exit routes.
- On-site vehicle speed shall be limited to 15 miles per hour.
- All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site.

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated for fugitive dust and total construction emissions. Less Than Significant Impact for ROG emissions, construction odors, construction equipment and worker vehicle exhaust, and operational emissions. No Impact for naturally occurring asbestos

LOCALIZED EMISSIONS

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS.**

Impact Analysis: Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

Sensitive receptors near the project site include surrounding residences adjacent to the north and west of the project site. In order to identify impacts to sensitive receptors, the SCAQMD recommends addressing localized significance thresholds (LSTs) for construction and operations impacts (area sources only). The CO hotspot analysis following the LST analysis addresses localized mobile source impacts.

Localized Significance Thresholds (LST)

LSTs were developed in response to SCAQMD Governing Board's Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized air quality impacts. The SCAQMD provides the LST screening lookup tables for one, two, and five acre projects emitting CO, NO_X, $PM_{2.5}$, or PM_{10}. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The SCAQMD recommends that any project over five acres should perform air quality dispersion modeling to assess impacts to nearby sensitive receptors. The project is located within Source Receptor Area (SRA) 10, Pomona/Walnut Valley.

Construction

The SCAQMD guidance on applying CalEEMod to LSTs specifies the amount of acres a particular piece of equipment would likely disturb per day. Based on the SCAQMD guidance on applying CalEEMod to LSTs, the project would disturb at most 25.84 acres of land per day. Therefore, the LST thresholds for five acres was conservatively utilized for the construction LST analysis. The closest sensitive receptors to the project site are residential uses located adjoining the project site to the east. These sensitive land uses may be potentially affected by air pollutant emissions generated during on-site construction activities. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. As the nearest sensitive uses adjoin the project site, the lowest available LST values for 25 meters were used. *Table 5.2-7*, *Localized Significance of Construction Emissions*, shows the localized unmitigated and mitigated (assumes Mitigation Measure AQ-1) construction-related emissions. It is noted that the localized emissions presented in *Table 5.2-7* are less than those in *Table 5.2-5* because localized emissions include only on-site emissions (i.e., from construction equipment and fugitive dust), and do not include off-site emissions (i.e., from hauling activities). As seen in *Table 5.2-7*, mitigated on-site emissions would not exceed the LSTs for SRA 10.

Operations

For proposed project operations, the five-acre threshold was conservatively utilized, as the project site is approximately 25.84 acres. As the nearest sensitive uses adjoin the project site, the most conservative LST values for 25 meters were used. As seen in *Table 5.2-8*, *Localized Significance of Operational Emissions*, project-related mitigated operational area source emissions would be negligible and would be below the LSTs. The mitigated area source emissions presented in *Table 5.2-8* were derived from the CalEEMod, and include the following proposed project features that would reduce operational emissions: use only natural gas hearths, installation of low-flow water devices, and water efficient landscaping and irrigation. As such, operational LST impacts would be less than significant in this regard.

Carbon Monoxide Hotspots

CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (i.e., adversely affecting residents, school children, hospital patients, the elderly, etc.).

The SCAQMD requires a quantified assessment of CO hotspots when a project increases the volume-to-capacity ratio (also called the intersection capacity utilization) by 0.02 (two percent) for any intersection with an existing level of service LOS D or worse. Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersections.

The City is located in the South Coast Air Basin (Basin), which is designated as an attainment/maintenance area for the Federal CO standards and an attainment area for State standards. There has been a decline in CO emissions even though vehicle miles traveled on U.S. urban and rural roads have increased. On-road mobile source CO emissions have declined 24 percent between 1989 and 1998, despite a 23 percent rise in motor vehicle miles traveled over the same 10 years. California trends have been consistent with national trends; CO emissions declined 20 percent in California from 1985 through 1997 while vehicle miles traveled increased 18 percent in the 1990s. Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

A detailed CO analysis was conducted in the *Federal Attainment Plan for Carbon Monoxide* (CO Plan) for the SCAQMD's 2003 Air Quality Management Plan. The locations selected for microscale modeling in the CO Plan are worst-case intersections in the Basin, and would likely experience the highest CO concentrations. Thus, CO analysis within the CO Plan is utilized in a comparison to the proposed project, since it represents a worst-case scenario with heavy traffic volumes within the Basin.

Table 5.2-7
Localized Significance of Construction Emissions

Source	Pollutant (pounds/day)[1]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Year 1				
Total Unmitigated On-Site Emissions	54.63	41.11	21.00	12.63
Total Mitigated On-Site Emissions	54.63	41.11	9.63	6.38
Localized Significance Threshold[1]	*236*	*1,566*	*12*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 2				
Total Unmitigated On-Site Emissions	35.98	25.38	8.27	5.21
Total Mitigated On-Site Emissions	35.98	25.38	4.35	3.11
Localized Significance Threshold[1]	*236*	*1,566*	*12*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***

Source: Michael Baker International, March 2016.

Notes:
1. The Localized Significance Threshold was determined using Appendix C of the SCAQMD Final Localized Significant Threshold Methodology guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The Localized Significance Threshold was based on the anticipated daily acreage disturbance for construction, the distance to sensitive receptors, and the source receptor area (SRA 10).

Table 5.2-8
Localized Significance of Operational Emissions

Source	Pollutant (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Total Unmitigated Area Source Emissions	0.21	16.41	2.15	2.15
Total Mitigated Area Source Emissions[1]	0.03	2.34	0.05	0.05
Localized Significance Threshold[2]	*236*	*1,566*	*3*	*2*
Thresholds Exceeded?	***No***	***No***	***No***	***No***

Source: Michael Baker International, March 2016.

Notes:
1. The proposed project does not include hearths.
2. The Localized Significance Threshold was determined using Appendix C of the SCAQMD Final Localized Significant Threshold Methodology guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The Localized Significance Threshold was based on the total acreage, the distance to sensitive receptors, and the source receptor area (SRA 10).

Of these locations, the Wilshire Boulevard/Veteran Avenue intersection in Los Angeles experienced the highest CO concentration (4.6 parts per million [ppm]), which is well below the 35-ppm 1-hr CO Federal standard. The Wilshire Boulevard/Veteran Avenue intersection is one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection, it can be reasonably inferred that CO hotspots would not be experienced at any intersections within the City of Irvine near the project site due to the low volume of traffic (267 daily trips) that would occur as a result of project implementation. Therefore, impacts would be less than significant in this regard.

Level of Significance Before Mitigation: Less Than Significant Impact for localized significance of construction emissions, operational emissions, and carbon monoxide hotspots.

Mitigation Measures: Refer to Mitigation Measure AQ-1. No additional mitigation measures are required.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated for localized significance of construction emissions. Less Than Significant Impact for localized significance of operational emissions and carbon monoxide hotspots.

ODORS

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD CREATE OBJECTIONABLE ODORS.**

Impact Analysis: According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any uses identified by the SCAQMD as being associated with odors.

Construction activities associated with the proposed project may generate detectable odors from heavy-duty equipment exhaust. Construction-related odors would be short-term in nature and cease upon project completion. Any impacts to existing adjacent land uses would be short-term and are less than significant.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

5.2.6 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **THE PROPOSED PROJECT ALONG WITH OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF CRITERIA POLLUTANTS.**

Impact Analysis: With respect to the proposed project's construction-related air quality emissions and cumulative Basin-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the *2012 AQMP* pursuant to Federal Clean Air Act mandates. As such, the proposed project would comply with SCAQMD Rule 403 requirements, and implement all feasible mitigation measures (Mitigation Measure AQ-1). Rule 403 requires that fugitive dust be controlled with the best available control measures in order to reduce dust so that it does not remain visible in the atmosphere beyond the property line of the proposed project. In addition, the proposed project would comply with adopted *2012 AQMP* emissions control measures. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with

adopted AQMP emissions control measures) would also be imposed on construction projects throughout the Basin, which would include related projects.

As discussed previously, the proposed project would not result in long-term air quality impacts, as emissions would not exceed the SCAQMD adopted operational thresholds. Additionally, adherence to SCAQMD rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. Emission reduction technology, strategies, and plans are constantly being developed. As a result, the proposed project would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant. Therefore, cumulative operational impacts associated with implementation of the proposed project would be less than significant.

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures: Refer to Mitigation Measure AQ-1. No additional mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.

5.2.7 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in less than significant project and cumulative impacts related to air quality following imposition of the identified mitigation measures and compliance with Federal, State, and local regulatory requirements. As such, no significant unavoidable impacts would result from the implementation of The Brookside Project.

5.2.8 SOURCES CITED

California Air Resources Board, *Aerometric Data Analysis and Measurement System (ADAM)*, summaries from 2012 to 2014, http://www.arb.ca.gov/adam.

Environ International Corporation and the South Coast Air Quality Management District, *California Emissions Estimator Model (CalEEMod) Version 2013.2.2*, 2013.

Michael Baker International, Inc., *Air Quality Assessment for The Brookside Project, City of Walnut*, March 28, 2016.

Michael Baker International, Inc., *The Brookside Project (Tentative Tract No. 72798) in Walnut, Traffic Impact Analysis*, November 20, 2015.

Michael Baker International, Inc., *The Brookside Tentative Tract No. 72798*, May 20, 2015.

South Coast Air Quality Management District, *2012 Air Quality Management Plan*, December 7, 2012.

South Coast Air Quality Management District, *CEQA Air Quality Handbook*, November 1993.

South Coast Air Quality Management District, *Final Localized Significance Threshold Methodology*, July 2008.

South Coast Air Quality Management District, *Regulation XI Source Specific Standards,* http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf?sfvrsn=15, accessed on March 23, 2016.

The Weather Channel, *Walnut, CA*, https://weather.com/weather/monthly/l/Walnut+CA+91789:4:US, accessed on March 23, 2016.

5.3 BIOLOGICAL RESOURCES

This section identifies potential impacts to existing cultural and historic resources within and around the project site and to assess the significance of such resources. Information in this section is based on information and conclusions contained in the following plans or studies:

- RBF Consulting, *The Brookside Tentative Tract No. 72798 Habitat Assessment*, dated May 2014 (included in its entirety as Appendix D).
- Michael Baker International, *Updated Habitat Assessment Letter for the Brookside Tentative Tract No. 72798 in the City of Walnut, California*, dated April 19, 2016 (included in its entirety as Appendix E).
- RBF Consulting, *The Brookside Tentative Tract 72798, City of Walnut, California, Delineation of State and Federal Jurisdictional Waters*, dated January 2014 (included in its entirety as Appendix F).
- Michael Baker International, *Updated Jurisdictional Delineation Letter for the Brookside Tentative Tract No. 72798 in the City of Walnut, California*, dated April 19, 2016 (included in its entirety as Appendix G).
- RBF Consulting, *The Brookside Tentative Tract 72798, City of Walnut, California, Tree Survey*, dated May 2014 (included in its entirety as Appendix H).
- Michael Baker International, *Updated Tree Survey Letter for the Brookside Tentative Tract No. 72798 in the City of Walnut, California*, dated April 19, 2016 (included in its entirety as Appendix I).

NOTE: AWAITING UPDATED LETTERS FROM MICHAEL BAKER THAT REFLECT CURRENT TTM

5.3.1 REGULATORY SETTING

The following is a summary of the regulatory context under which biological resources are managed at the Federal, State, and local level.

FEDERAL

Army Corps of Engineers

Under *Clean Water Act* Section 404 and *Rivers and Harbors Act* Section 10, the United States Army Corps of Engineers (USACE or Corps) has authority to regulate activity that could discharge fill or dredge material or otherwise adversely modify wetlands or other waters of the United States. Perennial and intermittent creeks and adjacent wetlands are considered waters of the United States and are within the regulatory jurisdiction of the USACE. The USACE implements the Federal policy embodied in *Executive Order 11990*, which, when implemented, is intended to result in no net loss of wetlands values or acres. In achieving the goals of the Clean Water Act, the Corps seeks to avoid adverse impacts and to offset unavoidable adverse impacts on existing aquatic resources. Any fill or adverse modification of waters of the United States (U.S.), wetlands may require a permit from the Corps prior to the start of work. Typically, permits issued by the Corps are a condition of a project as mitigation to offset unavoidable impacts on wetlands and other waters of the U.S. in a manner that achieves the goal of no net loss of wetland acres or values.

Fish and Wildlife Service

The United States Fish and Wildlife Service (USFWS) implements the *Migratory Bird Treaty Act* (*16 United States Code* (*USC*) Section 703-711), the *Bald and Golden Eagle Protection Act* (*16 USC* Section 668), Section 10, and the *Federal Endangered Species Act* (*FESA; 16 USC* Section 153 et seq.). Projects that would result in take of any federally listed threatened or endangered species are required to obtain permits from the USFWS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (incidental take permit) of *FESA*, depending on the involvement by the federal government in permitting or funding the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what mitigation measures would be required to avoid jeopardizing the species.

Take under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of *FESA*, however, the USFWS advises project applicants that they could be elevated to listed status at any time.

STATE

California Endangered Species Act

The *California Endangered Species Act* (*CESA*) declares that deserving plant or animal species will be given protection by the state because they are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the state. *CESA* establishes that it is state policy to conserve, protect, restore, and enhance Endangered species and their habitats. Under state law, plant and animal species may be formally designated as Rare, Threatened, or Endangered through official listing by the California Fish and Game Commission. Listed species are given greater attention during the land use planning process by local governments, public agencies, and landowners than are species that have not been listed.

On private property, Endangered plants may also be protected by the *Native Plant Protection Act* (*NPPA*) of 1977. Threatened plants are protected by CESA, and Rare plants are protected by the *NPPA*. However, *CESA* authorizes that *"Private entities may take plant species listed as Endangered or Threatened under the ESA and CESA through a Federal incidental take permit issued pursuant to Section 10 of the ESA, if the CDFG certifies that the incidental take statement or incidental take permit is consistent with CESA."* In addition, the *California Environmental Quality Act* (*CEQA*) requires disclosure of any potential impacts on listed species and alternatives or mitigation that would reduce those impacts.

California Environmental Quality Act – Treatment of Listed Plant and Animal Species

ESA and *CESA* protect only those species formally listed as Threatened or Endangered (or Rare in the case of the State list). *CEQA Guidelines* Section 15380 independently defines "Endangered" species of plants or animals as those whose survival and reproduction in the wild are in immediate jeopardy and "Rare" species as those who are in such low numbers that they could become Endangered if their environment worsens. Therefore, a project normally will have a significant effect on the environment if it will substantially affect a Rare or Endangered species of animal or plant or the habitat of the species. The significance of impacts to a species under *CEQA* must be based on analyzing actual rarity and threat of extinction despite legal status or lack thereof.

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) derives its authority from the *Fish and Game Code* of California Species listed under the *California Endangered Species Act* (*CESA*; *Fish and Game Code* Section 2050 et seq.) prohibits take of listed threatened or endangered species. Take under CESA is restricted to direct killing of a listed species and does not prohibit indirect harm by way of habitat modification.

Species of Special Concern (CSC) is a category used by CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that afforded by the *Fish and Game Code*. The CSC category is intended by the CDFW for use as a management tool to take these species into special consideration when decisions are made concerning the development of natural lands.

The CDFW also has authority to administer the *Native Plant Protection Act* (*Fish and Game Code* Section 1900 et seq.). The Act requires CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c), the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of plant.

Perennial and intermittent streams also fall under the jurisdiction of the CDFW. *Fish and Game Code* Sections 1601-1603 (Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone (which could extend to the 100-year flood plain) consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake.

The *Natural Communities Conservation Planning Act* of 1991 was established by the California Legislature, is directed by the Department of Fish and Game, and is being implemented by the state, and public and private partnerships to protect habitat in California. As opposed to the single species interpretation of the *Endangered Species Act*, this act aims at protecting many species using a regional approach to habitat preservation. A Natural Communities Conservation Plan (NCCP) identifies and provides for the regional or area wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity.

Fish and Game Code Section 1602

Streambeds and other drainages that occur within the planning area are subject to regulation by the CDFW. The CDFW considers most drainages to be “streambeds” unless it can be demonstrated otherwise. A stream is defined as a body of water that flows at least periodically or intermittently through a bed or channel with banks and supports fish or other aquatic life. This includes watercourses having a surface or sub-surface flow that supports, or has supported, riparian vegetation. CDFW jurisdiction typically extends to the edge of the riparian canopy, and therefore, usually encompasses a larger area than Corps jurisdiction.

Fish and Game Code Sections 3503, 3503.5, and 3800

These sections of the *Fish and Game Code* prohibit the destruction of bird nests and eggs (Section 3503), and the take of birds of prey (Section 3503.5) and nongame birds (Section 3800). Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered "take." Such a take would also violate federal law protecting migratory birds. Incidental Take Permits (i.e., Management Agreements) are required from the CDFW for projects that may result in the incidental take of species listed by the State of California as Endangered, Threatened, or candidate species. The permits require that impacts to protected species be minimized to the extent possible and mitigated to a level of insignificance.

Porter Cologne Act

The State Water Quality Control Board has ruled after the U.S. Supreme Court decisions to reduce the Federal jurisdiction over waters of the U.S., that the State would require that a Waste Discharge Report be required for any discharge of waste, including fill, into "waters of the state," other than those projects requiring a Federal Section 404 permit and the State's Section 401 Certification of the Federal permit, under the authority of the Porter Cologne Act. This essentially extends the State's assumption of the NPDES program, by modifying the definition of waste. The Regional Water Quality Control Board is responsible for issuing Waste Discharge Permits.

LOCAL

City of Walnut General Plan

The City of Walnut General Plan Environmental Resources Management Element consolidates the Conservation, Recreation, Open Space, and Scenic Highway Elements as integral components of the General Plan.

The City of Walnut considers the following policy statement to be basic in establishing programs and implementation measures for the Conservation, Recreation, Open Space, and Scenic Highways Elements of the General Plan.

3. Protect scenic, historic, natural wildlife, archaeological and cultural resources of this area.

City of Walnut City Code

The *Walnut City Code* Title VI Planning and Zoning, Chapter 25 Zoning, Article XVI Supplemental Planning Requirements, Division 5 Oak/Walnut Tree Preservation provides in Section 25-178.1 that "*It shall be the policy of the City of Walnut to require the preservation of all healthy trees unless compelling reasons justify the removal of such trees."* For purposes of Division 5, Section 25-178.2 defines tree to include only oak and walnut trees.

5.3.2 ENVIRONMENTAL SETTING

HABITAT ASSESSMENT METHODOLOGY

A literature review and records search was conducted to determine which sensitive biological resources have the potential to occur on the project site or within the general vicinity. In addition, a general habitat assessment of the project site was conducted. The field survey provided information on the existing conditions of the site and the potential for sensitive biological resources to occur.

Literature Review

Prior to conducting the field visit, a thorough literature review and records search was conducted for sensitive biological resources potentially occurring on or within the vicinity of the project site. Previously recorded occurrences of special status plant and wildlife species and their proximity to the project site were determined through a query of CDFW's California Natural Diversity Database (CNDDB), the California Native Plant Society's (CNPS) *Electronic Inventory of Rare, Threatened, and Endangered Plants of California*, Calflora Database, compendia of special-status species published by CDFW, and USFWS species listings.

Literature detailing biological resources previously observed near the project site and historical land uses were reviewed to understand the extent of disturbances to the habitats on-site. Standard field guides and texts on sensitive and non-sensitive biological resources were reviewed for habitat requirements, as well as the following resources:

- United States Department of Agriculture Natural Resource Conservation Service, Soil Survey
- USFWS Critical Habitat designations for Threatened and Endangered Species

The literature review provided a baseline from which to inventory the biological resources potentially occurring on the project site. Additional recorded occurrences of these species found on or near the project site were derived from database queries. The CNDDB ArcGIS database was used, together with ArcGIS software, to locate the nearest occurrence and determine the distance from the project site.

Habitat Assessment and Field Investigation

RBF Consulting biologists Travis J. McGill and Ryan Winkleman inventoried and evaluated the condition of the habitat on the project site on April 16, 2014. Plant communities identified by signature on aerial photographs during the literature review were ground-truthed by walking meandering transects through the plant communities and along boundaries between plant communities. The plant communities were evaluated for their potential to support sensitive plant and wildlife species, and in addition the biologists paid attention to indicators of riparian/riverine habitat and corridors and linkages that may support the movement of wildlife through the area.

All plant and wildlife species observed, as well as dominant plant species within each plant community, were recorded. Detections of animal species were made by scat, trails, tracks, burrows, nests, and visual and aural observation. In addition, site characteristics such as soil condition, topography, presence of indicator species, condition of the plant communities, hydrology, and evidence of human use of the site were noted. The plant communities were

classified in accordance with CDFW (2003) and Holland (1986), delineated on an aerial photograph, and then digitized into GIS Arcview. The Arcview application was used to compute the area of each plant community in acres.

HABITAT ENVIRONMENTAL SETTING

At the time of the field investigation in April 2014, the project site was used as an equestrian center. The site consists of stables and various riding areas, mostly consisting of grassy or bare fields. Two water bodies converge on-site, Lemon Creek and an unnamed tributary. The area immediately surrounding these streambeds is comprised of a mixed forest with unpaved trails going through it.

Vegetation

Three plant communities were observed within the boundaries of the project site during the habitat assessment (refer to *Exhibit 5.3-1*, *Vegetation*): mixed forest, ruderal, and developed/ landscaped. These communities are described in further detail below.

Mixed Forest

A mixed forest plant community surrounds the on-site drainage features traversing the project site from north to south. This plant community is multi-canopied with no single dominant species. Co-dominant plant species observed include eucalyptus (*Eucalyptus* sp.), Peruvian pepper (*Schinus molle*), California walnut (*Juglans californica*), white alder (*Alnus rhombifolia*), common fig (*Ficus carica*), and Mexican fan palm (*Washingtonia robusta*). Due to the presence of eucalyptus and Peruvian pepper, there is little to no vegetation in the understory.

Ruderal

Several ruderal fields are located at the southern end of the project site, south of all equestrian riding areas. This plant community is dominated by non-native grasses and early successional plant species. Plant species observed in this community include Bermuda grass (*Cynodon dactylon*), ryegrass (*Lolium rigidum*), cheeseweed (*Malva parviflora*), and panic veldtgrass (*Ehrharta erecta*).

Developed/Landscaped

Much of the site can be characterized as developed and consists of equestrian facilities, including buildings, structures, and fields with associated landscaped vegetation. The buildings and structures generally consist of facility offices and administration areas, horse stables, and horse pens. Fields are generally fenced and are either completely bear with no vegetative cover or are vegetated with manicured grassy lawns. The ground between these areas is mostly covered with manicured lawns and landscaped ornamental trees, though in the northeast portion of the project site in the area surrounding the horse pens the ground is all bare. Access roads and paths through this area are graded but are not paved.

Wildlife

Plant communities provide food sources, along with foraging, nesting and denning sites, cover, and protection from adverse weather or predation. This section provides a discussion of those wildlife species observed, expected, or not expected to occur on-site. The discussion is to be used as a general reference and is limited by the season, time of day, and weather condition in which the survey was conducted. Wildlife observations were based on calls, songs, scat, tracks, burrows and actual sightings of animals.

Amphibians

A single Pacific chorus frog (*Pseudacris regilla*) was heard calling in an open, mostly pooled area immediately downstream of where the unnamed tributary enters the project site. No amphibian species were visually observed during the habitat assessment. On-site aquatic habitat is most conducive to the presence of Pacific chorus frogs and western toads (*Anaxyrus boreas*), though it is possible that salamanders could also be present within the leaf litter of the stream banks. However, due to the general channelization of the streambeds, the water is mostly too swift to support amphibian breeding efforts. Some isolated areas, such as where the chorus frog was calling, may provide sufficient breeding habitat.

Reptiles

A western fence lizard (*Sceloporus occidentalis*) was observed during the 2014 habitat assessment, but no other reptiles were found. The grassy fields and the area immediately surrounding the streambed have the potential to provide suitable habitat for additional reptilian species. Common reptile species that have the potential to occur on the project site include side-blotched lizard (*Uta stansburiana*), southern alligator lizard (*Elgaria multicarinata*), California kingsnake (*Lampropeltis californiae*), southern pacific rattlesnake (*Crotalus oreganus helleri*), and gopher snake (*Pituophis catenifer*).

Avian

The plant communities found on the project site provide suitable nesting and foraging habitat for a variety of avian species. The project site has the potential to provide suitable habitat for migrant and resident sensitive avian species. Because a large number of bird species were observed during the habitat assessment, only the most common species are noted here. A full list of observed species is in Appendix D. The most common bird species detected within and surrounding the project site during the 2014 habitat assessment include Pacific-slope flycatcher (*Empidonax difficilis*), band-tailed pigeon (*Patagioenas fasciata*), house finch (*Haemorhous mexicanus*), cedar waxwing (*Bombycilla cedrorum*), American robin (*Turdus migratorius*), lesser goldfinch (*Carduelis psaltria*), California towhee (*Melozone crissalis*), and yellow-rumped warbler (*Setophaga coronata*).

Mammals

Fox squirrels (*Sciurus niger*) were observed on-site during the 2014 habitat assessment in the riparian corridor surrounding Lemon Creek. The site is probably unlikely to support other mammal species due to its reasonable amount of disturbance outside of the creekbed. While no burrows were observed, California ground squirrel (*Otospermophilus beecheyi*) could occur in some areas such as the overgrown grassy field at the southern boundary of the site.

Nesting Birds

On-site plant communities provide suitable foraging and cover habitat for year-round/seasonal avian residents, migrating songbirds, and raptors that occur in the area. Vegetation within and adjacent to the project site has the potential to provide suitable nesting opportunities for a number of avian species, in particular amongst the large number of trees on-site. The habitat assessment was conducted in mid-April, and three occupied bird nests were observed, including bushtit (*Psaltriparus minimus*), house finch, and red-tailed hawk (*Buteo jamaicensis*).

Migratory Corridors and Linkages

Habitat linkages provide links between larger undeveloped habitat areas that are separated by development. Wildlife corridors are similar to linkages, but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species but inadequate for others. Wildlife corridors are significant features for dispersal, seasonal migration, breeding, and foraging. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

The project site is surrounded on all sides by urban development and does not provide a corridor between undisturbed areas. South of the project site, Lemon Creek continues underground. However, both Lemon Creek and the unnamed tributary are on the surface north of the project site and can serve as a constrained migration corridor for wildlife movement to the north.

Jurisdictional Areas

A jurisdictional delineation of state and federal waters was conducted by RBF Consulting regulatory specialists Wesley Salter and Tim Tidwell in December 2013. The delineation documents the regulatory authority of the Corps, Regional Board, and CDFW pursuant to *Federal Clean Water Act* Sections 401 and 404, the *California Porter-Cologne Water Quality Control Act*, and *California Fish and Game Code* Section 1600, respectively.

State and federal jurisdictional areas were identified within the project site. Lemon Creek and an unnamed drainage (“Drainage A”) are subject to the jurisdictional authority of all three aforementioned agencies. Placement of fill and/or alteration within these jurisdictional areas may be subject to Corps, Regional Board, and CDFW jurisdiction and approval. *Table 5.3-1* identifies the total on-site jurisdiction of each regulatory agency as illustrated in the jurisdictional delineation report.

Table 5.3-1
Jurisdictional Areas

Jurisdictional Feature	Corps	Regional Board	CDFW	
	Acreage	Acreage	Vegetated Streambed Acreage	Associated Riparian Vegetation
Lemon Creek	0.49	0.49	1.75	0.83
Drainage A	0.01	0.01	0.02	0.00
Total	0.50	0.50	1.77	0.83
Sources: RBF Consulting, May 2014 and Michael Baker International, July 2016				

Sensitive Biological Resources

The CNDDB was queried for reported locations of listed and sensitive plant and wildlife species as well as sensitive natural plant communities within the San Dimas and Baldwin Park USGS 7.5-minute quadrangles. A search of published records of these species was conducted within these quadrangles using the CNDDB Rarefind 5 online software. The CNPS Electronic Inventory of Rare, Threatened, and Endangered Plants of California supplied information regarding the distribution and habitats of vascular plants in the vicinity. The habitat assessment was used to assess the ability of the on-site plant communities to provide suitable habitat for relevant special-status plant and wildlife species.

Sensitive Plants

Ten special-status plant species have been recorded in the San Dimas and Baldwin Park quadrangles (refer to Appendix D). Based on habitat requirements for specific species, availability and quality of habitats needed by each sensitive plant species, and habitat assessment results it was determined that the project site has a low potential to support San Bernardino aster (*Symphyotrichum defoliatum*). This species is ranked by the CNPS as 1B.2, indicating that it is rare, threatened, or endangered rangewide and is moderately threatened in California. All other sensitive plant species are presumed absent within the project site.

None of the 10 special-status plant species, which includes round-leaved filaree (*California macrophylla*), Plummer's mariposa lily (*Calochortus plummerae*), intermediate mariposa lily (*Calochortus weedii* var. *intermedius*), many-stemmed dudleya (*Dudleya multicaulis*), mesa horkelia (*Horkelia cuneata* var. *puberula*), Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*), Brand's star phacelia (*Phacelia stellaris*), Parish's gooseberry (*Ribes divaricatum* var. *parishii*), chaparral ragwort (*Senecio aphanactis*), and San Bernardino aster, is federally- or state-listed.

However, impacts to special-status plant species in general could be considered significant under California Environmental Quality Act (CEQA) if they are determined to be present within the limits of disturbance and if the size and status of the population(s) warrant a finding of significance under CEQA. Mitigation for significant impacts may include avoidance, relocation with post-construction monitoring, or purchase of off-site habitat containing this species to complement existing open space areas.

Based on the disturbed nature of the project site, existing development, and routine human activities, no sensitive plant species known to occur in the area are expected to occur on the project site.

Sensitive Wildlife

Nineteen special-status wildlife species have been recorded in the San Dimas and Baldwin Park quadrangles (refer to Appendix D). Based on habitat requirements for specific species, availability and quality of habitats needed by each sensitive wildlife species, and habitat assessment results, it was determined that the project site has a high potential to support Cooper's hawk (*Accipiter cooperii*), merlin (*Falco columbarius*), hoary bat (*Lasiurus cinereus*), and western yellow bat (*Lasiurus xanthinus*), a moderate potential to support arroyo chub (*Gila orcuttii*), and a low potential to support pallid bat (*Antrozous pallidus*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), western mastiff bat (*Eumops perotis californicus*), yellow-breasted chat (*Icteria virens*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), big free-tailed bat (*N. macrotis*), coast horned lizard (*Phrynosoma blainvillii*), and bank swallow (*Riparia riparia*).

Of the 19 special-status wildlife species, five are federally- and/or state-listed: western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), arroyo chub, coastal California gnatcatcher (*Polioptila californica californica*), bank swallow, and least Bell's vireo (*Vireo bellii pusillus*). Arroyo chub is state threatened within its native range, which includes the project site, but only has a moderate potential to occur within Lemon Creek on the project site. Two of the five listed species, western yellow-billed cuckoo and coastal California gnatcatcher, are presumed absent due to lack of suitable habitat. Bank swallow has a low potential to occur, primarily as a foraging species along the riparian sections; there is little, if any, suitable nesting habitat within the project site for this species. Least Bell's vireo was documented on-site during the habitat assessment and may require Section 7 consultation if it is determined that this species is nesting on-site for the season, especially if construction is expected to occur during the spring and summer when this migrant species is present in southern California. It is presumed that this species was migrating through the area and stopped in the vegetation overnight.

Sensitive Plant Communities

The CNDDB lists three sensitive plant communities as having the potential to occur within the San Dimas and Baldwin Park quadrangles. These plant communities include California Walnut Woodland, Riversidean Alluvial Fan Sage Scrub, and Walnut Forest. None of these communities are located on the project site.

TREE SURVEY SCOPE AND METHODOLOGY

RBF Consulting and Golden State Land and Tree Assessment conducted a limited tree survey for the project site to determine the presence and health of protected trees within the project site. These tree resources are protected under the *Walnut City Code*. RBF Consulting was contracted to perform the tree survey in accordance with *City Code* Sections 25-178.9(e), 25-178.9(f)(3)m and 25-178.9. This task does not include all the requirements of *City Code* Section 25-1789.9 - Oak/Walnut Tree Permit – Application Requirements.

The survey associated with this Arborist Report included no wood or soil sampling/testing, root excavation, trunk coring/drilling, or any other invasive procedure. The determinations of damage due to pest infestation and decay were made solely on outward appearance and inspection of

the tree structures. The canopy of the trees was inspected visually using binoculars - no trees were climbed or canopies entered as part of this survey.

Background

According to *City Code* Section 25-178, the City lies in the Walnut Valley, the beauty and natural setting of which is greatly enhanced by the presence of large majestic trees. These indigenous trees are recognized for their significant historical, aesthetic and environmental value. They are indicator species for the natural communities in which they exist, supporting a broad spectrum of other native plant and animal species. As one of the most picturesque trees in the Southern California area, they lend beauty and charm to the natural and man-made landscape, enhance the value of property and preserve the character of the communities in which they exist.

Development within the Walnut Valley has resulted in the removal of most of these trees. Further uncontrolled and indiscriminate destruction of this diminishing plant heritage would detrimentally affect the general health, safety and welfare of the citizens of Walnut. The preservation program and procedures outlined in these guidelines contribute to the welfare and aesthetics of the community and retain the great historical and environmental value of these last remaining trees.

No person, partnership, firm, corporation, government agency, or other legal entity shall cut, prune, remove, relocate, endanger or damage any tree protected by this division on any and located within the incorporated areas of the City of Walnut except in accordance with the conditions of a valid tree permit issued by the City.

The *City Code* indicates that *"It shall be the policy of the City of Walnut to require the preservation of all healthy trees unless compelling reasons justify the removal of such trees. This policy shall apply to the removal, pruning, cutting and/or encroachment into the protected zone of the trees. The community development department shall have the primary and overall responsibility to administer, evaluate and monitor this policy to assure strict compliance."*

City Code Section 25-178 addresses Oak/Walnut Tree Preservation and Protection. Native trees with a circumference at breast height of 6 inches including oak (*Quercus spp.*), California black walnut (*Juglans californica*), require preservation under this ordinance. Specific mitigation ratios are not identified in the ordinance.

Methodology

The project site was surveyed by International Society of Arboriculture (ISA) Certified Arborist George Wirtes and Ecologist Wesley Salter on April 23, 2014. Trees adjacent to the project site were also surveyed because they may be impacted as a result of grading activities associated with the proposed project.

During the survey, trees with canopies that were within 5 feet of the grading limits were tagged and characterized according to the criteria in the *City Code*. Trees locations for trees with canopies greater than 5 feet from the grading limits were documented; however, these trees were not tagged, measured or characterized. Data collected for individual trees that were determined to be protected under the Walnut Oak/Walnut Tree Preservation Ordinance is contained in Tree Survey Appendix A. Trees that did not qualify for protection by the *City Code* were not tagged and are not included in this assessment.

Tree Tags

Each native tree 6 inches in circumference or larger when measured at a point 4½ feet above the tree's natural grade as measured from the highest ground elevation adjacent to the tree was individually tagged on the north side of the tree at a height of 3½ feet above the natural elevation with an all-weather, non-corrosive, aluminum tag bearing the tree number. Tag numbers include 176 through 200.

Circumference

Using a measuring tape, measurements were taken three feet above mean natural grade; multiple trunks were measured separately. The circumference of trees with multiple trunks was summed to determine the total circumference of the tree. In addition, the total number of trunks was recorded.

Height and Canopy

The height of each tree was estimated from mean natural grade to the highest branch. Also, canopy widths were taken at eight compass bearings including north, northeast, east, southeast, south, southwest, and west. In addition, the height of the lowest branch was estimated at all eight compass bearings.

Aesthetics

Each tree subject to the Walnut Tree Preservation Ordinance was inspected and compared to an archetype tree (considered excellent on all points mentioned below) of the same species. The trees were rated on a scale of A through F, with A being the highest. Tree aesthetics were evaluated with respect to overall form and symmetry, crown balance, branching pattern, and broken branches. The trees were rated on a scale of A to F, as follows:

"A" = Outstanding. A healthy and vigorous tree characteristic of its species and reasonably free of any visible signs of stress, disease or pest infestation.

"B" = Above Average. A healthy and vigorous tree with minor visible signs of stress, disease and/or past infestation.

"C" = Average. Although healthy in overall appearance, there is an abnormal amount of stress or disease and/or pest infestation.

"D" = Below Average/Poor. This tree is characterized by exhibiting a greater degree of stress, disease and/or pest infestation than normal and appears to be in a state of rapid decline. The degree of decline may vary greatly in signs of dieback, disease and pest infestation and appears to be in an advanced state of decline.

"F" = Dead. This tree exhibits no signs of life whatsoever.

It should be noted that although the trees were rated based on the above metrics, scores of 1 to 5 (1 being the highest) were utilized in the evaluation forms in order for quantifiable analysis to be conducted.

Health

The health of each tee was assessed based on visual evidence of vigor, such as the amount of foliage, leaf color and size, presence of branch or twig dieback, severity of insect infestation, the present of disease, heart rot, fire damage, mechanical damage, amount of new growth, appearance of bark, and rate of callous development over wounds. The tree's structural integrity was also evaluated with respect to branch attachment, branch placement, root health, and stability. In addition, the health assessment considered such elements as the presence of decay, weak branch attachments, and the presence of exposed roots due to soil erosion.

Hazard Risk Assessment

The International Society of Arboriculture (ISA) recommends that a Hazard Assessment be included with arborist reports. Such an assessment is an important component of any such report and is critical if trees may potentially be located near public areas such as walkways and buildings.

A tree is considered hazardous when it has a structural defect that predisposes it to failure and is located near a target.

- A target is a person or property that may sustain potential injury or property damage if a tree or a portion of a tree fails.

- Target areas include sidewalks, walkways, equestrian paths, roads, vehicles, structures, playgrounds or any other area where people are likely to gather.

- Structurally sound and healthy trees may also be hazardous if they interfere with utilities, roadways, walkways, and sidewalks, or if they obstruct motorist vision.

- Common hazards include dead and diseased trees, dead branches, included bark, stubs from topping cuts, broken branches (hangers), multiple leaders, tight-angled crotches, significant leans, and an unbalanced crown.

With regard to the methodology indicated above, tree parameters were rate on the A to F scale (1 to 5), noted above.

Mapping

Analysis presented in this document is supported by field surveys and verification of current conditions conducted on April 23, 2014. While in the field, tree locations were obtained with a Garmin 62 Global Positioning System (GPS) Map62. This data was then transferred via USB port as a .shp file and added to the project's tree survey map. The tree survey map was prepared in ESRI ArcInfo Version 10 (refer to *Exhibit 5.3-2*, *Tree Survey Locations*). In addition, tree locations and measurements would be incorporated into the project site plan at the time of the tree application.

TREE SURVEY ENVIRONMENTAL SETTING

Special Status Species Observed

Juglans californica (California Walnut)

Southern California black walnut is a native, deciduous tree that grows from 20 to 49 feet tall in stature. It varies considerably in growth habit depending on the age of the tree and site characteristics. Southern California walnut occurs in a mediterranean climate and generally occurs on mesic sites such as north slopes, creekbeds, canyon bottoms, and alluvial terraces. This species grows best in deep, alluvial soils with high water-holding capacity. The root system is extensive, often with a deep taproot. These trees live to be about 100 years old and are highly susceptible to crown (*Phytophthora spp.*) rots.

Quercus agrifolia (Coast Live Oak)

Coast live oak is a native, drought-resistant, evergreen tree, ranging in height from 19 to 82 feet and in diameter from one to four feet. With age, the bark develops deep furrows, ridges, and can be relatively thick. The crowns are typically broad and dense, with foliage often reaching the ground. In open areas, trunks are usually 4 to 8 feet tall; at this height, primary branches originate and grow horizontally. Coast live oak stands are typically from 40 to 110 years old; however, trees may live over 250 years. The root system consists of a deep taproot that is usually nonfunctional in large trees. Several deep main roots may tap groundwater if present within approximately 36 feet of the soil surface. The most serious threat to coast live oak, other red oaks, and related non-oak species in the beech family is sudden oak death disease. The primary pathogen response for sudden oak death is the fungus-like water mold *Phytophora ramorum*.

Quercus lobata (Valley Oak)

Valley oak is a long-lived, flood- and drought-tolerant, monoecious, deciduous tree. It is the largest North American oak. Trees are typically 30 to 75 feet tall and from 1.8 to 2.4 feet in DBH. Valley oaks have a highly branched growth habit with large canopies. Valley oaks typically have several vertical roots that tap groundwater and extensive horizontal root branches. Vertical root depth has been measured as deep as 80 feet in some individuals. The oaks grow in a Mediterranean climate, characterized by wet, mild winters and hot, dry summers. Oak diseases cause scant mortality in valley oak under natural conditions. Most commonly, valley oaks can be infected with the heart-rot fungus *Armillaria mellea*, which is usually fatal to only senescent trees.

Diseases and Pathogens

Among the walnut species, foliar Infections were noted on several trees in the form of necrotic leaf spots (refer to Tree Survey Figure 1). Southern California walnut is highly susceptible to crown (*Phytophthora spp.*) rots as noted in the species description above. It is also possible these spots can be indication of walnut blight (*Xanthomonas campestris pv. juglandis*).

Survey Results

A total of 26 protected trees are present on the project site: 19 southern California black walnuts, one coast live oak (*Quercus agrifolia*), and four valley oaks (*Quercus lobata*). During the field survey, it was noted that the valley oaks were located in the vicinity of the horse stables, the coast live oak was near a horse path at the south end of the project site, and the California black walnuts were in the vicinity of Lemon Creek.

The valley oaks appeared relative healthy with well-developed canopies, however they had small wounds with dark exudation possibly indicating a potential infection or boring pest (such as Goldspotted oak borer *Agrilus auroguttatus*). Some mechanical damage was noted as well. Tree 196 (tag number) contained an increased amount of inner canopy death, and tree 199 had significant mechanical damage with exudation present at its perimeter.

The walnut trees generally occurred within close proximity of the drainage on-site. In most cases, these trees posed little threat of a present danger, but due to competition for resources, mechanical damage (trees 175 and 184), and poor maintenance (such as topping (trees 192 and 193), arbitrary limb cutting (tree 195); many canopies were simply poorly developed (trees 181, 185, and 197) or possessed a significant lean (trees 179, 181, 185, and 188).

Table 5.3-2, Summary of On-Site *Trees* summarizes the key parameter measurements taken during the field survey.

Table 5.3-2
Summary of On-Site Trees

Species	Quantity	Average Circumference (inches)	Average Height (feet)	Average Canopy Width (feet)	Average Aesthetics and Health	Average Risk	Surrounding Environmental Health
Southern California walnut	19	29.9	24	8.5	3.3	2.7	1.47
Coast live oak	1	22	13	30	3.5	3.5	2.00
Valley oak	6	21	27	8.2	2.5	4.0	3.30
Source: RBF Consulting, May 2014							

Heritage Trees

According to the *City Code*, a Heritage tree is defined as one that measures 40 inches in circumference (or 30 inches cumulatively in a multi-stemmed tree) at three feet above grade. Heritage trees have a special designation because of the beauty and significance they typically possess.

As defined by the *City Code*, four trees within the project site are considered Heritage Trees, and, all four are southern California black walnut. Unfortunately, all four trees have significant decay (trees 187 and 194), increased canopy deadwood (trees 186 and 187), and pose a present or future potential risk to pedestrians and other nearby targets. These trees must be completely removed to eliminate any liability.

If they were determined to be a significant enough natural resource to preserve in place, substantial measures would need to be implemented to minimize any risks to potential targets. These measures may include, but are not limited to, the following:

1. Fencing at the tree protection zone to minimize pedestrian traffic
2. Strategic maintenance appropriate for the species targeted to reduce risk of failure
3. Future maintenance and monitoring

5.3.3 SIGNIFICANCE THRESHOLD CRITERIA

Environmental impact thresholds as indicated in *CEQA Guidelines* Appendix G (Environmental Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it 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 Wildlife 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 Wildlife 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 (refer to Section 8.0, Effects Found Not To Be Significant)

Based on these standards, the effects of the proposed project have been categorized as either a “less than significant impact” or a “potentially significant impact.” Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.3.4 PROJECT IMPACTS AND MITIGATION MEASURES

SPECIAL-STATUS PLANT OR ANIMAL SPECIES

- **THE PROPOSED PROJECT COULD RESULT IN IMPACTS TO SPECIAL-STATUS PLANT OR ANIMAL SPECIES KNOWN TO OCCUR WITHIN THE PROJECT SITE VICINITY.**

Impact Analysis:

Sensitive Plant Species

Based on the disturbed nature of the project site, existing development, and routine human activities, no sensitive plant species occur on the project site. Additionally, the majority of impacts from the proposed project would occur to areas that have been disturbed or have been landscaped, and as such, do not provide suitable habitat for sensitive plant species. Therefore, implementation of the proposed project would result in no impacts to sensitive plant species.

Sensitive Animal Species

Nineteen special-status wildlife species have been recorded in the San Dimas and Baldwin Park quadrangles (refer to Appendix D). Of the 19 special-status wildlife species, five are federally- and/or state-listed: western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), arroyo chub, coastal California gnatcatcher (*Polioptila californica californica*), bank swallow, and least Bell's vireo (*Vireo bellii pusillus*).

Arroyo chub is state threatened within its native range, which includes the project site, but only has a moderate potential to occur within Lemon Creek on the project site. Two of the five listed species, western yellow-billed cuckoo and coastal California gnatcatcher, are presumed absent due to lack of suitable habitat. Bank swallow has a low potential to occur, primarily as a foraging species along the riparian sections; there is little, if any, suitable nesting habitat within the project site for this species.

A singing male least Bell's vireo was documented on-site during the habitat assessment. It is unknown at this time if the male has a territory on the site. The habitat assessment presumed that this species was migrating through the area and stopped in the vegetation overnight. Given the inconclusiveness of this siting, the impacts cannot be fully determined, and thus, are considered potentially significant. With implementation of Mitigation Measure BIO-1, impacts to least Bell's vireo would be less than significant.

Nesting Birds

On-site plant communities provide suitable foraging and cover habitat for year-round/seasonal avian residents, migrating songbirds, and raptors that occur in the area. Vegetation within and adjacent to the project site has the potential to provide suitable nesting opportunities for a number of avian species, in particular amongst the large number of trees on-site.

Nesting birds are protected pursuant to the Migratory Bird Treaty Act and Fish and Game Code; Fish and Game Code Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests or eggs. If avian nesting behaviors are disrupted, such as nest

abandonment and/or loss of reproductive effort as a result of project construction, it would be considered "take" and is potentially punishable by fines and/or imprisonment.

Thus, prior to any vegetation removal, construction, or development, the Applicant shall be required to implement Mitigation Measure BIO-2. With implementation of Mitigation Measure BIO-2, no impacts to nesting birds would occur.

Level of Significance Before Mitigation: No Impact for sensitive plant species. Potentially Significant Impact for sensitive animal species and nesting birds.

Mitigation Measures:

BIO-1 A least Bell's vireo survey shall be conducted during the breeding season (i.e., May or June) to ascertain if the species continues to be present on-site. If least Bell's vireo is still present at that time and construction is scheduled to begin during the breeding season or otherwise before October (least Bell's vireo typically leaves southern California in September), a Section 7 consultation may be required to get take authority under the Endangered Species Act.

BIO-2 Nesting bird clearance surveys shall be required prior to any vegetation removal or development that may disrupt the birds during the nesting season (generally from February 1 - August 31, but can vary annually based upon seasonal weather conditions). The pre-construction nesting bird clearance survey shall be conducted within 7 days prior to any ground disturbing activities. This clearance survey shall ensure that no nesting birds, in particular raptors, shall be disturbed during construction. As long as development does not cause direct take of a bird or egg(s) or disrupt nesting behaviors, immediate protections would not be required. The biologist conducting the clearance survey should document a negative survey with a report indicating that no impacts to active avian nests shall occur.

If an active avian nest is discovered during the pre-construction clearance survey, construction activities might have to be rerouted, a no-work buffer might have to be established around the nest, or construction may be delayed until the young have fledged. The size of the buffer shall be determined by the biologist in consultation with CDFW, and shall be based on the nesting species, its sensitivity to disturbance, and expected types of disturbance. Typically, these buffers range from 250 to 500 feet from the nest location.

It is recommended that a biological monitor be present to delineate the boundaries of the buffer area if an active nest is detected and to monitor the nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the qualified biologist has determined that young birds have successfully fledged, a monitoring report shall be prepared and submitted for review and approval prior to initiating construction activities within the buffer area. The monitoring report shall summarize the results of the nest monitoring, describe construction restrictions currently in place, and confirm that construction activities can proceed within the buffer area without jeopardizing the survival of the young birds.

Construction within the designated buffer area shall not proceed until the written authorization is received by the Applicant from CDFW.

Level of Significance After Mitigation: No Impact for sensitive plant species and nesting birds. Less Than Significant Impact for sensitive animal species.

JURISDICTIONAL WATERS

- **THE JURISDICTIONAL WATERS OF THE U.S. ARMY CORPS OF ENGINEERS, REGIONAL WATER QUALITY CONTROL BOARD, AND CALIFORNIA DEPARTMENT OF FISH AND GAME COULD BE ADVERSELY AFFECTED BY THE PROPOSED PROJECT.**

Impact Analysis:

U.S. Army Corps of Engineers Determination

Waters of the United States Determination

Evidence of an Ordinary High Water Mark (OHWM) was noted within the boundaries of the project site, which totaled 0.50-acre. Lemon Creek enters the project site along the northeastern boundary flowing through the project site, and off-site through a culvert under La Puente Road. In addition, Drainage A is tributary to Lemon Creek. Eventually, Lemon Creek conveys flows downstream to San Jose Creek and the San Gabriel River. Therefore, Lemon Creek and Drainage A exhibit a hydrological connection to downstream waters and are considered "Waters of the United States," which fall within Corps' jurisdiction. Refer to *Table 5.3-1* for a summary of the jurisdictional areas on-site, and *Exhibit 5.3-3*, *Jurisdictional Map*, for an illustration of on-site jurisdictional areas.

Wetland Determination

As previously noted, an area must exhibit all three wetland parameters described in the Corps Regional Supplement to be considered a jurisdictional wetland. Based on the results of the site visit, it was determined that at no point were all three wetland parameters met within the project site.

The Corps regulates discharges of dredged or fill materials into water of the U.S. and wetlands pursuant to Section 404 of the *CWA*. At the time of the 2014 delineation, no Corps jurisdictional impacts were proposed; however, a Nationwide Permit (NWP) or Individual Permit (IP) would be required from the Corps should construction activities (i.e., dredge or fill) be conducted within the Corps-delineated jurisdictional areas.

Regional Water Quality Control Board Determination

No isolated or Rapanos conditions were observed within the boundaries of the project site; therefore, the Regional Board follows that of Corps jurisdiction.

The Regional Board regulates discharges to surface waters under the Federal CWA and the California Porter-Cologne Water Quality Control Act. At the time of the 2014 delineation, no Regional Board jurisdictional impacts were proposed; however, a CWA 401 Water Quality Certification from the Regional Board would be required should construction be proposed within Regional Board jurisdictional areas. The Regional Board also requires that CEQA compliance be obtained prior to obtaining the 401 Certification.

California Department of Fish and Wildlife Determination

The on-site drainages exhibited a bed and bank and is considered a CDFW jurisdictional streambed. Based on the results of the field investigation, approximately 1.77-acre of vegetated CDFW jurisdictional streambed occurs within the project site. The mixed riparian forest habitat dominated by walnut and sycamore tree species documented throughout the drainage comprises 0.83-acre of associated CDFW jurisdictional riparian vegetation located within the project site. None of the 1.77-acre of vegetated streambed is considered CDFW jurisdictional wetlands.

The CDFW regulates alterations to streambed under the *California Fish and Game Code*. At the time of the 2014 delineation, no CDFW jurisdictional impacts were proposed; however, the CDFW must be notified should any activities alter jurisdictional areas.

Impact Conclusion

At the time of the 2014 delineation, design plans were not finalized; therefore, specific impacts to jurisdictional areas are unknown. Once design plans are finalized and if they indicate construction activities within the identified jurisdictional areas shown in *Table 5.3-1*, the Applicant shall be required to obtain the following regulatory approvals: Corps CWA Section 404 Permit, Regional Board CWA Section 401 Water Quality Certification, and CDFW Section 1602 Streambed Alteration Agreement (SAA) as indicated in Mitigation Measure BIO-3.

Level of Significance Before Mitigation: Potentially Significant Impact.

Mitigation Measures:

BIO-3 Prior to issuance of grading or demolition permits, final design plans shall be reviewed to confirm impacts and conclusions identified in the 2014 delineation. If impacts and conclusions remain the same no further action is need. Should the review show that the project results in to jurisdictional areas, the Applicant shall be required to obtain the following regulatory approvals:

- Corps CWA Section 404 Permit
- Regional Board CWA Section 401 Water Quality Certification
- and CDFW Section 1602 Streambed Alteration Agreement (SAA)

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.

TREE PRESERVATION

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD CONFLICT WITH THE CITY'S OAK/WALNUT TREE PRESERVATION ORDINANCE.**

Impact Analysis: Two oak species (Quercus lobata and Q. agrifolia) and one walnut species (Juglans californica) occur within the proposed project impact area. The oak species were intentionally planted along walkways and bridal paths. This is in contrast to the walnut species, which primarily occurred naturally on the banks and shoulder of the drainage within the project site.

Many trees were found to have significant decay and deadwood within their stems and canopies. This was especially noted in the walnut species growing along near the drainage competing for resources with other tree species such as ash and willow. As a response, many walnut trees exhibited significant leans, deadwood, and flagging in what frequently resulted in an asymmetrical canopy. In several cases, these situations resulted in a clear and present danger to pedestrians and equestrian riders. These conditions also resulted in a poor prognosis for future development. Mechanical damage and poor maintenance also contributed to potential hazardous conditions presented by the trees. When considering trees to be removed, public safety was taken into consideration as a primary factor; other considerations included potential to become a hazard, biological contribution, and aesthetics.

The trees protected in the *Walnut City Code* are preserved as a natural resource due to their contributions biologically and aesthetically. To the degree possible, these natural resources should be preserved in place to the greatest degree possible unless:

1. They pose a clear and present risk to the public in their current condition and location.
2. They will create a potential risk to targets in the future development.
3. They have significant amounts of deadwood, or pose a threat due to infected tissue.

In accordance with the *City Code*, to the extent feasible (given the risk of potential present or future failure), healthy trees must be preserved within the project site.

The project impact area was determined to be the project design boundary provided by the Applicant. The proposed project would impact 19 southern California walnuts, one coast live oak, and six valley oaks that are protected under the Oak/Walnut Tree Preservation Ordinance; however, 16 of the trees are recommended for removal based on existing conditions.

Valley Oaks

The valley oaks appeared relative healthy with well-developed canopies, however they had small wounds with dark exudation possibly indicating a potential infection or boring pest (such as Goldspotted oak borer *Agrilus auroguttatus*). Some mechanical damage was noted as well. Two valley oaks are recommended for removal. Tree 196 (tag number) contained an increased amount of inner canopy death, and tree 199 had significant mechanical damage with exudation present at its perimeter.

Southern California Black Walnut

The walnut trees generally occurred within close proximity of the drainage on-site. Fourteen walnut trees are recommended for removal. In most cases, these trees posed little threat of a present danger, but due to competition for resources, mechanical damage (trees 175 and 184), and poor maintenance (such as topping (trees 192 and 193), arbitrary limb cutting (tree 195); many canopies were simply poorly developed (trees 181, 185, and 197) or possessed a significant lean (trees 179, 181, 185, and 188).

As defined by the *City Code*, four trees within the project site are considered Heritage Trees, and, all four are southern California black walnut. Unfortunately, all four trees have significant decay (trees 187 and 194), increased canopy deadwood (trees 186 and 187), and pose a present or future potential risk to pedestrians and other nearby targets. These trees must be completely removed to eliminate any liability.

Because of factors like these or the presence of significant deadwood or decay (trees 181, 182, 185, 186, 187, 188, 192, and 195), it was determined that the proposed project would remove and replace these seven walnut trees, two of which are Heritage Trees (trees 186 and 187).

Although no specific mitigation ratios are identified within the Walnut Tree Preservation Ordinance, the following is recommended:

> *Young trees planted from a 15-gallon container nursery stock have a good success rate if properly planted and maintained. Mitigation requires trees to be removed be replaced with healthy, native oak/walnut tree stock at a five to one (5:1) ratio for heritage trees, two to one (2:1) for non-heritage trees, and one to one (1:1) for dead or diseased trees.*

A native tree maintenance and monitoring plan must be in place to track the survival of preserved and newly planted trees. Final decisions of which trees to impact should be negotiated with the City-based and based primarily on:

- The relative health and aesthetic character of each specimen
- Its uniqueness (Heritage trees are typically more prized by the community)
- The degree of conflict with the proposed site plan
- The cost and risk associated with successful relocation

Although mitigation plantings do not fully replace the biological value of the loss of on-site trees on-site, they can adequately mitigate against the effects of oak and walnut tree removal resulting from the proposed project.

The City may grant exceptions to the number of replacement trees required and may require additional replacement trees based on the following considerations:

1. Vegetative character of the subject property;
2 Number of protected trees that are proposed to be removed in relation to the number of protected trees currently existing on the subject property; and
3. Anticipated effectiveness of the replacement of trees, as determined by an arborist's report is submitted by the Applicant.

Replacement tree size would be determined by the City and is recommended to be no smaller than a 15-gallon container. Replacements trees shall be indigenous to the area.

Tree relocation or transplanting is not recommended due to the increased cost and care needed by transplants. A mitigation plan prepared by a qualified biologist may be required.

Where site conditions preclude the long-term success of replacement trees, the City may require planting replacement trees on public property (e.g., designated open space areas or public parks) and/or a monetary donation to a Tree Replacement Fund in the amount equal to the value of required replacement trees and the cost of installation.

Impact Conclusion

The Applicant is subject to *Walnut City Code* Section 25-178.9, Oak/Walnut Tree Permit Application Requirements and shall comply with all requirements stipulated in Section 25-178 et seq. Compliance with the requirements in Section 25-178 et seq. and Mitigation Measures BIO-4 through BIO-8 ensure that impacts associated with implementation of the proposed project are mitigated to less than significant levels.

Level of Significance Before Mitigation: Potentially Significant Impact.

BIO-4 Any oak and walnut trees removed shall be replaced with healthy, native oak or walnut tree stock at a five to one (5:1) ratio for heritage trees, two to one (2:1) for non-heritage trees, and one to one (1:1) for dead or diseased trees.

BIO-5 A Native Tree Maintenance and Monitoring Plan shall be in place prior to commencement of construction to track the survival of preserved and replacement trees. Final decisions of which trees to impact shall be negotiated with the City-based and based primarily on:

- The relative health and aesthetic character of each specimen
- Its uniqueness (Heritage trees are more prized by the community)
- The degree of conflict with the project site plan
- The cost and risk associated with successful relocation

BIO-6 The Applicant shall be required, as a condition of Tree Removal Permit approval, to enter into a Tree Maintenance Agreement prior to removal of any protected tree or commencement of construction activities that may adversely affect the health and survival of trees to be preserved. The Tree Maintenance Agreement shall include provisions for the submittal of arborist reports during and after construction activities, installation of replacement trees and irrigation systems by or under the supervision of a certified arborist, replacement of trees that die during or after construction phases and submittal of a security deposit, as may be necessary to ensure the health and survival of the affected trees.

BIO-7 Trees not impacted by construction shall be enclosed by barriers, such as chain link fencing or orange snow fencing. The barriers shall be placed at least five feet outside the drip line, and no grade changes shall be made within the barriers without prior approval by the City of Walnut.

BIO-8 During project grading, a biological monitor and/or tree arborist shall be present to record the number of trees actually impacted. If project construction can avoid impacts to protected trees, the number of replacement trees shall be reduced accordingly.

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.

5.3.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **THE PROPOSED PROJECT ALONG WITH OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS RELATED TO BIOLOGICAL RESOURCES.**

Impact Analysis: Impacts to biological resources tend to be site-specific and are assessed on a site-by-site basis. Impacts to special status resources, jurisdictional waters, and oak/walnut trees would be mitigated to less than significant levels. Thus, implementation of the proposed project would not represent an incremental adverse cumulative impact to biological resources and would not be cumulatively considerable. In addition, related projects would be required to conduct analysis, as required, and to implement appropriate mitigation measures. Thus, implementation of the proposed project would not contribute to any potential cumulative impacts, and cumulative impacts to biological resources would be less than significant.

According to CEQA Guidelines Section 15130, cumulative impacts refer to the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects. Implementation of the proposed project would not result in significant direct impacts to oak or walnut trees. However, potential impacts from the proposed project and other related projects would be site-specific, and evaluations of potential impacts would be conducted on a project-by-project basis, and mitigation would be included to address any impacts. This would be especially true of those developments located in areas that contain sensitive species and habitats. Mitigation measures within this section would provide detailed requirements for the protection, replacement, and/or relocation of sensitive plant and animal species. Each incremental development would be required to comply with all applicable Federal, State, and City regulations concerning the preservation of biological resources. In consideration of these regulations and the mitigation measures incorporated within this EIR, potential cumulative impacts upon biological resources would be considered less than significant.

Level of Significance Before Mitigation: Potentially Significant Impact.

Mitigation Measures: Refer to Mitigation Measures BIO-1 through BIO-8. No additional mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.3.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in less than significant project and cumulative impacts related to biological resources following imposition of the identified mitigation measures and compliance with Federal, State, and local regulatory requirements. As such, no significant unavoidable impacts would result from the implementation of The Brookside Project.

5.3.7 SOURCES CITED

City of Walnut, *City of Walnut General Plan,* adopted July 1978.

City of Walnut, *City Code*, Title VI Planning and Zoning, Chapter 25 Zoning, Article XVI Supplemental Planning Requirements, Division 5 Oak/Walnut Tree Preservation, Section 25-178 et seq.

Michael Baker International, *Updated Habitat Assessment Letter for the Brookside Tentative Tract No. 72798 in the City of Walnut, California*, dated April 19, 2016.

Michael Baker International, *Updated Jurisdictional Delineation Letter for the Brookside Tentative Tract No. 72798 in the City of Walnut, California*, dated April 19, 2016.

Michael Baker International, *Updated Tree Survey Letter for the Brookside Tentative Tract No. 72798 in the City of Walnut, California*, dated April 19, 2016.

RBF Consulting, *The Brookside Tentative Tract No. 72798 Habitat Assessment*, dated May 2014.

RBF Consulting, *The Brookside Tentative Tract 72798, City of Walnut, California, Delineation of State and Federal Jurisdictional Waters*, dated January 2014.

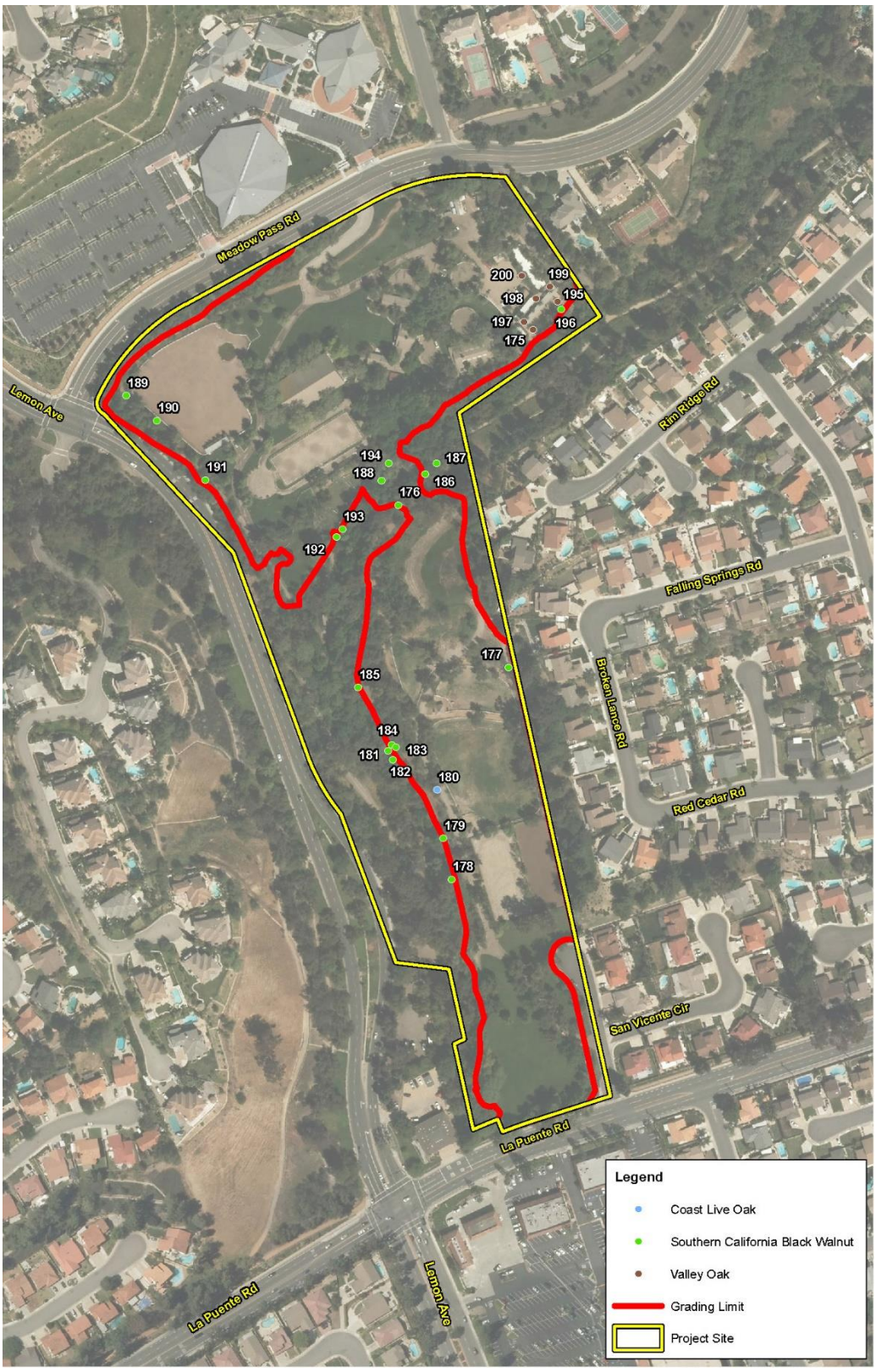
RBF Consulting, *The Brookside Tentative Tract 72798, City of Walnut, California, Tree Survey*, dated May 2014.

Source: Michael Baker International
May 2014

The Brookside Project
Environmental Impact Report

Exhibit 5.3-1

VEGETATION MAP

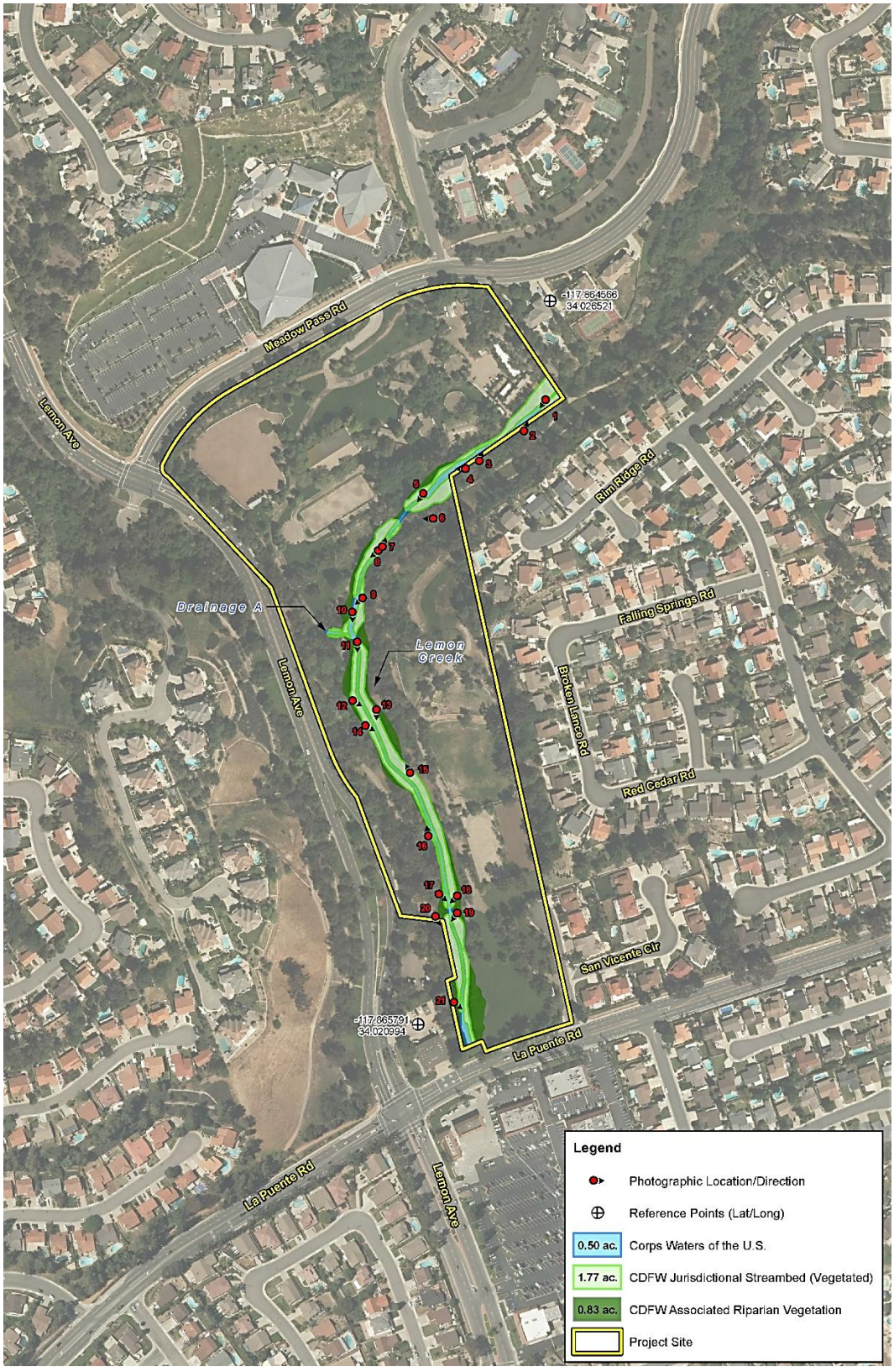


Source: Michael Baker International
May 2014

The Brookside Project
Environmental Impact Report

Exhibit 5.3-2

TREE LOCATION MAP



Source: Michael Baker International
May 2014

The Brookside Project
Environmental Impact Report

Exhibit 5.3-3

JURISDICTIONAL MAP

5.4 CULTURAL RESOURCES

This section identifies potential impacts to existing cultural and historic resources within and around the project site and to assess the significance of such resources. Information in this section is based on information and conclusions contained in the following plans or studies:

- BonTerra Psomas, *Cultural Resources Assessment, Brookside Specific Plan, City of Walnut, County of Los Angeles, California*, March 24, 2015 (included in its entirety as Appendix J)

- Daly & Associates, *Draft Historic Resource Assessment Report of Brookside Equestrian Center, 800 Meadow Pass Road, Walnut, Los Angeles County, CA*, April 2015 (included in its entirety as Appendix K).

5.4.1 REGULATORY SETTING

FEDERAL

National Register of Historic Places

First authorized by the Historic Sites Act of 1935, the National Register was established by the NHPA as "an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment."[1] The National Register recognizes properties that are significant at the national, state and local levels.

To be eligible for listing in the National Register, the quality of significance in American history, architecture, archaeology, engineering, or culture must be in a district, site, building, structure, or object that possesses integrity of location, design, setting, materials, workmanship, feeling and association, and:[2]

A. is associated with events that have made a significant contribution to the broad patterns of our history; or
B. is associated with the lives of persons significant in our past; or
C. embodies the distinctive characteristics of a type, period, or method of construction or that represents the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. yields, or may be likely to yield, information important to prehistory or history.

A property eligible for listing in the National Register must meet one or more of the four criteria (A-D) defined above. In addition, unless the property possesses exceptional significance, it must be at least 50 years old to be eligible for National Register listing.

1 Code of Federal Regulations (CFR), 36 § 60.2.

2 Guidelines for Completing National Register Forms, National Register Bulletin 16, U.S. Department of the Interior, National Park Service, September 30, 1986 ("National Register Bulletin 16"). This bulletin contains technical information on comprehensive planning, survey of cultural resources, and registration in the National Register of Historic Places.

In addition to meeting the criteria of significance, a property must have integrity. *"Integrity is the ability of a property to convey its significance."*[3] According to *National Register Bulletin 15*, within the concept of integrity, the National Register criteria recognize seven aspects or qualities that, in various combinations, define integrity. To retain historic integrity a property will always possess several, and usually most, of these seven aspects. The retention of specific aspects of integrity is paramount for a property to convey its significance.[4] The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association. The following is excerpted from *National Register Bulletin 15*, which provides guidance on the interpretation and application of these factors.

- Location is the place where the historic property was constructed or the place where the historic event occurred.[5]
- Design is the combination of elements that create the form, plan, space, structure, and style of the property.[6]
- Setting is the physical environment of a historic property.[7]
- Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.[8]
- Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.[9]
- Feeling is property's expression of the aesthetic or historic sense of a particular period of time.[10]
- Association is the direct link between an important historic event or person and a historic property.[11]

In assessing a property's integrity, the National Register criteria recognize that properties change over time; therefore, it is not necessary for a property to retain all its historic physical features or characteristics. The property must, however, retain the essential physical features that enable it to convey its historic identity.[12]

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3 National Register Bulletin 15, page 44.

4 Ibid.

5 "The relationship between the property and its location is often important to understanding why the property was created or why something happened. The actual location of a historic property, complemented by its setting is particularly important in recapturing the sense of historic events and persons. Except in rare cases, the relationship between a property and its historic associations is destroyed if the property is moved." Ibid.

6 "A property's design reflects historic functions and technologies as well as aesthetics. It includes such considerations as the structural system; massing; arrangement of spaces; pattern of fenestration; textures and colors of surface materials; type, amount, and style of ornamental detailing; and arrangement and type of plantings in a designed landscape." Ibid.

7 National Register Bulletin 15, page 45.

8 "The choice and combination of materials reveals the preferences of those who created the property and indicated the availability of particular types of materials and technologies. Indigenous materials are often the focus of regional building traditions and thereby help define an area's sense of time and place." Ibid.

9 "Workmanship can apply to the property as a whole or to its individual components. It can be expressed in vernacular methods of construction and plain finishes or in highly sophisticated configurations and ornamental detailing. In can be based on common traditions or innovative period techniques." Ibid.

10 "It results from the presence of physical features that, taken together, convey the property's historic character." Ibid.

11 "A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to the observer. Like feeling, associations require the presence of physical features that convey a property's historic character…Because feeling and association depend on individual perceptions, their retention alone is never sufficient to support eligibility of a property for the National Register." Ibid.

12 National Register Bulletin 15, page 46.

For properties that are considered significant under National Register criteria A and B, *National Register Bulletin 15* states that a property that is significant for its historic association is eligible if it retains the essential physical features that made up its character or appearance during the period of its association with the important event, historical pattern, or person(s).[13]

In assessing the integrity of properties that are considered significant under National Register criterion C, *National Register Bulletin 15* provides that a property important for illustrating a particular architectural style or construction technique must retain most of the physical features that constitute that style or technique.[14]

The primary effects of listing in the National Register on private property owners of historic buildings is the availability of financial and tax incentives.[15] In addition, for projects that receive federal funding, the NHPA Section 106 clearance process (published at *36 CFR* Part 800) must be completed. State and local laws and regulations may apply to properties listed in the National Register. For example, demolition or inappropriate alteration of National Register eligible or listed properties may be subject to *CEQ*A.

STATE OF CALIFORNIA

The *California Environmental Quality Act* (*CEQA)* requires a lead agency to determine whether a project would have a significant effect on one or more historical resources. A "historical resource" is defined as a resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR) (*California Public Resources Code* [*PRC*], Section 21084.1); a resource included in a local register of historical resources (*14 California Code of Regulations* [*CCR*], Section 15064.5[a][2]); or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (*14 CCR* 15064.5[a][3]).

PRC Section 5024.1 of the PRC, *CEQA Guidelines* Section 15064.5 (14 CCR), and *CEQA* Sections 21083.2 and 21084.1 were used as the basic guidelines for the cultural resources study. *PRC* Section 5024.1 requires the evaluation of historical resources to determine their eligibility for listing in the CRHR. The purposes of the CRHR are to maintain listings of the State's historical resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources in the CRHR were expressly developed to be in accordance with criteria developed for listing in the National Register of Historic Places (NRHP) (per the criteria listed at *36 California Federal Register* [*CFR*] 60.4) and include those listed below.

> The quality of significance in American history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and that:
>
> (a) Are associated with events that have made a significant contribution to the broad patterns of our history; or

[13] Ibid.

[14] "A property that has lost some historic materials or details can be eligible if it retains the majority of the features that illustrate its style in terms of the massing, spatial relationships, proportion, patter of windows and doors, texture of materials, and ornamentation. The property is not eligible, however, if it retains some basic features conveying massing but has lost the majority of features that once characterized its style." Ibid.

[15] See 36 CFR 60.2(b) (c).

(b) Are associated with the lives of persons significant in our past; or
(c) Embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
(d) Have yielded, or may be likely to yield, information important in prehistory or history.

According to *CEQA Guidelines* Section 15064.5(a)(3)(A–D), a resource is considered historically significant if it meets the criteria for listing in the NRHP (per the criteria listed at *36 CFR* 60.4 previously discussed). Impacts that affect those characteristics of the resource that qualify it for the NRHP or that would adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered to have a significant effect on the environment. Impacts to cultural resources from the proposed project are thus considered significant if the project (1) physically destroys or damages all or part of a resource; (2) changes the character of the use of the resource or physical feature in the setting of the resource that contributes to its significance; or (3) introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

The purpose of a cultural resources investigation is to evaluate whether any built-environment cultural resources are present in or near the project area or can reasonably be expected to exist in the subsurface. If resources are discovered, management recommendations would be included that require evaluation of the resources for NRHP or CRHR eligibility.

Human Remains

California Health and Safety Code (*HSC*) Section 7050.5 of the provides for the disposition of accidentally discovered human remains. *HSC* Section 7050.5 states that, if human remains are found, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined the appropriate treatment and disposition of the human remains.

PRC Section 5097.98 states that, if the Coroner determines that the remains are of Native American origin, s/he must notify the Native American Heritage Commission (NAHC) within 24 hours which, in turn, must identify the person or persons it believes to be the most likely descended from the deceased Native American. The descendants shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.

Senate Bill 18

California Senate Bill (SB) 18 (*California Government Code* Section 65352.3) incorporates the protection of California traditional tribal cultural places into land use planning for cities, counties, and agencies by establishing responsibilities for local governments to contact, refer plans to, and consult with California Native American tribes as part of the adoption or amendment of any general or specific plan proposed on or after March 1, 2005. At the time the Cultural Resources Report was prepared, the proposed project originally ncluded a Specific Plan and General Plan Amendment; therefore, formal consultation under SB 18 was undertaken by the City of Walnut. However, the proposed project has been revised and does not include a Specific Plan or require a General Plan Amendment.

California Office of Historic Preservation

The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also carries out the duties as set forth in the Public Resources Code (PRC) and maintains the California Historical Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the state's jurisdictions.

California Register of Historical Resources

Created by Assembly Bill 2881, which was signed into law on September 27, 1992, the California Register is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change."[16] The criteria for eligibility for the California Register are based upon National Register criteria.[17] Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.[18]

The California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed in the National Register of Historic Places and those formally determined eligible for the National Register of Historic Places;
- California Registered Historical Landmarks from No. 770 onward;
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Resources Commission for inclusion in the California Register.[19]

Other resources which may be nominated to the California Register include:

- Individual historical resources;
- Historical resources contributing to historic districts;
- Historical resources identified as significant in historical resources surveys with significance ratings of Category 1 through 5;
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as a historic preservation overlay zone.[20]

To be eligible for the California Register, a historic resource must be significant at the local, state, or national level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;

16 California Public Resources Code § 5024.1(a).
17 California Public Resources Code § 5024.1(b).
18 California Public Resources Code § 5024.1(d).
19 California Public Resources Code § 5024.1(d).
20 California Public Resources Code § 5024.1(e).

3. 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
4. Has yielded, or may be likely to yield, information important in prehistory or history.

Additionally, a historic resource eligible for listing in the California Register must meet one or more of the criteria of significance described above and retain enough of its historic character or appearance to be recognizable as a historic resource and to convey the reasons for its significance. Historical resources that have been rehabilitated or restored may be evaluated for listing.[21]

Integrity under the California Register is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. The resource must also be judged with reference to the particular criteria under which it is proposed for eligibility. It is possible that a historic resource may not retain sufficient integrity to meet criteria for listing in the National Register, but it may still be eligible for listing in the California Register.[22]

California Office of Historical Preservation Survey Methodology

The evaluation instructions and classification system prescribed by the California OHP in its Instructions for Recording Historical Resources provide a three-digit evaluation rating code for use in classifying potential historical resources. The first digit indicates one of the following general seven evaluation categories for use in conducting cultural resources surveys:

1. Listed in the National Register or the California Register;
2. Determined eligible for listing in the National Register or the California Register;
3. Appears eligible for the National Register or the California Register through survey evaluation;
4. Appears eligible for the National Register or the California Register through other evaluation;
5. Recognized as Historically Significant by Local Government;
6. Not eligible for any Listing or Designation; and
7. Not evaluated for the National Register or California Register or needs re-evaluation.

The second digit of the evaluation status code is a letter code indicating whether the resource is separately eligible (S), eligible as part of a district (D), or both (B). The third digit is a number that is used to further specify significance and refine the relationship of the property to the National Register and/or California Register. Under this evaluation system, categories 1 through 4 pertain to various levels of National Register eligibility. The California Register, however, may include surveyed resources with evaluation rating codes through level 5. In addition, properties found ineligible for listing in the National Register, California Register, or for designation under a local ordinance are given an evaluation status code of 6.

[21] California Code of Regulations, California Register of Historical Resources (Title 14, Chapter11.5), Section 4852(c).
[22] Ibid.

LOCAL

City of Walnut General Plan

The City of Walnut General Plan Environmental Resources Management Element consolidates the Conservation, Recreation, Open Space, and Scenic Highway Elements as integral components of the General Plan.

The City of Walnut considers the following policy statement to be basic in establishing programs and implementation measures for the Conservation, Recreation, Open Space, and Scenic Highways Elements of the General Plan.

3. Protect scenic, historic, natural wildlife, archaeological and cultural resources of this area.

City of Walnut Municipal Code

The City of Walnut adopted Ordinance No. 15-02 on February 11, 2015. The Historical Preservation Ordinance was incorporated into the *Walnut Municipal Code*, Chapter 25, Zoning, Article XXIX. Historical Preservation.

The purpose of the Historical Preservation Ordinance is to establish procedures and guidelines to protect and preserve historical and culturally significant resources within the City. Preservation of historical resources within the community will preserve and promote the historical heritage of the City by:

1. Establishing a mechanism to protect historical and cultural resources;
2. Identifying historically significant structures and sites to protect the City's past and present heritage;
3. Establishing public awareness of historically significant resources and the benefits of preservation;
4. Encourage public participation in historical preservation;
5. Encourage civic pride with the beauty and accomplishments of years past.

A Historical Preservation Ad-Hoc Advisory Committee will use one or more of the following criteria in advising the City Council regarding the designation of a structure(s) or site(s) as a historic landmark:

1. It meets the criteria for listing in the National Register of Historic Places; or
2. It meets the criteria for listing in the California Register of Historical Resources; or
3. It meets one or more of the following criteria:
    a. It exemplifies or reflects elements of the City's history, heritage or culture;
    b. It is identified with persons or events significant in local, state, or national history;
    c. It is representative of the work of a notable builder, designer, architect, or artist;
    d. It embodies distinguishing architectural characteristics of a style, type, period, or method of construction;
    e. It is a noteworthy example of the use of indigenous materials or craftsmanship;
    f. It embodies elements that represent a significant structural, engineering, or architectural achievement or innovation;
    g. It has a unique location, a singular physical characteristic, or is an established and familiar visual feature of a neighborhood, community or the City; or

h. It is one of the few remaining examples in the City, region, state or nation possessing distinguishing characteristics of an architectural or historical type of specimen.

5.4.2 ENVIRONMENTAL SETTING

PREHISTORIC BACKGROUND

Several chronologies are generally used to describe the sequence of the later prehistoric periods of Southern California. William Wallace (1955) developed the first comprehensive California chronologies and defines four periods for the southern coastal region. Wallace's synthesis is largely "descriptive and classificatory, emphasizing the content of archaeological cultures and the relationships among them" (Moratto 1984:159). Wallace relies upon the concept of "cultural horizons", which are generally defined by the temporal and spatial distribution of a set of normative cultural traits, such as the distribution of a group of commonly associated artifact types. As a result, his model does not allow for much cultural variation within the same time period, nor does it provide precise chronological dates for each temporal division. Nonetheless, although now more than 50 years old, the Wallace chronology has provided a general framework for Southern California prehistory that remains valid today.

Horizon I: Early Man or Paleo-Indian Period (11,000 BCE to 7,500 BCE[23]). While initially termed Early Man Horizon (I) by Wallace (1955), this early stage of human occupation is commonly referred to as the Paleo-Indian Period today (Chartkoff and Chartkoff 1984:24). As discussed above, the precise start of this period is still a topic of considerable debate. At inland archaeological sites, the surviving material culture of this period is primarily lithic, consisting of large, extremely well made stone projectile points and tools (e.g., scrapers and choppers). Encampments were probably temporary, located near major kills or important resource areas. The San Dieguito Tradition, defined by Warren at the stratified C.W. Harris site in San Diego County, is encompassed by this period of time (Moratto 1984:97).

Horizon II: Milling Stone Assemblages (7,500 BCE to 1,000 BCE). Encompassing a broad expanse of time, the Milling Stone Period was named for the abundant millingstone tools associated with sites of this period. These tools, the mano and metate, were used to process small, hard seeds from plants associated with shrub-scrub vegetation communities. An annual round of seasonal migrations was likely practiced, with movements coinciding with ripening vegetal resources and the periods of maximal availability of various animal resources. Along the coast, shell midden sites are common site types. Some formal burials, occasionally with associated grave goods, are also evident. This period of time is roughly equivalent to Warren's (1968) Encinitas Tradition. Warren (1968) suggests that, as millingstones are common and projectile points are comparatively rare during this period of time, hunting was less important than the gathering of vegetable resources.

More recent studies (Koerper 1981; Koerper and Drover 1983) suggest that a diversity of subsistence activities, including hunting of various game animals, were practiced during this period. At present, little is known about cultural change during this time period in Southern California. While this lack of noticeable change gives the appearance of cultural stasis, almost certainly many regional and temporal cultural shifts did occur. Future research that is focused on temporal change in the Milling Stone Period would greatly benefit the current understanding of Southern California prehistory.

[23] BCE stands for "Before Common Era" and CE stands for "Common Era." These alternative forms of "BC" and "AD," respectively, are used throughout this document.

Horizon III: Intermediate Cultures (1,000 BCE to 750 CE). The Intermediate Period is identified by a mixed strategy of plant exploitation, terrestrial hunting, and maritime subsistence strategies. Chipped stone tools, such as projectile points, generally decrease in size, but increase in number. Abundant bone and shell remains have been recovered from sites dating to these time periods. In coastal areas, the introduction of the circular shell fishhook and the growing abundance of fish remains in sites over the course of the period suggest a substantial increase in fishing activity during the Intermediate Horizon. It is also during this time period that mortar and pestle use intensified dramatically. The mano and metate continued to be in use on a reduced scale, but the greatly intensified use of the mortar and pestle signaled a shift away from a subsistence strategy based on seed resources to that of the acorn. It is probably during this time period that the acorn became the food staple of the majority of the indigenous tribes in Southern California. This subsistence strategy continued until European contact. Material culture became more diverse and elaborate and included steatite containers, perforated stones, bone tools, ornamental items, and asphalt adhesive.

While Warren (1968) recognized the start of the Campbell Tradition in the Santa Barbara region at roughly the beginning of Intermediate Period, he did not see clear evidence of cultural change farther south. As a result, the Encinitas Tradition in Southern California encompasses both the Milling Stone and Intermediate Periods in Warren's chronology (1968: 2, 4). However, the more recent chronology posited by Koerper and Drover clearly recognizes an Intermediate Period in Southern California. They suggest that Warren's inability to recognize an intermediate cultural stage was likely due to "the lack of conclusive data in 1968" (1983:26).

Horizon IV: Late Prehistoric Cultures (750 CE to 1769 CE). During the Late Prehistoric Period, exploitation of many food resources, particularly marine resources among coastal groups, continued to intensify. The material culture in the Late Prehistoric Horizon increased in complexity in terms of the abundance and diversity of artifacts being produced. The recovery and identification of a number of small projectile points during this period likely suggests a greater utilization of the bow and arrow, which was likely introduced near the end of the Intermediate Period. Shell beads, ornaments, and other elements of material culture continue to be ornate, varied, and widely distributed; the latter evidence suggests elaborate trade networks. Warren's (1968) scheme divides the late prehistoric period into several regional traditions. Western Riverside County, Orange County, and the Los Angeles Basin area are considered part of the "Shoshonean" tradition, which may be related to a possible incursion of Takic speakers into these areas during this period. The Late Prehistoric Period includes the first few centuries of early European contact (1542–1769 CE); it is also known as the Protohistoric Period as there was a low level of interaction between native Californians and Europeans prior to Portolá's overland expedition in 1769.

In the few centuries prior to European contact, the archaeological record reveals substantial increases in the indigenous population (Wallace 1955:223). Some village sites may have contained as many as 1,500 individuals. Apparently, many of these village sites were occupied throughout the year rather than seasonally. This shift in settlement strategy was likely influenced by improved food procurement and storage technology, which enabled population growth and may have helped stimulate changes in sociopolitical organization.

ETHNOGRAPHIC BACKGROUND

Gabrielino/Tongva

At the time of Spanish contact, the project area is believed to have been inhabited by the Gabrielino, or *Tongva*, near the eastern extent of their ethnographic territory (see Kroeber 1925; Harrington 1933; Johnston 1962; Blackburn 1963; Heizer 1968; Bean and Smith 1978; McCawley 1996). The name "Gabrielino" identifies those people who came under the control of Mission San Gabriel Arcángel and included the inhabitants of most of current-day Los Angeles and Orange Counties and portions of Riverside and San Bernardino Counties. Today many Gabrielino prefer to be known as Tongva. According to the ethnographic evidence, the Gabrielino territory included the coastal plain of Los Angeles and Orange Counties, extending from Topanga Canyon in the north to Aliso Creek in the south, and eastward of Mount Rubidoux in Western Riverside County. Their territory also included Santa Catalina, San Clemente, and San Nicolas Islands. No ethnographic villages have been identified within or directly adjacent to the area of potential effects (APE); however, McCawley (1996:49) reports that the Gabrielino village of *PaXávXanga* was located in the Santa Ana Mountains near the present City of Corona, in or near Temescal Valley. This would place it in the vicinity of the project area, but its precise location is not known.

Unfortunately, the Gabrielino are one of the least documented of the native peoples of California because they were one of the first groups to suffer the effects of foreign diseases brought by the Spanish and the subsequent migration of foreigners who arrived in the region (Bean and Smith 1978). Fortunately, ethnographic studies conducted by J.P. Harrington (1933), Alfred Kroeber (1925), and others in the early 20th Century provide some insight into the culture of the Gabrielino.

Linguists have determined that the Gabrielino language derived from one of the Cupan languages in the Takic family, a part of the Uto-Aztecan linguistic stock (Bean and Smith 1978). Linguistic evidence indicates that the Gabrielino or their ancestors migrated from the Great Basin area. Linguistic analysis suggests that, at one time, the entire Southern California coastal region was populated by Hokan speakers who were gradually separated and displaced by Takic-speaking immigrants from the Great Basin area (Bean and Smith 1978; Cameron 1999). The timing and extent of the migrations and their impact on indigenous peoples is not well understood, and any data related to it represents a valuable contribution to the understanding of local prehistory.

Gabrielino territory occupied one of the richest environmental habitats in all of California. The territory included four macro-environments: the Interior Mountains/Adjacent Foothills, the Prairie, the Exposed Coast, and the Sheltered Coast (Bean and Smith 1978). These diverse macro-environments, and the resources contained within each, enabled the Gabrielino to develop one of the most complex cultures of any of the native California groups. The abundance of resources provided many opportunities for the Gabrielino to exploit native plants and animals. This, in turn, allowed the population to settle in small villages throughout the territory.
Permanent villages evolved in resource-rich areas near rivers, streams, and along the coast. Secondary, or satellite, villages were also established nearby. The Gabrielino traditionally constructed two types of dwellings: the subterranean pit house and the thatched lean-to (*wickiup*). The pit house was constructed by excavating approximately two feet below the surface and constructing the walls and roof with wooden beams and earth around the excavation pit. The lean-to, or wickiup, was constructed of thatched walls and a thatched roof, surrounded by large converging poles. A hearth located inside the structure provided warmth.

Hearths used for cooking were located outside. Sweathouses, or *temescals*, were used as a meeting place for the men (Kroeber 1925; Bean and Smith 1978).

The material culture of the Gabrielino reflected an elaborately developed artistic style and an adaptation to the various environments in their territory. This artistic style was often manifested in elaborate shell bead and asphaltum ornamentation on many utilitarian items (e.g., bone awl handles, bowls, or mortar rims). Spear and bow and arrow were used for hunting, while manos and metates, as well as mortars and pestles, were used for processing plant and animal material into food items. The Gabrielino were also known for their high quality of basketry made from rush stems (*Juncus* sp.), native grass (*Muhlenbergia rigens*), and squawbush (*Rhus trilobata*) (Bean and Smith 1978:542).

HISTORY

The major historic periods for the greater Southern California area are defined by key events documented by participants, witnesses, historians, and cartographers. Paramount among these was the transfer of political control over *Alta California,* including the APE and surrounding lands specifically.

- Spanish Period (1769–1822)
- Mexican Period (1822–1848)
- American Period (1848–Present)

Spanish explorer Juan Rodriguez Cabrillo made a temporary landfall at the Chumash village of *Sisolop* (present-day Ventura) on October 12, 1542 (Grant 1978:518). He was the first of several early explorers, representing several nations, to explore the Alta California coast. However, the end of the prehistoric era in Southern California is marked by the arrival of the Gaspar de Portolá overland expedition from New Spain (Mexico) and the founding of the first Spanish settlement at San Diego on July 16, 1769 (Johnston 1962). With the onset of the Spanish Period**,** the Gabrielino first came into direct contact with Europeans when the Portolá expedition passed through the San Gabriel Valley where the expedition camped briefly as they continued west toward Ventura (Bean and Smith 1978: 541).

Two of the 21 Franciscan missions established by the Spanish in Alta California impacted Gabrielino people profoundly: *Mission San Gabriel Arcángel* and *Mission San Fernando Rey de España,* both in Los Angeles County, which were founded in September 1771 and in 1797, respectively. The Gabrielino were persuaded to settle in the vicinity of the two missions.

The missions were charged with administering to the natives in their areas. Mission life did give the Native Americans skills needed to survive in their rapidly changing world, but the population was decimated by the introduction of European diseases, such as measles and small pox, for which they had no immunity. After 1810, mission populations declined faster than they could be replenished.

The Mexican Revolution, beginning in 1821, overthrew Spanish control and the new government of Mexico had a very different outlook on mission activities. Mexico's independence from Spain in 1822 brought the Mexican Period to California. Mexico secularized the missions in 1833 and expanded on the Spanish practice of granting large tracts of ranch land to soldiers, civil servants, and pioneers (Cleland 1966). Secularization of the missions, planned under the Spanish, was greatly accelerated by the Mexican government. Plans to provide land, training, and living quarters for the Native American population never developed and the mission lands

were soon under the control of a relatively few influential Mexican families. The rancho lifestyle was relatively short lived, but remains an influential period in California history.

During the 1840s, an increasing influx of Anglo-Americans from the eastern United States spurred an American challenge for the California territory. The American Period began with Mexico's defeat at the end of the Mexican-American War, resulting in the concession of California to the United States under the Treaty of Guadalupe Hidalgo on February 2, 1848 (Rolle 1998: 91, 104). Only a few days before, the discovery of gold on the American River had stimulated the Gold Rush of 1848–1849. After more than two years of legislative process and debate, California became the 31st state of the Union on September 9, 1850 (Rolle 1998:106).

PROJECT SITE HISTORICAL CONTEXT

Rancho La Puente

Where the Gabrielino village of *Awingna* once stood near San Jose Creek, Rancho La Puente was established and operated by Mission San Gabriel in 1771. The rancho's name is derived from the bridge (*puente*) built over San Jose Creek by Gaspar de Portolá's expedition during their trek from San Diego to Monterey in 1769.[24] After Mexico won its independence from Spain and mission lands were redistributed under the Secularization Act of 1833, the rancho was expanded and granted to Mexican citizens.

In 1842, 17,740 acres of the land known as the Rancho La Puente was granted to John Rowland by Governor Juan Alvarado for $1,000.[25] The rancho was enlarged to 48,790 acres in 1845 when Governor Pío Pico named both John A. Rowland and William Workman as co-owners. With the expansion to nearly 49,000 acres, Rancho La Puente was one of the largest Mexican land grants in California. Workman and Rowland had formed a partnership in 1823 by going into the fur trade together. They lived in New Mexico and worked for the American Fur Company owned by John Jacob Astor.[26] Based upon the favorable recommendation of the conditions in Alta California from their friend Kit Carson, Workman, Rowland, and 25 other families made the 1,200-mile trip to Alta California in 1841.[27] Workman and Rowland settled near the Mission San Gabriel and requested a grant of lands known as La Puente that had been formerly under control of the Mission.

With the entrance of California into the Union, land grants issued by Pío Pico came under intense scrutiny and many disputes. Workman and Rowland went to federal court for many years to obtain the patent for the land. It was not until after the close of the *War between the States* that the men were issued their patent. A year later in 1868 the men decided to equally divide the land between them. Rowland took possession of the land in the northern and eastern part of the parcel, and Workman the western and central portion. The San Jose Hills of the area were known for growing the native California species of black walnut trees, raising cattle, and for fruit orchards.

The land that Rowland owned would include the unincorporated Los Angeles County community of La Puente, and from this the cities of Walnut and La Puente were created in 1959. Rowland's

[24] Workman and Temple Homestead Museum. "Rancho La Puente." http://www.homesteadmuseum.org/Rancho_La_Puente
[25] Ibid.
[26] Kielbasa, John. *Historic Adobes of Los Angeles County*. Pittsburgh; Dorrance Publishing Co, 1998. http://www.laokay.com/halac/RanchoLaPuente.htm
[27] Ibid.

descendents sold their land to the Sentous family and an 1,800-acre portion of this land was sold to Percy Glen Winnett in the 1930s. Charles Rudel, a land developer in the new City of Walnut in the 1960s was married to Madeline Legrand Rudel, a descendent of the Sentous family.[28]

Percy G. Winnett and San Vicente Ranch

When the City of Walnut was created in 1959, the population of the community was only 960 residents, and many of these earned their livelihood from the citrus fruit and walnut orchard activities of the area. Percy Glen Winnett (P.G. Winnett) had purchased 2,000 acres of the Sentous family land in the early 1930s.[29]

Percy G. Winnett was born in Winnipeg, Canada in 1881, and moved with his family to the City of Los Angeles, through San Francisco, in 1896 when he was 15 years old. P.G. Winnett's father and uncle established Winnett's Furniture Store in the business center of Los Angeles in 1897, but P.G. went to work for Arthur Lett's Broadway Department Store on Rampart Street in the City.[30] It was here that he met and formed a business relationship with John G. Bullock, who had also emigrated from Canada. At the turn of the century, Percy was still living at home with his parents and siblings at 124 25th Street in Los Angeles.[31]

Bullock formed a partnership with Letts, and took over the management of Lett's Broadway Department Store while planning to open his own flagship store. P.G. Winnett was 25 years old, and was Bullock's first assistant when Bullock opened his "giant" 7-story department store at the corner of Broadway and 7th Avenue in downtown Los Angeles.[32]

Working at Bullock's, Winnett rapidly climbed management ladder, becoming a chief buyer by 1910.[33] In 1918, Winnett was 37 years old and was Vice-President and Manager of Bullock's Department Store. He was living at 505 Georgina Avenue in Santa Monica with his wife, son and two daughters.[34]

Los Angeles grew at such a rate in the 1910s and 1920s that Bullock felt he could take the risk to build a new Bullock's Department Store on Wilshire Boulevard. Winnett had been made General Manager of the Bullock's organization in 1927, and Bullock gave him his full support in designing the new "temple to women."[35] The new store opened in September of 1929, and was such a success that the Los Angeles Times hailed: "these two men, Mr. Bullock and Mr. Winnett, are idealists, artists, even poets, first, and business men afterword."[36]

Even during the Great Depression, Bullock's Department Store became the leading department store in Los Angeles. The U.S. Census of 1930 now records Winnett and his family living on an estate on San Vicente Boulevard in Santa Monica. With the passing of John Bullock in 1933, Winnett at 52 years old became the president of Bullock's Incorporated. The corporation

28 *Los Angeles Times*. "Big Tract Boosts Small Town," September 19, 1965.
29 *Los Angeles Times*. "Community Profile: Walnut," November 22, 1996. 29 Los Angeles Public Library. *Los Angeles City Directory 1898*.
30 Los Angeles Public Library. *Los Angeles City Directory 1898*.
31 Ancestry.com. 1900 United States Census.
32 *Los Angeles Times*. "P.G. Winnett, Cofounder of Bullock's Stores, Dies at 87," July 20, 1968
33 Ancestry.com. 1910 *United States Census*.
34 Ancestry.com. *Draft Card (Registration Card) for Percy Glen Winnett*, September 12, 1918.
35 *Los Angeles Times*. "Bullock's In Debut Today," September 26, 1929.
36 Ibid.

included the Bullock's Downtown store, Bullock's Wilshire store, a Bullock's branch store in Palm Springs, and branch stores in Europe.[37]

Articles in the *Los Angeles Times* society columns recorded the many social activities of the Winnett family. P.G. Winnett's financial status now allowed him into the highest reaches of society in Los Angeles. Besides becoming Chairman of the Board of Bullock's in 1950, he organized the Citizens Transportation Committee that spearheaded local involvement in the development of the Los Angeles freeway system and "pioneered Greater Los Angeles Plans, and organization dedicated to establishing music and conventions centers."[38] Over the years, the *Los Angeles Times* printed columns in the society news that included snippets about Winnett's involvement with the showing of horses in California and his various vacation homes in Lake Arrowhead and on Catalina Island.

In 1935, Winnett had acquired 2,000 acres of land that had been used as a hay and grain farm owned by the Exupary Sentous family to create a private, small-scale, horse breeding and training facility. The Sentous land had been lost through foreclosure. Once he was the owner of the property, Winnett demolished all the buildings except for a house that had been built in 1890.[39] The 1890 house may have been the site of where Winnett later set about building a 3,000 square-foot California style ranch house for his weekends "in the country," plus horse stables and associated barns. He called his horse farm Rancho San Vicente, possibly after his home address of San Vicente Boulevard in Santa Monica.[40] Winnett hired Jack Fox, an English horseman, to buy and sell, breed and train Thoroughbred horses for steeple chasing, fox hunting, and show jumping.[41] In 1938, Winnett is noted as having his personal horses presented in the horse show on the grounds of the Riviera Country Club and in the San Fernando Valley. The *Los Angeles Times* reported that his horses competed at the Los Angeles County Fair horse show in 1940. In 1942, an article in the *Los Angeles Times* about Winnett's horse ranch stated that he had 20 horses at the ranch, of which nine were broodmares.[42]

After the end of World War II, Winnett became the president of the Santa Anita Foundation, a charitable organization associated with horse racing activities at Santa Anita Racetrack.[43] His association with the Santa Anita Foundation may have been an outcome of his leadership position of selling War Bonds in Los Angeles during the war, and of his ownership and interest of Thoroughbred horses.[44]

Winnett started selling off sections of his land in the 1950s as his interest in the horse operations waned and he was over 75 years old. Winnett sold most of his land in 1961 to Barry J. Richards, partner of Richards Construction Company for a price in excess of $2.6 million.

Winnett retained 80 acres for his ranch which, according to the *Los Angeles Times*, included at that time a ranch house, stables, and paddock areas.[45] Refer to ***Exhibit 5.4-1***, ***1946 Aerial Photograph***.

37 *Los Angeles Times*. "Bullock Once Delivery Boy," August 23, 1931.
38 *Los Angeles Times*. "P.G. Winnett, Cofounder of Bullock's Stores, Dies at 87," July 20, 1968.
39 *Los Angeles Times*. "Future of Walnut's 'Greatest Resource' Cloudy," May 26, 1974.
40 Ibid.
41 *Los Angeles Times*. "A Southland Paradise for High-Bred Horses," September 27, 1942.
42 Ibid.
43 *Los Angeles Times*. "Turf Club Members Make Charity Race Week Plans," January 11, 1948.
44 *Los Angeles Times*. "P.G. Winnett, Cofounder of Bullock's Stores, Dies at 87," July 20, 1968.
45 *Los Angeles Times*. "Walnut Valley, Bypassed Many Times, at Threshold of Boom," July 23, 1961.

Winnett passed away in July 1968 and had an estate valued at over $20 million. Before he died, Winnett had risen from a dry goods store stock clerk into a trustee of Caltech and Claremont Men's College, and had been given an honorary doctor of law degree from Occidental College.[46]

Winnett bequeathed the remaining 80-acre parcel of his land in Walnut, which included the ranch house and stables, in equal shares to Occidental College, Claremont Men's College and California Institute of Technology to be used to fund student scholarships.[47] In 1978, the colleges had still not sold the parcel, only renting out the stalls and barns to local horse owners and trainers. Building permit records at the City of Walnut indicate the horse property consisting of almost 26 acres was finally sold by the three colleges in 1983 to Santiago Corporation of Tustin, California. Winnett's ranch house and associated features appear to have been lost to development projects.

IDENTIFICATION OF ON-SITE HISTORICAL RESOURCES

A site visit and intensive-level inspection of the built environment resources on the property at 800 Meadow Pass Road, was performed by Pamela Daly, Architectural Historian, on January 8, 2015. The project site consists of a well-planned horse training establishment with structures related to the breeding, training, and riding of horses located primarily in the northern section of the property. The grounds of the property, as it exists today, have been substantially improved since Winnett's ranch was in operation. The Brookside Equestrian Center has large expanses of landscaped lawns and gardens, with mature trees and gravel roads meandering through the property. There are only two structures that remain on the grounds that were constructed while Winnett owned the land: the Main Barn and Stables structure and the Minor Stable structure.

Winnett's San Vicente Ranch Structures

Main Barn and Stables constructed in 1935, altered 1985 and 1995: According to an article in the Los Angeles Times, P.G. Winnett demolished the existing buildings on his 2,000-acre ranch when he took possession in 1935. It was most probably at that time that he constructed the three ranch structures that would be part of his San Vicente Ranch until the property was sold to Santiago Corporation in 1983.

The Main Barn with Stables has a "U" shaped massing that was originally comprised of a gable-front barn in the center of the structure and horse stalls forming wings extending from the eaves sides of the barn (refer to *Exhibit 5.4-2a*). The gable-front barn had a ground level and a second level that held a hay loft under the gable roof. The height of the barn peak appears to be approximately 26 feet high. The barn was set on an east-southeast by west-northwest axis and the stable wings extend perpendicularly from the barn in the direction of the southwest and northeast forming the "base" of the U-shape structure. Both stable wings extend approximately 43 feet from the barn before they turn 90 degrees to the west, for an additional 81 feet, thereby forming the "arms" of the U-shape.

Winnett constructed a riding ring, having a diameter of approximately 75 feet within the "arms" of the Main Barn. Historic aerial photographs of the ranch from 1964 and 1980 show that the

46 *Los Angeles Times*. "P.G. Winnett, Cofounder of Bullock's Stores, Dies at 87," July 20, 1968.
47 *Los Angeles Times*. "Colleges and Hospitals Among Beneficiaries of Winnett Estate," July 27, 1968.

ring was removed before 1980.[48] Today the space within the "U," the stable yard, is landscaped with lawn and gardens.

The stable wings were originally constructed to be only one-stall deep, with the stalls measuring 12-feet wide by 12-feet long, and the run of stalls are covered with a medium-low pitched gable roof. These types of stalls are known as "box" stalls and would shelter one horse. There are seven stalls in each wing. When the stall wings were originally designed, the stalls most probably would have had only the one door providing access in and out of the individual units. The stall doors in the wings that face towards the stable yard would have been the doors to the stalls. If the doors were on the stall walls facing the stable yard, there may have been a wood-framed opening in the rear wall that could be opened to provide cross-ventilation to the individual stall. These window openings would have been placed approximately 5-feet high on the wall, with steel bars set vertically in the frame a few inches apart so that a horse couldn't get a leg caught in the opening. The stall doors that face the yard are sheltered by a wide extension of the gable roof. The roof overhang, approximately 8-feet wide, is supported by wood beam that runs under the eaves, and the beam is supported by large wood posts with angle brackets at the top of the posts, where the posts intersect with the beam. The support posts are set approximately 12-feet apart. The exterior walls of the stall wings are clad with rough-cut, tongue-and-groove, board siding set horizontally with battens set vertically approximately every four feet.

Building permit records for the ranch dating from 1984 and 1985, note that there were extensive repairs and renovations made to the horse stable structures. Based Daly & Associates experience with horse training facilities, they believe that it was during this time that the personal tack boxes (tack and equipment lockers) and the covered corridors that run between the stalls and the tack boxes were constructed, thereby widening the stable wing structure by 8 feet. The original roof cladding on the stall wings was removed and replaced with fire-retardant shingles.

When constructed by Winnett, the first level of the center barn would have provided space on either side of the central passage for a locked feed room, the tack and equipment room, an office for Winnett's horse trainer, restrooms, and possibly a small apartment unit for a live-in farm manager. We believe that there may have been a lounge for visitors of the ranch to refresh and relax between observing or riding Winnett's horses.

The center barn was extensively renovated in 1995 when the upper level of the barn was converted into a residence with multiple bedrooms, bathrooms, and full service kitchen. While the original gable roof profile was kept in place on the west elevation, approximately five feet to the east, the roof was raised from its medium pitch to a roof slope with a low pitch, thereby creating additional interior floor space under the roof rafters. A large window unit comprised of a set of french doors with matching sidelights, headed by a Syrian arched window unit with segmented lights replaced the original hay loft doors in the center of the upper level facade. A balconette spans across the window unit on the upper façade.

On the rear (east) elevation, the footprint of the upper level was extended to match the new width of the lower-level stable corridors. An outside staircase provides access to the upper floor residence, and a deck extends approximately six feet from the upper level facade to provide an entrance landing. The deck is supported by large wood posts. The first level of the barn appears

[48] NETR Historic Aerials: http://www.historicaerials.com/

to have been renovated into modern lounge facilities for use by the boarders and riding students.

The Main Barn and Stables structure has been substantially altered from its original design when the private tack lockers were constructed with a covered corridor, thereby widening the original stable wings by almost twice their width. The structure was irreparably altered when the hay loft area of the barn was converted for use as residence by changing the roof pitch and raising the roof, altering the buildings profile.

Minor Barn structure constructed 1935, altered 1984 and 1995: The Minor Barn is located just to the northeast of the Main Barn and Stables. It may have been the barn used for housing the breeding mares and foals on the ranch. The rectangular mass of the structure measures approximately 85-feet long by 32-feet wide, and has a medium pitched gable roof (refer to *Exhibit 5.4-2a*). The roof slope of the structure was extended approximately six feet on all sides to provide covered walkways over the exterior stall doors. The roof slope is supported by the same style of posts and brackets as on the Main Barn. The Minor Barn has a center aisle paved with bricks, with six stalls situated on each side of the aisle. The building is set on a northeast to southwest axis and a training ring is set to the north of the structure. This barn was substantially altered as evidenced by the excellent condition of the stall walls, and the installation of skylights in the roof. The skylights and cupola were added in 1995. Private tack boxes/lockers were also constructed for this barn, and they span the length of the east end of the structure across the walkway from the stalls, and in a separate structure to the south.

Brookside Equestrian Center Improvements

When the property was sold to the Santiago Corporation in 1983, the new owners invested substantial amounts of money to landscape the parcel and to build the following features identified below.

1984: Covered riding arena, corrals and paddocks, flagpole (refer to Exhibit 5.4-2b)
1985: Remove old box stalls in both barns, and replace with new structures
1987: Landscape equestrian center grounds with gravel roads, fencing, light fixtures, Stone-faced retaining walls, dressage ring (refer to *Exhibit 5.4-2b* and *Exhibit 5.4-2c*)
1996: Paddocks with run-in sheds (refer to *Exhibit 5.4-2c*)
2004: Pole stalls, standing stalls for grooming and washing horses

The structures and features listed above are not over 50 years of age, and therefore ineligible to be considered to be historical resources.

CULTURAL RESOURCES

A records search and literature review of documents on file at the SCCIC at California State University, Fullerton was conducted on January 6, 2015 (Cultural Resources Assessment Appendix A). The SCCIC is a designated branch of the California Historical Resources Information System and houses records regarding archaeological and historic resources in Los Angeles, Orange, and Ventura Counties. The review consisted of an examination of the U.S. Geological Survey's Orange 7.5-minute Quadrangle to determine if any sites are recorded or if any cultural resources studies have been conducted on or within a ½-mile radius of the subject property. Data sources consulted at the SCCIC include archaeological records, Archaeological Determinations of Eligibility (DOE), historic maps, and the Historic Property Data File (HPDF)

maintained by the OHP. The HPDF contains listings for the CRHR and/or the NRHP, California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI).

Archaeological Field Survey

The City of Walnut was notified of the pending visit on January 5, 2015. On January 6, 2015, the BonTerra Psomas Senior Archaeologist, David, Smith, conducted a pedestrian survey of the project area.

PALEONTOLOGICAL RESOURCES

A paleontological resources records search and scientific literature review for the project area was conducted in an effort to identify deposits and formations where significant resources might be located. The records search was conducted on January 26, 2015 by the Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County (NHMLAC). The records search documents mapped formations, fossil localities, and references to publications regarding fossil resources previously identified within and adjacent to the project area (Cultural Resources Assessment Appendix B).

SENATE BILL 18

SB 18 consultation (*California Government Code* Section 65352.3) was conducted. As previously noted, at the time the Cultural Resources Report was prepared, the proposed project included a Specific Plan and General Plan Amendment; therefore, formal consultation under SB 18 was undertaken by the City of Walnut. However, the proposed project has been revised and does not include a Specific Plan or require a General Plan Amendment.

The process consists of an offer of government-to- government consultation between interested Native American tribes and the City of Walnut. Consultation with the NAHC and interested tribes for the project was initiated by BonTerra Psomas (on behalf of City of Walnut) with an SB 18 tribal consultation list request to the NAHC on January 5, 2015. Letters offering consultation for the current project were sent by the City of Walnut on January 29, 2015 (Cultural Resources Assessment Appendix D).

5.4.3 SIGNIFICANCE THRESHOLD CRITERIA

Environmental impact thresholds as indicated in *CEQA Guidelines* Appendix G (Environmental Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 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.

According to *Public Resources Code* Section1(j), a "historical resource" includes, but is not limited to, "any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California." *CEQA Guidelines* state that the term "historical resources" applies to any such resources listed in, or determined to be eligible for listing in, the California Register of Historical Resources; included in a local register of historical resources; or determined to be historically significant by the Lead Agency (*Title 14 CCR* Section 15064.5(a)(1)-(3)).

CEQA Guidelines require that "a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing in the California Register of Historical Resources" (*Title 14 CCR* Section 15064.5(a)(3)).

Under C*EQA*, a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. Substantial adverse change in the significance of a historical resource is defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired. The significance of a historical resource would be materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register, a local register of historical resources pursuant to Section 5020.1(k) of the *Public Resources Code* or historical resources survey meeting the requirements of Section 5024.1(g) of the *Public Resources Code*. In general, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties and associated guidelines shall be considered as mitigated to below the level of significance.

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.4.4 PROJECT IMPACTS AND MITIGATION MEASURES

HISTORICAL RESOURCES

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD IMPACT HISTORICAL RESOURCES.**

Impact Analysis: The subject property is located at the street address of 800 Meadow Pass Road, and consists of built environment resources that were installed on the site starting in 1935 for housing and care of horses. P.G. Winnett had purchased the property in 1935 and removed all the prior ranching-related structures on the land that dated from the late nineteenth century. He constructed the "U" shaped stables, a secondary barn, and a farm barn, for his San Vicente Ranch. A decade before his death in 1968, Winnett had reduced his 2,000 acres to 80 acres, which were bequeathed to the three colleges. In 1983, the remaining 25.8-acre parcel was sold to the Santiago Corporation. The Santiago Corporation removed the farm barn in 1983, and did extensive rehabilitation work to the existing stables in addition to constructing a covered arena, stadium arena, dressage ring, schooling ring, feed storage building, run-in sheds, and

professional landscaping over four years. The "U" shape stable structure was substantially altered in 1995 by remodeling the existing hay loft area of the stables (at its mid-point) into a residential living unit.

The property no longer has any built environment structures or buildings that represent the historic use of the land when it was owned by Rowland or the Sentous family, during the early years of settlement in the area of Walnut and La Puente. The Property has been significantly altered from when P.G. Winnett owned it in 1935 and developed it to be used as a privately-owned Thoroughbred horse breeding and training ranch located in a lightly-settled area of Los Angeles County, to that of a commercial horse training and boarding facility designed to attract customers.

The Brookside Equestrian Center property is not listed in the National Register or California Register, but it is on the list provided by the Walnut Historical Society as a property of interest.

Evaluation Under the National Register and California Register Criteria

Under the criterion for evaluating properties for listing in the National Register or California Register for its association with events that have made a significant contribution to the broad patterns of history in the City of Walnut, the cultural heritage of California or the United States, the 25.8-acre Brookside Equestrian Center property and the two horse barns do not appear eligible for listing. The subject property was not found to have been directly associated with area's history of cattle ranching, or the growing, picking or packing walnuts and other orchard fruits, which were the main contributing activities of the residents of the area before 1959. The raising and training of horses was a popular recreational pastime throughout Southern California before the onslaught of housing developments constructed after World War II converted open land to residential neighborhoods. In Walnut and La Puente, however, the boarding, training, showing, and breeding of horses did not play even a minor part in the history of those communities. The Brookside Equestrian Center property does not appear eligible for listing in the National Register under Criterion A, or the California Register under Criterion 1.

Under the criterion for evaluating properties for listing in the National Register or California Register for their association with the lives of persons important to the history of the City of Walnut, the state of California, or the nation, the Brookside Equestrian Center property does not appear eligible for listing. P.G. Winnett was important to the history of dry goods and department stores in Los Angeles, and in particular to the history of the chain of Bullock's Department Stores, but his work and activities for Bullock's did not occur at his ranch in Walnut. Daly & Associates could not find evidence of any other important persons being directly associated with Winnett's ranch. The Brookside Equestrian Center property and the two horse barns do not appear eligible for listing in the National Register under Criterion B, or the California Register under Criterion 2.

Per the criterion to evaluate built environment structures, Daly & Associates did not find that the Main Barn and Stables structure and the Minor Barn structure, originally built by P.G. Winnett in 1935, on the grounds of the present-day Brookside Equestrian Center, have sufficient architectural integrity to present the structural characteristics required to be strongly representatives of horse barns dating from 1935 in rural Los Angeles County. The period of significance for the horse barns dates from their construction in 1935 when the property was a small, private, facility built by P.G. Winnett for his personal use on a large and unchanged 2,000-acre portion of the original rancho granted to John Rowland. The stables are not significant examples of horse stall structures as they do not present an important phase in the

design or building practices of horse barns or horse stalls during the 1930s. Additionally, the attributes of the original Winnett stable buildings' setting and feeling, and their surrounding landscape of the 1930s, has been lost or destroyed with the substantial renovations of the property in the 1980s and 1990s.

When the Santiago Corporation took ownership of the much reduced 25.8-acre parcel, it turned a modest, privately owned and operated equine facility, into a more robust commercial facility. To protect their investment, the Santiago Corporation increased the number of stalls in the horse barns, and added tack and equipment storage units that increased the overall size of the horse barns, all of which altered the original design, materials, and workmanship of the barns. The landscape surrounding the barns was significantly altered by leveling the land for the dressage ring, stadium jumping ring, and the covered arena. With the creation of the manicured lawns and gardens, well-defined bridle paths, and ornamental outdoor lighting, the setting, feeling and association of the current property to that of a simple ranch dating to the 1930s has been lost. The Brookside Equestrian Center property and the two horse barns do not appear eligible for listing in the National Register under Criterion C, or the California Register under Criterion 3.

Impact Conclusion

The Brookside Equestrian Center property at 800 Meadow Pass Road has not yielded, nor does it appear to have the potential to yield, information important about the prehistory or history of the local area, California or the nation. The property does not appear eligible for listing in the National Register under Criterion D, or the California Register under Criterion 4.

Evaluation Under the City of Walnut Historical Resource Criteria

The Brookside Equestrian Center property is on the list provided by the Walnut Historical Society as a property of interest. It is listed with this description:

> *This site first belonged to the Sentous family, holders of the 2,200-acre Sentous Ranch. It was later used in the filming of* [the movie] *"National Velvet", starring Elizabeth Taylor. The ranch is now owned by the Walton Family and used for equestrian programs, most notably as an Olympic training facility.*

Historic research has revealed that after California was admitted to the Union, the land that includes the Brookside Equestrian Center was the location of Rancho La Puente owned by William Workman and John Rowland. When the two men divided the land, the current project location was within the lands of John Rowland. It was Rowland's descendants who sold the land to the Sentous family.

When the movie *National Velvet* was filmed in 1943/1944, the horse riding scenes were filmed in Monterey near the Pebble Beach Golf Course, and in Santa Monica, California, at the Uplifters Club in Rustic Canyon.[49]

The Brookside Equestrian Center was used as a regional qualifying training facility for the United States Equestrian Federation (USEF) Olympic dressage team events in 2008.[50] The USEF uses regional dressage training centers across the United States before a final team is chosen for the Olympic events. The U.S. Olympic dressage team trains at the headquarters of

[49] IMDb (Internet Movie Database) "National Velvet"; http://www.imdb.com/title/tt0037120/locations?ref_=tt_dt_dt
[50] Email from Keith Walton, owner of Brookside Equestrian Center to his agent Jack Su, January 10, 2014.

the United States Equestrian Team Foundation's Hamilton Farm facility in Gladstone, New Jersey.[51]

When using the criteria of the Historical Preservation Ordinance to evaluate the significance of the Brookside Equestrian Center, the property does not appear to be eligible for listing in the City's future Historical Resources Register.

Criterion 1. The property has been found not eligible for listing in the National Register of Historic Places.

Criterion 2. The property has been found not eligible for listing in the California Register of Historical Resources.

Criterion 3.a. The property has not been found to exemplify or reflect elements of the City's history, heritage, or culture.

Criterion 3.b. The property has not been identified with persons or events significant in local, state, or national history.

Criterion 3.c. The property has not been found to be representative of the work of a notable builder, designer, architect, or artist.

Criterion 3.d. The property has not been found to embody distinguishing architectural characteristics of a style, type, period, or method of construction that reflect the original Winnett ranch built in 1935.

Criterion 3.e. The property is not a noteworthy example of the use of indigenous materials or raftsmanship.

Criterion 3.f. The property does not embody elements that represent a significant structural, engineering, or architectural achievement or innovation.

Criterion 3.g. The property does not have a unique location in the City. The property does not have a singular significant physical characteristic that represents the history of the City. The property does not present a historic property that is an established and familiar visual feature of the neighborhood, community, or the City.

Criterion 3.h. The property has lost the characteristics of the original 1930s horse-related type facility, and is not a significant architectural or historical specimen.

Impact Conclusion

In summation, the Brookside Equestrian Center property at 800 Meadow Pass Road is not eligible for listing in the National Register, California Register, or as a significant local historic property. Thus, less than significant impacts to historical resources would result with implementation of the proposed project.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

[51] United States Equestrian Team Foundation "Hamilton Farm": http://www.uset.org/hamiltonfarm.php

Level of Significance After Mitigation: Less Than Significant Impact.

ARCHAEOLOGICAL RESOURCES

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD IMPACT ARCHAEOLOGICAL RESOURCES.**

Impact Analysis:

Previous Research

The record search at the SCCIC showed that ten cultural resource studies have been conducted within a ½-mile radius of the project site. However, none of those involved any portion of the subject property. Six of the studies consisted of pedestrian field surveys for various properties adjacent to or near the subject property, while the remaining four were research oriented and did not involve field work. Cultural Resources Assessment Table 1 lists the studies that were conducted near the subject property.

The records search also shows that one prehistoric archaeological site, CA-LAN-521, was recorded partially on a knoll on the project site along the east side of Lemon Creek. The site was initially recorded by Sanburg from California State University, Los Angeles (CSLA), in January 1973. The record indicates that at least three artifacts were observed at that time: a mano, a hammerstone, and a cogstone. The record identifies the site as a campsite, heavily disturbed, measuring approximately 50 yards in diameter bound by Lemon Creek on the eastern and western sides. The 1973 recordation also indicated that the site would be destroyed by developers in June 1973. The cogstone had been collected by a local resident who may have contacted CSLA, which resulted in the site recordation prior to the destruction of the site. The disposition of the cogstone and the other two artifacts is unknown and, although the site record indicates CSLA issued artifact accession #119, it does not indicate what artifact(s) were curated.

The location of the site was re-visited in June 1982 by Joanne Mack. Mack described the site as having been destroyed sometime between June 1973 and 1975 when the top ten feet of the knoll (on which the site had been located) was graded away during construction. It is unknown where the excavated materials were deposited and whether any of those materials could still be located on the subject property. Prehistoric cogstones, whose function is still poorly understood, are rare and significant artifacts associated with early millingstone sites particularly in Southern California. They have been found in cached deposits observed during monitoring of construction projects.

The second cultural resource within ½-mile of the project site is the Rowland Adobe Redwood Ranch House. The adobe structure is located approximately ½-mile south of the project site just west of Lemon Street. The house was entered into the California Department of Parks and Recreation's listing of Points of Historical Interest in October 1975. The adobe structure is located approximately ½-mile south of the subject property just west of Lemon Street.

No other archaeological or historical sites have been recorded within a ½-mile radius of the subject property.

Cultural Resources Assessment Table 2 lists the cultural resources recorded on and within ½-mile of the subject property.

Additional data sources consulted at the SCCIC included listings of Archaeological DOEs, historic maps, and the HPDF maintained by the California OHP. The HPDF contains listings for the CRHR and/or the NRHP, and the CHL. No cultural resources within the records search area were identified from any of these additional research materials.

While no evidence of prehistoric activity on the project site was observed during the current survey, a significant prehistoric site was recorded as existing partially on the eastern edge of the subject property and extending eastward in an area now occupied by a residential neighborhood.

Archaeological Survey

The archaeological survey of the property was conducted on January 6, 2015, by Mr. David Smith, the BonTerra Psomas Senior Archaeologist based in the Santa Ana office. The City had been notified of the survey schedule on January 5, 2015. Access to the property was gained via the main driveway entering the property from Meadow Pass Road. The survey proceeded southward from Meadow Pass Road along the eastern side of Lemon Creek to the end of the property near Sand Vicente Road, then northward from the fire station along the western side of Lemon Creek. Most of the subject property is now covered with dense vegetation, grasses, eucalyptus leaves, mulch, decomposed granite, road gravel, and other materials, and visibility was generally poor overall. Several fenced areas had been graded flat and were obviously not at a natural grade.

Particular attention was given to the areas east of Lemon Creek where CA-LAN-521 had been recorded. No archaeological materials were observed during the pedestrian survey.

Impact Conclusion

There is the potential to impact previously unknown resources during earth-disturbing activities associated with implementation of the proposed project. Therefore, with the imposition of Mitigation Measure CUL-1, potential impacts would be reduced to a less than significant level.

Level of Significance Before Mitigation: Potentially Significant Impact.

Mitigation Measures:

CUL-1 A qualified Archaeologist shall be retained during construction to observe grading activities in the uppermost layers of sediment (soils and younger Quaternary Alluvium) and to salvage and catalogue archaeological resources, as necessary. The designated Archaeologist must be present during the pre-grade meeting to discuss cultural resources sensitivity, to assess whether archaeological resources have the potential to be encountered, and to establish procedures for monitoring activities. In the event of a discovery, the Archaeologist must first determine whether an archaeological resource uncovered during construction is a “unique archaeological resource” pursuant to California Public Resources Code Section 21083.2(g) California Public Resources Code or a “historical resource” pursuant to CEQA Guidelines Section 15064.5(a). If the archaeological resource is determined to be a “unique archaeological resource” or a “historical resource,” the Archaeologist shall formulate a mitigation plan in consultation with the City of Walnut that satisfies the requirements of the above-listed California Public Resources Code or CEQA Guidelines Sections.

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.

PALEONTOLOGICAL RESOURCES

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD DIRECTLY OR INDIRECTLY IMPACT A UNIQUE PALEONTOLOGICAL RESOURCE OR SITE.**

Impact Analysis: The NHMLC conducted a review of their Vertebrate Paleontology records for The Brookside Plan project. The review shows no vertebrate fossil localities have been recorded directly within the project site boundaries; however, the same stratigraphic deposits that occur on the property have yielded important vertebrate fossils in proximity to the project area. The lower elevations on the project site consist primarily of Quaternary Alluvium, which typically does not contain significant vertebrate fossils. However, in higher elevations on the project site, the marine sediments consist of the late Miocene Puente Formation and are considered a part of the local Monterey Formation in the area. The closest vertebrate fossil localities to the project site are LACM 5837 (located between La Puente Road and Valley Boulevard east of Nogales Street) and LACM 6170 (located west-southwest of the property). Both localities produced fossil fish specimens of scad and oilfish. To the west of the property, in the San Jose Hills, LACM localities 7854–7859, 7871–7877, and 7930–7934, produced fossil fish specimens of silversides, bigscale, herring, cod, lanterfish, croaker, mackerel, smelt, and viperfish. Similar specimens were recovered from a locality near Mount San Antonio Junior College.

Impact Conclusion

The NHMLC recommends paleontological monitoring be conducted whenever excavation is occurring in the older alluvium deposits and the Puente Formation exposures in the higher elevations. Additionally, sediment samples from the older alluvium and Puente Formation should be bulk processed to determine if macrofossils are present.

There is the potential to impact previously unknown resources during earth-disturbing activities associated with implementation of the proposed project. Therefore, with the imposition of Mitigation Measure CUL-2, potential impacts would be reduced to a less than significant level.

Level of Significance Before Mitigation: Potentially Significant Impact.

Mitigation Measures:

CUL-2 A qualified Paleontologist be notified and retained when earth-moving activities are anticipated to impact undisturbed deposits in the Older Quaternary Alluvium on the project site. The designated Paleontologist must be present during the pre-grade meeting to discuss paleontological sensitivity, to assess whether scientifically important fossils have the potential to be encountered, and to establish procedures for monitoring activities. The extent of monitoring activities will be determined at the meeting in consultation with the City of Walnut. If any scientifically important large fossil remains are uncovered during earth-moving activities, the Paleontological Monitor shall divert heavy equipment away from the fossil site until s/he has had an opportunity to examine the remains. Samples of Older Quaternary Alluvium shall be collected for processing and examination for very small vertebrate fossils.

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.

BURIAL SITES

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD IMPACT UNMARKED BURIAL SITES.**

Impact Analysis: Given the history of various Indian tribes and their presence throughout Walnut and the region, there is the potential for human remains, including those interred outside of formal cemeteries, to be encountered during earth removal or disturbance activities with implementation of the proposed project. However, archaeological resources have been documented within and near the City. Therefore, ground-disturbing activities in the City, such as grading or excavation, have the potential to disturb as yet unidentified human remains.

The Native American Graves Protection and Repatriation Act within the State of California, is enacted by the California Native American Historical, Cultural and Sacred Sites Act, and applies to Federal, State, and private lands. Upon discovery of human remains, the activity ceases and the County Coroner shall be notified. If the remains are of a Native American, the coroner notifies the Native American Heritage Commission (NAHC), which then notifies the mostly likely descendents. The NAHC is directed to prepare an inventory of Native American Sacred Places on public lands. It is illegal for anyone to knowingly or willfully possess or obtain any Native American artifacts or human remains from a Native American grave or cairn. Any person who removes, without authority of law, Native American artifacts or human remains from a Native American grave or cairn with the intent to sell or dissect such remains is guilty of a felony punishable by imprisonment in a Federal or State prison.

If human remains were found, those remains would require proper treatment, in accordance with applicable laws. State of California *Public Resources Health and Safety Code* Sections 7050.5-7055 describe the general provisions for human remains. Specifically, H*ealth and Safety Code* Section 7050.5 describes the requirements if any human remains are accidentally discovered during excavation of a site. In addition, the requirements and procedures set forth in *California Public Resources Code* Section 5097.98 would be implemented. If human remains are found during excavation, excavation must stop in the vicinity of the find and any area that is reasonably suspected to overlie adjacent remains until the County coroner has been called out, and the remains have been investigated and appropriate recommendations have been made for the treatment and disposition of the remains.

Following compliance with State regulations, which detail the appropriate actions necessary in the event human remains are encountered, and compliance Mitigation Measure CUL-3, impacts in this regard would be less than significant.

Level of Significance Before Mitigation: Potentially Significant Impact.

Mitigation Measures:

CUL-3 If human remains are encountered during excavation activities, all work shall halt in the vicinity of the remains and the County Coroner shall be notified (California Public Resources Code, Section 5097.98). The Coroner shall determine whether the remains are of forensic interest. If the Coroner, with the aid of a qualified

Archaeologist, determines that the remains are prehistoric, s/he shall contact the Native American Heritage Commission (NAHC). The NAHC shall be responsible for designating the most likely descendant (MLD), who will be responsible for the ultimate disposition of the remains, as required by Section 7050.5 of the California Health and Safety Code. The MLD shall make his/her recommendation within 48 hours of being granted access to the site. If feasible, the recommendation of the MLD shall be followed and may include scientific removal and non-destructive analysis of the human remains and any items associated with Native American burials (California Health and Safety Code, Section 7050.5). If the landowner rejects the recommendations of the MLD, the landowner shall rebury the remains with appropriate dignity on the property in a location that will not be subject to further subsurface disturbance (California Public Resources Code, Section 5097.98).

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.

5.4.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **THE PROPOSED PROJECT ALONG WITH OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS RELATED TO CULTURAL, PALEONTOLOGICAL, OR HISTORIC RESOURCES.**

Impact Analysis: Future development projects in the City of Walnut and the region may encounter cultural resources. During the growth anticipated to occur with implementation of the proposed project, it is possible that undiscovered archaeological, paleontological and/or historic resources could be impacted. It is possible that cumulative development could result in the adverse modification or destruction of archaeological, paleontological, and/or historic resources. Potential cultural resource impacts associated with the development of individual projects under the proposed project would be specific to each site. All new developments would be required to comply with existing Federal, State, and local regulations concerning the protection of archaeological, paleontological and historic resources on a project-by-project basis. Additionally, implementation of the recommended mitigation measures would reduce potential impacts to undocumented archaeological resources, cultural resources, and historical structure/resources to less than significant levels. Thus, implementation of the proposed project would not result in cumulatively considerable cultural resource impacts.

Impacts related to archaeological resources are generally considered site-specific and are assessed on a case-by-case basis. As with the proposed project, potential impacts to cultural resources due to cumulative development within the project area would be analyzed and mitigated on a site-specific, individual basis. Incremental development within the project area would be required to comply with all applicable City, State, and Federal regulations concerning preservation, salvage, or handling of cultural resources.

As discussed above, impacts to archaeological resources due to implementation of the proposed project would be less than significant with incorporation of the recommended mitigation measure. In addition, given the site-specific nature of archaeological resources and existing regulations applicable to cumulative development in the project area, cumulative impacts related to these resources would not be considerable.

Level of Significance Before Mitigation: Potentially Significant Impact.

Mitigation Measures: Refer to Mitigation Measures CUL-1 through CUL-3. No additional mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.

5.4.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in less than significant project and cumulative impacts related to cultural resources following imposition of the identified mitigation measures and compliance with Federal, State, and local regulatory requirements. As such, no significant unavoidable impacts would result from the implementation of The Brookside Project.

5.4.7 SOURCES CITED

City of Walnut, *City of Walnut General Plan,* adopted July 1978.

BonTerra Psomas, *Cultural Resources Assessment, Brookside Specific Plan, City of Walnut, County of Los Angeles, California*, March 24, 2015.

Daly & Associates, *Draft Historic Resource Assessment Report of Brookside Equestrian Center, 800 Meadow Pass Road, Walnut, Los Angeles County, CA*, April 2015.

Source NETR Historic Aerials

The Brookside Project
Environmental Impact Report

Exhibit 5.4-1

1946 Aerial Photograph

The Main Barn and Stables. View looking southwest.

The north and west elevations of the Minor Barn.

Source: Daly & Associates, April 2015

The Brookside Project
Environmental Impact Report

Exhibit 5.4-2a

Photographs of On-Site Structures

Covered riding arena. View looking southwest.

View looking west from driveway off Meadow Pass Road towards the large main riding ring. The covered riding arena is to the left.

Source: Daly & Associates, April 2015

The Brookside Project
Environmental Impact Report

Exhibit 5.4-2b

Photographs of On-Site Structures

Dressage Ring. View looking east.

Stone-faced concrete arch bridge supporting bridle path at Lemon Creek. View looking north.

Run-in sheds and pasture railing. View looking north.

Source: Daly & Associates, April 2015

The Brookside Project
Environmental Impact Report

Exhibit 5.4-2c

Photographs of On-Site Structures

5.5 GEOLOGY

This section evaluates the geologic and seismic conditions within the City of Walnut and evaluates the potential for geologic and seismic hazard impacts associated with implementation of the proposed project. Information in this section is based on information and conclusions contained in the following plans or studies:

- *Geotechnical Recommendations, The Proposed Residential Development Tract 45378, Northeast Corner of N Lemon Avenue and La Puente Road, City of Walnut, California*, Group Delta Consultants, Inc., Revised November 6, 2013 (included in its entirety as Appendix K).

5.5.1 REGULATORY SETTING

FEDERAL

Federal Soil Protection Act

The purpose of the Federal Soil Protection Act is to protect or restore the functions of the soil on a permanent sustainable basis. Protection and restoration activities include prevention of harmful soil changes, rehabilitation of the soil of contaminated sites and of water contaminated by such sites, and precautions against negative soil impacts. If impacts are made on the soil, disruptions of its natural functions as an archive of natural and cultural history should be avoided, as far as practicable. In addition, the requirements of the Federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) through the National Pollution Discharge Elimination System (NPDES) permit provide guidance for protection of geologic and soil resources.

STATE OF CALIFORNIA

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. This State law was a direct result of the 1971 San Fernando Earthquake, which was associated with extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures. The Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards.

The Act requires the State Geologist to establish regulatory zones, known as "Earthquake Fault Zones," around the surface traces of active faults and to issue appropriate maps. Earthquake Fault Zones were called "Special Studies Zones" prior to January 1, 1994. Local agencies must regulate most development projects within these zones. Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults. An evaluation and written report of a specific area must be prepared by a licensed geologist. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (typically 50 feet set backs are required).

Effective June 1, 1998, the Natural Hazards Disclosure Act requires that sellers of real property and their agents provide prospective buyers with a "Natural Hazard Disclosure Statement" when the property that is being sold lies within one or more State-mapped hazard areas, including Earthquake Fault Zones.

Seismic Hazards Mapping Act

As a further means to protect public safety and property from seismic hazards, the California legislature adopted the Seismic Hazards Mapping Act in 1990. In contrast to the Alquist-Priolo Act, the Seismic Hazards Mapping Act specifically addresses potential hazards posed by secondary effects of seismic activity including strong ground shaking, soil liquefaction and associated ground failure, and seismically-induced landslides.

Maps showing zones of required investigation for one or more of these hazards are prepared and published by the California Geologic Survey, and like the Alquist-Priolo maps, are available to the public via an online resource. Inclusion within a designated seismic zone does not necessarily indicate that such hazards have been confirmed within the zone, but only that the prevalent soil and groundwater conditions within the zone render the area susceptible to the hazard. The local jurisdictional, such as the city or county permitting agency, is responsible for ensuring that the required site-specific geotechnical investigations have been performed for construction projects proposed within these seismic hazard zones.

California Building Code

California building standards are published in the *California Code of Regulations*, *Title 24*, known as the *California Building Code* (*2013 CBC*). The *2013 CBC* provides the regulatory framework for building code enforcement within the City of Walnut. The various requirements contained with the *2013 CBC* are based on the *International Building Code* and are intended to provide minimum standards to protect public property and welfare by regulating the design and construction of excavations, structural foundations and building framing systems to mitigate the effects of strong ground shaking and adverse soil conditions. By order of the California legislature, the *California Building Code* is published by the California Building Standards Commission every three years. The regulations contained in each revision take effect 180 days after the publication date.

LOCAL

City of Walnut Municipal Code

The official codes that govern construction projects in the City of Walnut are contained within *Municipal Code* Title II, Buildings and Building Regulations:

- Chapter 6, Buildings
- Chapter 7, Electricity
- Chapter 8, Mechanical Code
- Chapter 9, Plumbing
- Chapter 9a, Residential Code

City of Walnut General Plan

The City of Walnut Public Safety Element introduces safety considerations in the planning process in order to reduce the potential for loss of life, injuries, damage to property, or economic and social dislocation resulting from fire, geologic hazard, or seismic hazards.

In order to provide an environment which is reasonably and economically safe from hazards, permits the residents of Walnut to conduct their daily lives free from fear and apprehension, and minimizes as much as possible the loss of life, injuries, damage to property, and social and economic dislocation resulting from regional and local seismic activity, the following policies are established:

1. Provide for the highest quality fire, police, and health protection feasible for all Walnut residents.

2. Reduce to acceptable risk levels the possibilities of loss of life, injuries, and property damage from flooding and geological hazards throughout the area.

5.5.2 ENVIRONMENTAL SETTING

SITE CONDITIONS

The project site was previously used for equestrian recreation. Lot 1 is vacant and Lot 2 is improved with an equestrian center and related improvements. The current site grade varies from approximately 572 feet on the south boundary adjacent to La Puente Road to approximately 640 feet on the north boundary. Lemon Creek runs on the south and east side of the property. There are 30 to 40 feet high descending slopes on the north and west property line, adjacent to Meadow Pass Road and N. Lemon Avenue.

SUBSURFACE SITE CONDITIONS

Two to four feet of artificial fill was encountered in the field exploration. Fill consists predominantly of stiff clay and silt. Below the fill, the subsurface soils consist predominantly of very stiff and hard native clay underlain by bedrock (claystone and sandstone).

Generalized geotechnical cross-sections (A-A') and (B-B') across the site are shown in Appendix K Figure 3A and 3B. The location of the cross-section is shown in Appendix K Figure 2. The generalized soil layers are discussed in the following sections.

Layer No. 1: Uncertified Fill (CL/ML)

Two to four feet of uncertified fill was encountered in our field exploration at the southern portion of Lot 1. Fill was not encountered at the north portion of Lot 1. Fill consists predominantly of very stiff and hard clay and silt. Due to past site development, deeper fill may be anticipated in local areas at this site.

Layer No. 2: Alluvial Deposit (SC/CL/ML)

Below the bottom of the fill, the alluvial deposits consist predominantly of very stiff and hard clay with some sandy silt. Based on samples retrieved from the hollow stem auger borings, the undrained shear strength of the cohesive soils ranges from 3.0 kilopound per square foot (ksf) to

greater than 4.0 ksf. However, clay and silt layers with undrained shear strength of 0.5 to 2.0 ksf were encountered in Lot 2. Atterberg Limits for the clays/silts were measured to be Liquid Limit (LL) of 32 to 65, Plastic Limit (PL) of 18 to 34, and Plastic Index (PI) of 9 to 35.

The Cone Penetration Test (CPT) tip resistance generally ranges from 25 to greater than 50 tons per square foot (tsf). However, CPT-15 and CPT-17 located on the southeastern part of Lot 2 encountered approximately 15 feet layer of cohesive soils (from El. 572 to El. 591 feet) having tip resistance equal to or less than 10 tsf, respectively. Using CPT correlations, these tip resistances correspond to undrained shear strength of 0.5 to 1.0 ksf.

Layer No. 3: Bedrock (Claystone/Sandstone)

Bedrock consisting of claystone and sandstone was encountered at the subject site at varying depths. Depth to bedrock varies from 20-30 feet below current grade at the southern portion of the site, to as shallow as 5 feet at the northern portion of the site where the site elevation is high.

GROUNDWATER

Current groundwater was encountered at depths of 27 to 35 feet below current grade at the southern portion of Lot 1, corresponding to an elevation of 546 to 548 feet (MSL). Groundwater was not encountered at the northern portion of Lot 1 to the maximum depth of 20 feet explored. Exploration in Lot 2 encountered groundwater at 18 to 28 feet below current grade, corresponding to an elevation of 586 to 591 feet (MSL).

The historical highest groundwater contours and borehole log data (San Dimas Quadrangle, CGS, 1998) does not have adequate coverage at the project site. The adjacent data indicates that the historical highest groundwater at this area is deeper than 20 feet below ground surface. The CGS (1998) groundwater map is shown in Appendix K Figure 4.

REGIONAL GEOLOGIC SETTING

The property is located within the San Jose Hills. The San Jose Hills consist mostly of Cenozoic marine sedimentary deposits and volcanics, underlain at depth by a basement of Mesozoic granitic rocks. These hills are bordered on the northwest by the San Gabriel Valley and on the south and east by the Puente Hills. The Puente and San Jose Hills are characterized by rounded, hilly, and locally mountainous terrain dissected by large canyons and numerous ravines and gullies that open out onto alluvial aprons and flood plains. Most of the area is underlain by upper Miocene marine sedimentary rocks belonging to the Puente Formation consisting of an assemblage of siltstone, sandstone, and conglomeratic sandstone layers which have been subdivided by geologists into four members (La Vida, Soquel, Yorba, and Sycamore Canyon).

The San Gabriel Valley is a tectonic basin located to the east of the Los Angeles Basin. The valley is a triangular-shaped structural basin bounded on the north by the east-trending Sierra Madre-Duarte reverse fault set and the Raymond left-lateral fault, on the southwest by the Elysian Hills and the East Montebello right-slip fault, and on the southeast by the San Jose Hills and Puente Hills.

The margins of the basin have been the sites of the following five major earthquakes: (1) the 1987 Whittier Narrows reverse-fault earthquake on the south; (2) the 1988 Pasadena strike-slip earthquake on the northwest along the Raymond fault; (3) the 1991 Sierra Madre reverse-fault

earthquake on the Sawpit-Clamshell cross fault north of the Sierra Madre fault; and (4) the 1988 and 1990 Upland earthquakes on a buried left-slip fault northeast of the San Jose Hills.

The San Jose fault is a reverse fault on the south side of the San Jose anticline (a fold that has its limbs pointing down and hinge-line pointing up). Uplift on the anticline has produced the San Jose Hills, although the west plunge of this anticline may be much older. The anticline and fault are bounded on the south by the Amar syncline (a fold that has its limbs pointing up and hinge-line pointing down), which follows a topographic low, occupied in its eastern part by San Jose Creek. South of this is the west-plunging Puente Hill anticline. The anticline is succeeded on the south by another syncline that is generally followed by Valley Boulevard, a major arterial highway following the structural low.

The California Division of Water Resources proposed that the irregular range front of the San Jose Hills and northern Puente Hills is marked by a northeast-striking fault that separates the folded Puente Hills and San Jose Hills from the nearly flat-lying deposits of the San Gabriel Valley. This fault has been named the Walnut Creek fault. This fault separates strongly-folded strata of the San Jose and Puente Hills from nearly flat-lying strata of the San Gabriel Valley.

The San Gabriel Valley, underlain by crystalline basement rocks, may drive southward as a rigid block against the margin of the Los Angeles basin, accumulating slip on the Walnut Creek fault from north to south. The valley is underlain by a sequence up to two-kilometer-thick of non-marine Plio-Pleistocene gravels, sands, and claystones underlain by a transgressive sequence of shallow-marine sands and clays, commonly referred to as Fernando, Pico, or Repetto. Throughout most of the valley, these deposits rest with angular unconformity upon Miocene (Mohnian and Luisian) lower Puente Formation, Topanga Formation, and Glendora Volcanics, which rest on Mountain Meadows Dacite and pre-Tertiary crystalline basement. These coarse-grained deposits are exposed only close to the San Gabriel Mountain front, where they are called Duarte Conglomerate.

Numerous active faults capable of generating moderate to large earthquakes lie within a 100-mile radius of the two project sites. Active earthquake faults within the general project area include, but are not limited to, the San Jose-San Antonio, Indian Hill, Cucamonga-Sierra Madre, Chino, Raymond-Hollywood, and Whittier-Elsinore fault zones. Each of those faults has the potential to give rise to large earthquakes and induce long-duration, strong ground acceleration.

South of the two project sites, the Whittier fault segment of the Whittier-Elsinore fault zone extends along the southwestern base of the Puente Hills and is categorized as a “blind fault” in that it does not intersect the ground surface. The fault has been mapped as a continuous fault from the Santa Ana Canyon to the Whittier Narrows. The south-easternmost outcrop of the Whittier fault is located at Bee Canyon, north of the Santa Ana River. Southeast of that point, the Whittier fault is covered by alluvium. The north-westernmost outcrop of the Whittier fault is located north of the City of Whittier, in Turnbull Canyon. From that point northwest to the Whittier Narrows, the Whittier fault is covered by alluvium. The Whittier fault is located about four miles south of the project and likely the nearest active fault to the proposed development.

The Puente Hills thrust fault system (PHT) may be the most menacing blind fault system in the Los Angeles region because it lies directly beneath densely urbanized areas. The PHT links surface folds south and southeast of downtown Los Angeles with the deep 1987 Whittier Narrows earthquake hypocenter. The PHT comprises the Los Angeles, Santa Fe Springs, and Coyote Hills segments, each of which is capable of generating a magnitude (M) 6.5 earthquake individually or

a M 7.0 earthquake if they rupture simultaneously. Four large earthquakes (M 7.0) have occurred on the PHT during the past 11,000 years.

SEISMIC HAZARDS

Earthquake Faults

The entire Southern California region is considered to be seismically active. The geologic structure of Southern California is dominated by northwest-trending faults associated with the San Andreas System. No portion of the project site is located within the boundaries of an "Earthquake Fault Zone" as defined by the State of California in the Alquist-Priolo Earthquake Fault Zoning Act. Published geologic maps and literature indicate that the site lies within 60 kilometers of a number of significant active and potentially active faults that, in addition to the various segments of the more distant San Andreas Fault zone, are considered capable of generating strong ground motion at the project site. The faults that are within 10 kilometers of the project site are considered to be significant seismogenic sources and are listed in *Table 5.5-1, Significant Nearby Seismic Sources*.

Table 5.5-1
Significant Nearby Seismic Sources

Abbreviated Fault Name	Approximate Closest Distance from Site	Maximum Magnitude
San Jose Char	2.3 kilometers	6.6
Chino, alt 1 Char	9.2 kilometers	6.5
Chino, alt 2 Char	10.3 kilometers	6.7
Puente Hills Char	9.2 kilometers	7.1
Puente Hills (Coyote Hills) Char	8.6 kilometers	6.7
Source: Geotechnical Recommendations, The Proposed Residential Development Tract 45378, Northeast Corner of N Lemon Avenue and La Puente Road, City of Walnut, California, Group Delta Consultants, Inc., Revised November 6, 2013.		

Surface Rupture and Ground Shaking

Surface rupture resulting from earthquakes is unlikely to occur in Walnut, as no active faults have been identified within City boundaries. No portion of the project site is located within the boundaries of an "Earthquake Fault Zone" as defined by the State of California in the Alquist-Priolo Earthquake Fault Zone Act. The site is, however, located approximately 10 kilometers to the northeast of the earthquake fault zone that has been established around the active traces of the Newport-Inglewood Fault.

The future impact of earthquakes on Walnut depends on several factors. The particular fault, fault location, distance from the City, and magnitude of the earthquake all determine the degree of shaking that will occur in the City. In addition, the soil and geology underlying Walnut influences the amount of damage that the City may experience.

Liquefaction Hazards

Liquefaction is a subsidiary hazard associated with intense ground shaking. During seismic events, the earth accelerates and soils can destabilize. When sufficient water is present in soil, the destabilized soil and water can mix, resulting in liquefaction. Liquefaction is generally associated with shallow ground water conditions and the presence of loose or sandy soils or alluvial deposits. A common surface manifestation of liquefaction is the formation of sand boils – short-lived fountains of soil and water that emerge from fissures or vents and leave freshly deposited conical mounds of sand or silt on the ground surface.

Expansive Soils

Expansive soils are soils that experience volumetric changes in response to increases or decreases in moisture content. Relatively thin, rigid structure elements such as building floor slabs and exterior concrete flatwork may experience uplift, shifting, or cracking as a result of swelling or contraction of expansive soils.

5.5.3 SIGNIFICANCE THRESHOLD CRITERIA

Environmental impact thresholds as indicated in *CEQA Guidelines* Appendix G (Environmental Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42 (refer to Section 8.0, Effects Found Not To Be Significant).
    - Strong seismic ground shaking (refer to Section 8.0, Effects Found Not To Be Significant).
    - Seismic-related ground failure, including liquefaction.
    - Landslides.
    - Result in substantial soil erosion or the loss of topsoil (refer to Section 8.0, Effects Found Not To Be Significant).
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
- Be located on expansive soil, as defined in Table 18-1-B of the California Building Code (2004), creating substantial risks to life or property.

- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water (refer to Section 8.0, Effects Found Not To Be Significant).

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.5.4 PROJECT IMPACTS AND MITIGATION MEASURES

GROUND FAILURE

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD EXPOSE PEOPLE OR STRUCTURES TO POTENTIAL SUBSTANTIAL ADVERSE EFFECTS FROM GROUND FAILURE, INCLUDING SETTLEMENT, COLLAPSE, GROUND LURCHING, LIQUEFACTION, OR LATERAL SPREADING.**

Impact Analysis: Liquefaction is a secondary hazard associated with intense ground shaking. Liquefaction occurs when the dynamic loading of a saturated sand or silt causes pore-water pressures to increase levels when grain-to-grain contact is lost and material temporarily behaves as a viscous fluid. Liquefaction can cause settlement of the ground surface, settlement and tilting of engineered structures, flotation of buoyant buried structures and fissuring of the ground surface. In other words, when the earth accelerates as a result of ground shaking, soils may destabilize. If sufficient water is present in the soil, soil and water could mix, resulting in ground failure. Liquefaction is generally associated with shallow ground water conditions, the presence of loose or sandy soils, or alluvial deposits.

As discussed in SP 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California (CGS, 2008), the vast majority of liquefaction hazards are associated with sandy soils and silty soils of low plasticity. Cohesive soils are generally not considered susceptible to soil liquefaction. In particular, soils having a plasticity index (PI) of 12 and greater are not susceptible to liquefaction. However, sensitive soils having PI > 18 can undergo severe strength loss; therefore, engineering judgment must be applied when using this screening criterion.

The project site is located within a State of California liquefaction study zone (refer to Appendix K Figure 6). However, based on site-specific investigation, the subsurface soils at the project site consist of 8 to 40 feet of cohesive alluvial deposit underlain by bedrock. Also, below the historical highest groundwater level, the plasticity index of the cohesive soils ranges from 16 to 46. Therefore, the project site is not susceptible to liquefaction.

Thus, implementation of the proposed project would not expose people or structures to potential substantial adverse effects involving liquefaction and less than significant impacts would occur in this regard.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

LANDSLIDES

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD EXPOSE PEOPLE OR STRUCTURES TO POTENTIAL SUBSTANTIAL ADVERSE EFFECTS FROM LANDSLIDES.**

Impact Analysis: The City of Walnut General Plan notes that *"Almost all of the geotechnically hazardous areas in the Walnut planning area are located in the San Jose Hills. The majority of the hills are characterized by high to moderate landslide, erosion, and seismic action. Recognition and assessment of future landslide and erosion potential should influence design and review and approval processes."*

As noted in the Ground Failure analysis above, while the project site is within a State of California liquefaction study zone, the subsurface soils at the project site consist of 8 to 40 feet of cohesive alluvial deposit underlain by bedrock. And based upon the historical highest groundwater level, the plasticity index of the cohesive soils ranges from 16 to 46, the project site was concluded to not be susceptible to liquefaction.

Given that the project site is not susceptible to liquefaction, the potential for on-site landslides is considered low.

As specified in *City of Walnut Municipal Code* Title II, Buildings and Building Regulation, Chapter 6, Buildings, Section 6.5, and except where noted and amended, the City has adopted Los Angeles County Building Code, as codified in Title 26 of the Los Angeles County Code (County Code), as the *City of Walnut Building Code* (*Building Code*).

In accordance therewith, a building permit may be issued, subject to the conditions specified therein. Compliance with City Code requirements and conditions ensures that any potential landslide impacts are mitigated to levels that ensure people and structures associated with the proposed project are not adversely impacted. Thus, implementation of the proposed project would not expose people or structures to potential substantial adverse effects involving landslides and less than significant impacts would occur in this regard.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

UNSTABLE OR EXPANSIVE SOILS

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD BE LOCATED ON UNSTABLE OR EXPANSIVE SOILS CREATING POTENTIAL RISK TO LIFE OR PROPERTY.**

Impact Analysis:

Unstable Soils

Given the age of the existing on-site buildings, it is unlikely that the on-site fill materials were placed in accordance with current grading standards and certified by a geotechnical professional. Given the lack of documentation of original grading operations on the site, the future settlement behavior of these materials under the proposed loading conditions cannot be accurately predicted. Where existing undocumented fill occurs in areas where new engineered fills or structures are proposed, the existing fill would need to be excavated and recompacted as part of the remedial grading operations.

During site remedial grading, the existing ground surface shall be over-excavated and the excavated material shall be replaced as properly compacted, engineered fill. The required over-excavation depth shall be determined during grading operations by a geotechnical consultant. Remedial and design grading shall be performed in accordance with Mitigation Measure GEO-1 and City codes.

Expansive Soils

Expansive soils can be a problem, as variation in moisture content will cause a volume change in the soil. Expansive soils heave when moisture is introduced and contract as they dry. During inclement weather and/or excessive landscape watering, moisture infiltrates the soil and causes the soil to heave (expansion). When drying occurs the soils will shrink (contraction). Repeated cycles of expansion and contraction of soils can cause pavement, concrete slabs on grade and foundations to crack. This movement can also result in misalignment of doors and windows.

The near surface soils at the subject site consist predominantly of stiff clays with medium expansion potential (expansion index of 59 to 79). Thus, foundation design needs to take into consideration of the presence of these expansive clays.

In order to ensure that the proposed project is not susceptible to damage as a result of on-site soils and geological conditions, the *Geotechnical Recommendations* has included specific recommendations to reduce this risk to less than significant levels, which are to be reviewed and revised as necessary as part of Mitigation Measure GEO-1. In addition, the proposed project would be subject to compliance with applicable building codes (i.e., *City Building Code*, *California Building Code*), which would also reduce unstable or expansive soils impacts to less than significant.

Level of Significance Before Mitigation: Potentially Significant Impact.

Mitigation Measures:

GEO-1 Prior to issuance of grading permits, the Applicant shall prepare and submit for review and approval by the Director of Building and Safety, a design-phase geotechnical report which shall consider the recommendations in the Geotechnical Recommendations, and revise as necessary for site preparation and construction. The report shall, at a minimum, address remedial and design grading, concrete foundation system, and building foundations. The recommendations of the design-phase geotechnical report shall be implemented during site grading and construction.

Level of Significance After Mitigation: Less Than Significant Impact with Mitigation Incorporated.

5.5.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **THE PROPOSED PROJECT ALONG WITH OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS RELATED TO GEOLOGIC SOILS AND SEISMIC HAZARDS.**

Impact Analysis: The proposed project would result in less than significant impacts related to geology, soils, and seismicity, with implementation of the applicable mitigation measure.

Unsafe geologic, soils, and seismic conditions exist throughout southern California and new development in such areas would be considered significant. These potential impacts are evaluated on a project-by-project basis in accordance with *CEQA*. If a specific site were determined to create a significant impact that could not be feasibly mitigated the site would not be appropriate for development. Development of cumulative projects would incrementally increase the number of people and structures potentially subject to a seismic event. However, such exposure would be minimized through strict engineering guidelines for development at each respective area. Future development projects would be subject to compliance with the respective jurisdiction's *Building Code* and *California Building Code*. Additionally, site-specific mitigation would be incorporated on a project-by-project basis to reduce cumulative geology and soil impacts to a less than significant level.

As concluded above, implementation of the proposed project would be less than significant with compliance with the City's *Building Code* and *California Building Code*, and recommended mitigation measure. Therefore, implementation of the proposed project would not result in cumulatively considerable geologic soils and seismic hazards impacts.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.5.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in less than significant project and cumulative impacts related to geologic soils and seismic hazards during both construction and operation with adherence to the identified mitigation measure and compliance with the applicable State and local

regulatory requirements. As such, no significant unavoidable impacts would result from implementation of The Brookside Project.

5.5.7 SOURCES CITED

City of Walnut, *City of Walnut General Plan,* adopted July 1978.

City of Walnut, *Municipal Code,* Title II, Buildings and Building Regulations, effective through Los Angeles County Ordinance No. 13-5076, adopted November 26, 2013.

City of Walnut, *Initial Study/Mitigated Negative Declaration, Francesca Mixed-Use Project, Specific Plan No. 01-2004, 780 And 808 Francesca Drive, Walnut, California*, January 2008.

Group Delta Consultants, Inc., *Geotechnical Recommendations, The Proposed Residential Development Tract 45378, Northeast Corner of N Lemon Avenue and La Puente Road, City of Walnut, California*, Revised November 6, 2013.

5.6 GREENHOUSE GAS EMISSIONS

This section evaluates greenhouse gas (GHG) emissions associated with the proposed project and analyzes project compliance with applicable regulations. Information in this section is based on information and conclusions contained in the following study:

- Michael Baker International, Inc., Greenhouse Gas Assessment for The Brookside Project, City of Walnut, Michael Baker International, March 28, 2016 (included in its entirety as Appendix M).

5.6.1 REGULATORY SETTING

This section discusses the Federal, State, and local greenhouse gas emissions policies and requirements applicable to the project site.

GLOBAL CLIMATE CHANGE REGULATORY PROGRAMS

Federal

The Federal government is extensively engaged in international climate change activities in areas such as science, mitigation, and environmental monitoring. The EPA actively participates in multilateral and bilateral activities by establishing partnerships and providing leadership and technical expertise. Multilaterally, the United States is a strong supporter of activities under the United Nations Framework Convention on Climate Change (UNFCCC) and the IPCC.

In 1988, the United Nations and the World Meteorological Organization established the IPCC to assess the scientific, technical, and socioeconomic information relevant to understanding the scientific basis of human-induced climate change, its potential impacts, and options for adaptation and mitigation. The most recent reports of the IPCC have emphasized the scientific consensus around the evidence that real and measurable changes to the climate are occurring, that they are caused by human activity, and that significant adverse impacts on the environment, the economy, and human health and welfare are unavoidable.

In December 2007, Congress passed the first increase in corporate average fleet fuel economy (CAFE) standards. The new CAFE standards represent an increase to 35 miles per gallon (mpg) by 2020. In March 2009, the Obama Administration announced that for the 2011 model year, the standard for cars and light trucks will be 27.3 mpg, the standard for cars will be 30.2 mpg; and standard for trucks would be 24.1 mpg. Additionally, in May 2009 President Barack Obama announced plans for a national fuel-economy and GHG emissions standard that would significantly increase mileage requirements for cars and trucks by 2016. The new requirements represent an average standard of 39 mpg for cars and 30 mpg for trucks by 2016.

Currently, the EPA is moving forward with two key climate change regulatory proposals, one to establish a mandatory GHG reporting system. Under the Federal Clean Air Act (FCAA), the EPA is now obligated to issue rules regulating global warming pollution from all major sources. In April 2009, the EPA concluded that GHGs are a danger to public health and welfare, establishing the basis for GHG regulation. However, as of the date of this study there are no Federal regulations or policies regarding GHG emissions applicable to the proposed project.

State

Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is occurring, and that there is a real potential for severe adverse environmental, social, and economic effects in the long term. Every nation emits GHGs and as a result makes an incremental cumulative contribution to global climate change; therefore, global cooperation will be required to reduce the rate of GHG emissions enough to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

Executive Order S-1-07. Executive Order S-1-07 proclaims that the transportation sector is the main source of GHG emissions in California, generating more than 40 percent of statewide emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in California by at least ten percent by 2020. This order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

Executive Order S-3-05. Executive Order S-3-05 set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The Executive Order directed the secretary of the California Environmental Protection Agency (Cal/EPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The secretary will also submit biannual reports to the governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the executive order, the secretary of Cal/EPA created the California Climate Action Team (CAT), made up of members from various State agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through State incentive and regulatory programs.

Executive Order B-30-15. Executive Order B-30-15 added the interim target to reduce statewide GHG emissions 40 percent below 1990 levels by 2030, and requires CARB to update its current AB 32 Scoping Plan to identify measures to meet the 2030 target.

Executive Order S-13-08. Executive Order S-13-08 seeks to enhance the State's management of climate impacts including sea level rise, increased temperatures, shifting precipitation, and extreme weather events by facilitating the development of State's first climate adaptation strategy. This will result in consistent guidance from experts on how to address climate change impacts in the State of California.

Executive Order S-14-08. Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the

"Renewable Electricity Standard" on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Executive Order S-20-04. Executive Order S-20-04, the California Green Building Initiative, (signed into law on December 14, 2004), establishes a goal of reducing energy use in State-owned buildings by 20 percent from a 2003 baseline by 2015. It also encourages the private commercial sector to set the same goal. The initiative places the California Energy Commission (CEC) in charge of developing a building efficiency benchmarking system, commissioning and retro-commissioning (commissioning for existing commercial buildings) guidelines, and developing and refining building energy efficiency standards under Title 24 to meet this goal.

Executive Order S-21-09. Executive Order S-21-09, 33 percent Renewable Energy for California, directs CARB to adopt regulations to increase California's Renewable Portfolio Standard (RPS) to 33 percent by 2020. This builds upon SB 1078 (2002) which established the California RPS program, requiring 20 percent renewable energy by 2017, and SB 107 (2006) which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Assembly Bill 32 (California Global Warming Solutions Act of 2006). California passed the California Global Warming Solutions Act of 2006 (AB 32; *California Health and Safety Code* Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

Assembly Bill 1493. AB 1493 (also known as the Pavley Bill) requires that CARB develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of GHG emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State."

To meet the requirements of AB 1493, CARB approved amendments to the California Code of Regulations (CCR) in 2004 by adding GHG emissions standards to California's existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 and adoption of 13 CCR Section 1961.1 require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty weight classes for passenger vehicles (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily to transport people), beginning with the 2009 model year. Emissions limits are reduced further in each model year through 2016. When fully phased in, the near-term standards will result in a reduction of about 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term standards will result in a reduction of about 30 percent.

Assembly Bill 3018. AB 3018 established the Green Collar Jobs Council (GCJC) under the California Workforce Investment Board (CWIB). The GCJC will develop a comprehensive approach to address California's emerging workforce needs associated with the emerging green economy. This bill will ignite the development of job training programs in the clean and green technology sectors.

Senate Bill 97. SB 97, signed in August 2007 (Chapter 185, Statutes of 2007; PRC Sections 21083.05 and 21097), acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directs the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions (or the effects of GHG emissions), as required by CEQA.

OPR published a technical advisory recommending that CEQA lead agencies make a good-faith effort to estimate the quantity of GHG emissions that would be generated by a proposed project. Specifically, based on available information, CEQA lead agencies should estimate the emissions associated with project-related vehicular traffic, energy consumption, water usage, and construction activities to determine whether project-level or cumulative impacts could occur, and should mitigate the impacts where feasible. OPR requested CARB technical staff to recommend a method for setting CEQA thresholds of significance as described in CEQA Guidelines Section 15064.7 that will encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the State.

The Natural Resources Agency adopted the CEQA Guidelines Amendments prepared by OPR, as directed by SB 97. On February 16, 2010, the Office of Administration Law approved the CEQA Guidelines Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The CEQA Guidelines Amendments became effective on March 18, 2010.

Senate Bill 375. SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPOs regional transportation plan. CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects may not be eligible for funding programmed after January 1, 2012.

Senate Bills 1078 and 107. SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.

Senate Bill 1368. SB 1368 (Chapter 598, Statutes of 2006) is the companion bill of AB 32 and was signed into law in September 2006. SB 1368 required the California Public Utilities Commission (CPUC) to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007. SB 1368 also required the California Energy Commission (CEC) to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards could not exceed the GHG emissions rate from a baseload combined-cycle, natural gas fired plant. Furthermore, the legislation states that all electricity provided to California, including imported electricity, must be generated by plants that meet the standards set by CPUC and CEC.

CARB Scoping Plan

On December 11, 2008, CARB adopted its Scoping Plan, which functions as a roadmap to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. CARB's Scoping Plan contains the main strategies California will implement to reduce CO_2eq[1] emissions by 174 million metric tons (MT), or approximately 30 percent, from the State's projected 2020 emissions level of 596 million MT CO_2eq under a business as usual (BAU)[2] scenario. This is a reduction of 42 million MT CO_2eq, or almost ten percent, from 2002 to 2004 average emissions, but requires the reductions in the face of population and economic growth through 2020.

CARB's Scoping Plan calculates 2020 BAU emissions as the emissions that would be expected to occur in the absence of any GHG reduction measures. The 2020 BAU emissions estimate was derived by projecting emissions from a past baseline year using growth factors specific to each of the different economic sectors (e.g., transportation, electrical power, commercial and residential, industrial, etc.). CARB used three-year average emissions, by sector, for 2002 to 2004 to forecast emissions to 2020. At the time CARB's Scoping Plan process was initiated, 2004 was the most recent year for which actual data was available. The measures described in CARB's Scoping Plan are intended to reduce the projected 2020 BAU to 1990 levels, as required by AB 32.

AB 32 requires CARB to update the Scoping Plan at least once every five years. CARB adopted the first major update to the Scoping Plan on May 22, 2014. The updated Scoping Plan summarizes the most recent science related to climate change, including anticipated impacts to California and the levels of GHG reduction necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32. The Scoping Plan update also looks beyond 2020 toward the 2050 goal established in Executive Order S-3-05, though not yet adopted as state law, and observes that "a mid-term statewide emission limit will ensure that the State stays on course to meet our long-term goal." The Scoping Plan update does not establish or propose any specific post-2020 goals, but identifies such goals adopted by other governments or recommended by various scientific and policy organizations.

1 Carbon Dioxide Equivalent (CO_2eq) - A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

2 "Business as Usual" refers to emissions that would be expected to occur in the absence of GHG reductions. See http://www.arb.ca.gov/cc/inventory/data/forecast.htm. Note that there is significant controversy as to what BAU means. In determining the GHG 2020 limit, CARB used the above as the "definition." It is broad enough to allow for design features to be counted as reductions.

FEDERAL AND STATE GREENHOUSE GAS STANDARDS

Global Climate Change Gases

The natural process through which heat is retained in the troposphere is called the "greenhouse effect."[3] The greenhouse effect traps heat in the troposphere through a threefold process as follows: 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.

The most abundant GHGs are water vapor and carbon dioxide (CO_2). Many other trace gases have greater ability to absorb and re-radiate long wave radiation; however, these gases are not as plentiful. For this reason, and to gauge the potency of GHGs, scientists have established a Global Warming Potential (GWP) for each GHG based on its ability to absorb and re-radiate long wave radiation.

GHGs include, but are not limited to, the following:[4]

- *Water Vapor (H_2O).* Although water vapor has not received the scrutiny of other GHGs, it is the primary contributor to the greenhouse effect. Natural processes, such as evaporation from oceans and rivers, and transpiration from plants, contribute 90 percent and 10 percent of the water vapor in our atmosphere, respectively.

The primary human related source of water vapor comes from fuel combustion in motor vehicles; however, this is not believed to contribute a significant amount (less than one percent) to atmospheric concentrations of water vapor. The Intergovernmental Panel on Climate Change (IPCC) has not determined a GWP for water vapor.

- *Carbon Dioxide (CO_2).* Carbon Dioxide is primarily generated by fossil fuel combustion in stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources in the past 250 years, CO_2 emissions from fossil fuel combustion increased by 8.8 percent between 1990 and 2013.[5] Carbon dioxide is the most widely emitted GHG and is the reference gas (GWP of 1) for determining GWPs for other GHGs.

- *Methane (CH_4).* Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane are landfills, natural gas systems, and enteric fermentation (the digestive process in animals with a rumen, typically cattle, causing methane gas). Methane is the primary component of natural gas, which is used for space and water heating, steam production, and power generation. The GWP of methane is 25.

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3 The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth's surface to 10 to 12 kilometers.

4 All Global Warming Potentials are given as 100-year Global Warming Potential. Unless noted otherwise, all Global Warming Potentials were obtained from the IPCC. (Intergovernmental Panel on Climate Change, *Climate Change, The Science of Climate Change – Contribution of Working Group I to the Second Assessment Report of the IPCC*, 1996).

5 U.S. Environmental Protection Agency, *Inventory of United States Greenhouse Gas Emissions and Sinks 1990 to 2013*, April 2015.

- *Nitrous Oxide (N_2O).* Nitrous oxide is produced by both natural and human related sources. Primary human related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production (for the industrial production of nylon), and nitric acid production (for rocket fuel, woodworking, and as a chemical reagent). The GWP of nitrous oxide is 298.

- *Hydrofluorocarbons (HFCs).* HFCs are typically used as refrigerants, aerosol propellants, solvents and fire retardants. The major emissions source of HFCs is from their use as refrigerants in air conditioning systems in both vehicles and buildings. HFCs were developed as a replacement for chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs). The GWP of HFCs range from 140 for HFC-152a to 11,700 for HFC-23.[6]

- *Perfluorocarbons (PFCs).* PFCs are compounds produced as a by-product of various industrial processes associated with aluminum production and the manufacturing of semiconductors. Like HFCs, PFCs generally have long atmospheric lifetimes and high Global Warming Potentials of approximately 6,500 and 9,200.[7]

- *Sulfur hexafluoride (SF_6).* SF_6 is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. Sulfur hexafluoride is the most potent GHG that has been evaluated by the IPCC with a GWP of 23,900. However, its global warming contribution is not as high as the GWP would indicate due to its low mixing ratio compared to carbon dioxide (4 parts per trillion [ppt] in 1990 versus 365 parts per million [ppm], respectively).[8]

In addition to the six major GHGs discussed above (excluding water vapor), many other compounds have the potential to contribute to the greenhouse effect. Some of these substances were previously identified as stratospheric ozone depletors; therefore, their gradual phase out is currently in effect. The following is a listing of these compounds:

- *Hydrochlorofluorocarbons (HCFCs).* HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, all developed countries that adhere to the Montreal Protocol are subject to a consumption cap and gradual phase out of HCFCs. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The GWPs of HCFCs range from 77 for HCFC-123 to 2,310 for HCFC-142b.[9]

- *1,1,1 trichloroethane.* 1,1,1 trichloroethane or methyl chloroform is a solvent and degreasing agent commonly used by manufacturers. The GWP of methyl chloroform is 110 times that of CO_2.[10]

6 U.S. Environmental Protection Agency, *Greenhouse Gas Emissions*, September 9, 2013, http://www.epa.gov/climatechange/ghgemissions/gases/fgases.html#Trends, accessed on March 24, 2016.
7 Ibid.
8 Ibid.
9 U.S. Environmental Protection Agency, *Stratospheric Ozone Protection and Climate Change,* http://www.epa.gov/ozone/climate.html, accessed on March 24, 2016.
10 Ibid.

- *Chlorofluorocarbons (CFCs)*. CFCs are used as refrigerants, cleaning solvents, and aerosols spray propellants. CFCs were also part of the Environmental Protection Agency's (EPA's) Final Rule (57 FR 3374) for the phase out of O_3 depleting substances. Currently, CFCs have been replaced by HFCs in cooling systems and a variety of alternatives for cleaning solvents. Nevertheless, CFCs remain suspended in the atmosphere contributing to the greenhouse effect. CFCs are potent GHGs with GWPs ranging from 4,750 for CFC 11 to 14,420 for CFC 13.[11]

LOCAL GREENHOUSE GAS STANDARDS

City of Walnut

The City of Walnut has no plans, policies, regulations, significance thresholds, or laws addressing climate change at this time.

5.6.2 ENVIRONMENTAL SETTING

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The project site lies within the northwestern portion of the South Coast Air Basin (Basin). The Basin is a 6,600-square mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The Basin's terrain and geographical location (i.e., a coastal plain with connecting broad valleys and low hills) determine its distinctive climate.

CLIMATE

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. The climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the Basin.

The average annual temperature varies little throughout the Basin, averaging 75 degrees Fahrenheit (°F). However, with a less-pronounced oceanic influence, the eastern inland portions of the Basin show greater variability in annual minimum and maximum temperatures. All portions of the Basin have had recorded temperatures over 100°F in recent years.

Although the Basin has a semi-arid climate, the air near the surface is moist due to the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the Basin by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature. Annual average relative humidity is 70 percent at the coast and 57 percent in the eastern part of the Basin. Precipitation in the Basin is typically nine to 14 inches annually

[11] U.S. Environmental Protection Agency, *Class I Ozone Depleting Substances*, dated August 19, 2010, http://www.epa.gov/ozone/science/ods/classone.html, accessed on March 24, 2016.

and is rarely in the form of snow or hail due to typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the Basin.

The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet, the terrain prevents the pollutants from entering the upper atmosphere, resulting in a settlement in the foothill communities. Below 1,200 feet, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the day. Mixing heights for inversions are lower in the summer and more persistent, being partly responsible for the high levels of ozone (O_3) observed during summer months in the Basin. Smog in southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods of time, allowing them to form secondary pollutants by reacting with sunlight. The Basin has a limited ability to disperse these pollutants due to typically low wind speeds.

The area in which the project site is located offers clear skies and sunshine, yet is still susceptible to air inversions. These inversions trap a layer of stagnant air near the ground, where it is then further loaded with pollutants. These inversions cause haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources.

5.6.3 SIGNIFICANCE THRESHOLD CRITERIA

SCAQMD GREENHOUSE GAS EMISSIONS THRESHOLDS

At this time, there is no absolute consensus in the State of California among CEQA lead agencies regarding the analysis of global climate change and the selection of significance criteria. In fact, numerous organizations, both public and private, have released advisories and guidance with recommendations designed to assist decision-makers in the evaluation of GHG emissions given the current uncertainty regarding when emissions reach the point of significance. Lead agencies may elect to rely on thresholds of significance recommended or adopted by State or regional agencies with expertise in the field of global climate change. (See C*EQA Guidelines* Section 15064.7[c].)

The SCAQMD has formed a GHG CEQA Significance Threshold Working Group (Working Group) to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. As of the last Working Group meeting (Meeting No. 15) held in September 2010, the SCAQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency.[12]

With the tiered approach, a project is compared with the requirements of each tier sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from SB 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold. For all non-industrial projects, the SCAQMD is proposing a

[12] The most recent SCAQMD GHG CEQA Significance Threshold Working Group meeting was held on September 2010.

screening threshold of 3,000 $MTCO_2eq$ per year. SCAQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact.

Tier 4 consists of three decision tree options. Under the Tier 4 first option, a project would be excluded if design features and/or mitigation measures resulted in emissions 30 percent lower than business as usual emissions. Under the Tier 4 second option, a project would be excluded if it had early compliance with AB 32 through early implementation of CARB's Scoping Plan measures. Under the Tier 4 third option, a project would be excluded if it was below an efficiency-based threshold of 4.8 $MTCO_2eq$ per service population (SP) per year.[13] Tier 5 would exclude projects that implement offsite mitigation (GHG reduction projects) or purchase offsets to reduce GHG emission impacts to less than the proposed screening level.

GHG efficiency metrics are utilized as thresholds to assess the GHG efficiency of a project on a per capita basis or on a "service population" basis (the sum of the number of jobs and the number of residents provided by a project) such that the project would allow for consistency with the goals of AB 32 (i.e., 1990 GHG emissions levels by 2020 and 2035). GHG efficiency thresholds can be determined by dividing the GHG emissions inventory goal of the State, by the estimated 2035 population and employment. This method allows highly efficient projects with higher mass emissions to meet the overall reduction goals of AB 32, and is appropriate, because the threshold can be applied evenly to all project types (residential or commercial/retail only and mixed-use).

As the proposed project involves a residential development, SCAQMD's 3,000 $MTCO_2eq/yr$ threshold has been selected as the significance threshold, as it is most applicable to the proposed project. The 3,000 $MTCO_2eq/yr$ threshold is used in addition to the qualitative thresholds of significance set forth below from Section VII of Appendix G to the CEQA Guidelines.

CEQA SIGNIFICANCE CRITERIA

Environmental impact thresholds as indicated in *CEQA Guidelines* Appendix G (Environmental Study Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it would:

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

- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Based on these standards and thresholds, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

[13] The project-level efficiency-based threshold of 4.8 $MTCO_2eq$ per SP per year is relative to the 2020 target date. The SCAQMD has also proposed efficiency-based thresholds relative to the 2035 target date to be consistent with the GHG reduction target date of SB 375. GHG reductions by the SB 375 target date of 2035 would be approximately 40 percent. Applying this 40 percent reduction to the 2020 targets results in an efficiency threshold for plans of 4.1 $MTCO_2eq$ per SP per year and an efficiency threshold at the project level of 3.0 $MTCO_2eq/year$.

5.6.4 PROJECT IMPACTS AND MITIGATION MEASURES

PROJECT-RELATED GREENHOUSE GAS EMISSIONS

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD GENERATE GREENHOUSE GAS EMISSIONS, EITHER DIRECTLY OR INDIRECTLY, THAT MAY HAVE A SIGNIFICANT IMPACT ON THE ENVIRONMENT.**

Impact Analysis: Project-related GHG emissions would include emissions from direct and indirect sources. The proposed project would result in direct and indirect emissions of CO_2, N_2O, and CH_4, and would not result in other GHGs that would facilitate a meaningful analysis. Therefore, this analysis focuses on these three forms of GHG emissions. Direct project-related GHG emissions include emissions from construction activities, area sources, and mobile sources, while indirect sources include emissions from electricity consumption, water demand, and solid waste generation. Operational GHG estimations are based on energy emissions from natural gas usage and automobile emissions. Proposed project GHG emissions were calculated using the California Emissions Estimator Model (CalEEMod), which relies on trip generation data, and specific land use information to calculate emissions. *Table 5.6-1*, *Estimated Greenhouse Gas Emissions*, presents the estimated CO_2, N_2O, and CH_4 emissions of the proposed project. The CalEEMod outputs are contained within Appendix M.

Table 5.6-1
Estimated Greenhouse Gas Emissions

Source	CO_2	CH_4		N_2O		Total Metric Tons of CO_2eq
	Metric Tons/yr[1]	Metric Tons/yr[1]	Metric Tons of CO_2eq[2]	Metric Tons/yr[1]	Metric Tons of CO_2eq[2]	
Direct Emissions						
• Construction (amortized over 30 years)	15.76	0.00	0.00	0.00	0.00	15.76
• Area Source	6.50	0.00	0.00	0.00	0.00	6.50
• Mobile Source	401.22	0.02	0.50	0.00	0.00	401.74
Total Mitigated Direct Emissions[3]	***423.48***	***0.02***	***0.50***	***0.00***	***0.00***	***424.00***
Indirect Emissions						
• Energy	99.76	0.00	0.00	0.00	0.00	99.76
• Water Demand	9.33	0.05	1.30	0.00	0.00	10.68
• Solid Waste Generation	3.33	0.20	5.00	0.00	0.00	8.53
Total Mitigated Indirect Emissions[3]	***112.42***	***0.25***	***6.30***	***0.00***	***0.00***	***118.97***
Total Mitigated Project-Related Emissions[3]	***545.63 MTCO₂eq/yr***					
Mitigated GHG Emissions Exceed Threshold?	***No***					

Source: Michael Baker International, March 2016

Notes:
1. Emissions calculated using CalEEMod.
2. CO_2 Equivalent values calculated using the EPA Website, *Greenhouse Gas Equivalencies Calculator*, http://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator, accessed March 2016.
3. Totals may be slightly off due to rounding.4.

Refer to Greenhouse Gas Emissions Data in Appendix M for detailed model input/output data.

Project Design Features

It is noted that the GHG emissions calculated in CalEEMod, as shown *Table 5.5-1*, include project design features that would reduce project-related GHG emissions. The proposed project consists of constructing 28 single-family residential homes that would incorporate water conservation measures, such as low-flow faucets, showers, toilets, and water-efficient landscaping and irrigation systems that would reduce operational GHG emissions.

Reduction measures applied in CalEEMod and accounted for in *Table 5.5-1* from project design features include the following:

- Natural gas hearths;
- Water-efficient irrigation systems;
- Low-flow faucets, toilets, and showers; and
- Institute recycling and composting services to reduce solid waste by at least 50 percent (per Assembly Bill 939).

Direct Project-Related Sources of Greenhouse Gases

- *Construction Emissions*. Construction GHG emissions are typically summed and amortized over the lifetime of the proposed project (assumed to be 30 years), then added to the operational emissions.[14] As seen in *Table 5.5-1*, the proposed project would result in 472.80 $MTCO_2eq/yr$, which represents 15.76 $MTCO_2eq/yr$ when amortized over 30 years.

- *Area Source*. Area source emissions were calculated using CalEEMod and project-specific land use data. As noted in *Table 5.5-1*, the proposed project would not result in 6.50 $MTCO_2eq/yr$ of area source GHG emissions.

- *Mobile Source*. The CalEEMod model relies upon trip data within the *Brookside Project Traffic Impact Analysis* (Traffic Impact Analysis) prepared by Michael Baker International, dated November 20, 2015, and project-specific land use data to calculate mobile source emissions. The proposed project would result in approximately 267 new daily trips. The proposed project would directly result in 401.74 $MTCO_2eq/yr$ of mobile source-generated GHG emissions.

Indirect Project-Related Sources of Greenhouse Gases

- *Energy Consumption*. Energy consumption emissions were calculated using the CalEEMod model and project-specific land use data. Electricity would be provided to the project site via Southern California Edison (SCE). The proposed project would indirectly result in 99.76 $MTCO_2eq/year$ due to energy consumption.

- *Water Demand*. The proposed project operations would result in a demand of approximately 2.54 million gallons of water per year. Emissions from indirect energy impacts due to water supply would result in 10.68 $MTCO_2eq/year$.

[14] The project lifetime is based on the standard 30-year assumption of the South Coast Air Quality Management District, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold,* October 2008.

- *Solid Waste.* Solid waste associated with operations of the proposed project would result in 8.53 $MTCO_2eq$/year.

Total Project-Related Sources of Greenhouse Gases

As depicted in *Table 5.5-1*, the proposed project's GHG emissions would be 545.63 $MTCO_2eq$/yr. As such, the proposed project would not exceed the 3,000 $MTCO_2eq$/yr GHG threshold. Impacts in this regard would be less than significant.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

PLAN CONSISTENCY

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD CONFLICT WITH AN APPLICABLE PLAN, POLICY, OR REGULATION ADOPTED FOR THE PURPOSE OF REDUCING THE EMISSIONS OF GREENHOUSE GASES.**

Impact Analysis: The City of Walnut does not have an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. However, the *Walnut Municipal Code* Chapter 25-174, *Landscaping Water Use Standards*, promotes water conservation in landscaping standards, water management practices and waste water prevention for existing landscapes and other resource management directives within new construction and rehabilitated projects in the City.

In addition, the proposed project would be subject to applicable Federal, State, and local regulatory requirements, further reducing project-related GHG emissions. As discussed above, the proposed project's GHG emissions would be below SCAQMD's 3,000 $MTCO_2eq$/yr threshold. As such, the proposed project would not conflict with or impede implementation of reduction goals identified in AB 32 and other strategies to help reduce GHG emissions. The proposed project would not conflict with an applicable GHG reduction plan, policy, or regulation. Impacts would be less than significant in this regard.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.6.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **GREENHOUSE GAS EMISSIONS GENERATED BY THE PROPOSED PROJECT ALONG WITH OTHER RELATED CUMULATIVE PROJECTS COULD HAVE A SIGNIFICANT IMPACT ON GLOBAL CLIMATE CHANGE.**

Impact Analysis: As stated above, the proposed project would not result in a significant impact regarding GHG emissions, as the proposed would result in 545.63 $MTCO_2eq/yr$. Therefore, project-related GHG impacts were determined to be less than significant as they were below the 3,000 $MTCO_2eq$ threshold.

On December 30, 2009, the Natural Resources Agency adopted the *CEQA Guidelines* Amendments prepared by Office of Planning and Research (OPR), as directed by SB 97. On February 16, 2010, the Office of Administration Law approved the *CEQA Guidelines* Amendments, and filed them with the Secretary of State for inclusion in the *California Code of Regulations*. The *CEQA Guidelines* Amendments became effective on March 18, 2010. The Natural Resources Agency originally proposed to add subdivision (f) to Section 15130 to clarify that *Public Resources Code* Sections 21083 and 21083.05 do not require a detailed analysis of GHG emissions solely due to the emissions of other projects (i.e., *CEQA Guidelines* Section 15130(a)(1); *Santa Monica Chamber of Commerce v. City of Santa Monica* (2002) 101 Cal.App.4th 786, 799). Rather, the proposed subdivision (f) would have provided that a detailed analysis is required when evidence shows that the incremental contribution of the project's GHG emissions is cumulatively considerable when added to other cumulative projects (i.e., *Communities for a Better Environment v. California Resources Agency* (2002), supra, 103 Cal.App.4th at 119-120). In essence, the proposed addition would be a restatement of law as applied to GHG emissions. Analysis of GHG emissions as a cumulative impact is consistent with case law arising under the National Environmental Policy Act (e.g., *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 538 F.3d 1172, 1215-1217 [9th Cir. 2008]). Other portions of the *CEQA Guidelines* Amendments address how lead agencies may determine whether a project's emissions are cumulatively considerable (e.g., Proposed Sections 15064(h)(3) and 15064.4). However, public comments noted that the new subdivision merely restated the law, and was capable of misinterpretation. The Natural Resources Agency, therefore, determined that because other provisions of the *CEQA Guidelines* Amendments address the analysis of GHG emissions as a cumulative impact, and because the reasoning of those is fully explained in the Initial Statement of Reasons, subdivision (f) should not be added to the *CEQA Guidelines*. The deletion was reflected in the revisions that were made available for further public review and comment on October 23, 2009, and was not adopted as part of the CEQA Guidelines Amendments that became effective on March 18, 2010.

It is generally the case that an individual project of this size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory.[15] GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective.[16] The additive effect of project-related GHGs would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. In addition, the proposed project as well as other cumulative related projects would also be subject to all applicable regulatory requirements, which would further reduce GHG emissions. The proposed project

[15] California Air Pollution Control Officers Association, *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, 2008.
[16] Ibid.

would result in a less than significant impact regarding GHG emissions. Therefore, the proposed project's cumulative GHG emissions would be considered less than significant.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.6.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in less than significant project and cumulative impacts related to greenhouse gas emissions during both construction and operation with compliance with the applicable Federal, State, and local regulatory requirements and project design features. As such, no significant unavoidable impacts would result from implementation of The Brookside Project.

5.6.7 SOURCES CITED

Environ International Corporation and the South Coast Air Quality Management District, *California Emissions Estimator Model (CalEEMod) Version 2013.2.2*, 2013.

Google Earth, 2016.

Michael Baker International, Inc., *Greenhouse Gas Assessment for The Brookside Project, City of Walnut, Michael Baker International*, March 28, 2016.

U.S. Environmental Protection Agency, *Class I Ozone Depleting Substances*, August 19, 2010, http://www.epa.gov/ozone/science/ods/classone.html accessed on March 23, 2016.

U.S. Environmental Protection Agency, *Greenhouse Gas Emissions*, September 9, 2013, http://www.epa.gov/climatechange/ghgemissions/gases/fgases.html#Trends, accessed on March 23, 2016.

U.S. Environmental Protection Agency, *Stratospheric Ozone Protection and Climate Change,* http://www.epa.gov/ozone/climate.html, accessed on March 23, 2016.

5.7 HAZARDS AND HAZARDOUS MATERIALS

The purpose of this section is to identify the potential for the proposed project to expose the public or the environment to hazards and hazardous materials related to existing conditions or new hazards created as a result of the proposed project. Information in this section is based on information and conclusions contained in the following studies:

- *Phase I Environmental Site Assessment, Alpine Pointe Development Lot 1 & 2 Tract No. 45378, 800 Meadow Pass Road (APNs 8709-093-001, -002, and -003), City of Walnut, County of Los Angeles, State of California*, RBF Consulting, January 2014 (included in its entirety as Appendix N).

5.7.1 REGULATORY SETTING

FEDERAL AND STATE

According to the United States Environmental Protection Agency (U.S. EPA), a "hazardous" waste is defined as one "which because of its quantity, concentrations, or physiochemical or infectious properties, may either increase mortality or produce irreversible or incapacitating illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed" (*U.S. Public Health and Welfare Code* Section 6903). Special handling and management are required for materials and wastes that exhibit hazardous properties. Treatment, storage, transport, and disposal of these materials are highly regulated at both the Federal and State levels. Compliance with Federal and State hazardous materials laws and regulations minimizes the potential risks to the public and the environment presented by these potential hazards, which include, but are not limited to, the following:

- Resources Conservation and Recovery Act (RCRA) – Hazardous waste management
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – Cleanup of contamination
- Superfund Amendment and Reauthorization Act (SARA) – Cleanup of contamination
- Hazardous Materials Transportation Act (HMTA) – Safe transport of hazardous materials

These laws provide the "cradle to grave" regulation of hazardous wastes. Businesses, institutions, and other entities that generate hazardous waste are required to identify and track their hazardous waste from the point of generation until it is recycled, reused, or disposed of. The primary responsibility for implementing RCRA is assigned to the U.S. EPA, although individual states are encouraged to seek authorization to implement some or all RCRA provisions.

The U.S. EPA and the California Department of Toxic Substances Control (DTSC) have developed and continue to update lists of hazardous wastes subject to regulation. In addition to the U.S. EPA and DTSC, the Regional Water Quality Control Board (RWQCB), Los Angeles Region (Region 4), is the enforcing agency for the protection and restoration of water resources, including remediation of unauthorized releases of hazardous substances in soil and groundwater. Other state agencies involved in hazardous materials management include the Office of Emergency Services, California Department of Transportation (Caltrans), California Highway Patrol (CHP), California Air Resources Board (CARB), and California Department of

Resources Recycling and Recovery (CalRecycle). California hazardous materials management laws include, but are not limited to, the following:

- Hazardous Materials Management Act – business plan reporting
- Hazardous Substance Act – cleanup of contamination
- Hazardous Waste Control Act – hazardous waste management
- Safe Drinking Water and Toxic Enforcement Act of 1986 – releases of and exposure to carcinogenic chemicals

Department of Toxic Substances Control

The responsibility for implementation of RCRA was given to California Environmental Protection Agency's (Cal EPA) DTSC in August 1992. The DTSC is also responsible for implementing and enforcing California's own hazardous waste laws, which are known collectively as the Hazardous Waste Control Law. Although similar to RCRA, the California Hazardous Waste Control Law and its associated regulations define hazardous waste more broadly and regulate a larger number of chemicals. Hazardous wastes regulated by California, but not by U.S. EPA, are called "non-RCRA hazardous wastes."

State Water Resources Control Board

Brownfields are underutilized properties where reuse is hindered by the actual or suspected presence of pollution or contamination. The goals of the State Water Resources Control Board's (SWRCB) Brownfield Program are to:

- Expedite and facilitate site cleanups and closures for Brownfields sites to support reuse of those sites;
- Preserve open space and greenfields;
- Protect groundwater and surface water resources, safeguard public health, and promote environmental justice; and
- Streamline site assessment, clean up, monitoring, and closure requirements and procedures within the various SWRCB site cleanup programs.

Site clean-up responsibilities for brownfields primarily reside within four main programs at the SWRCB: the Underground Storage Tank Program, the Site Cleanup Program, the Department of Defense Program, and the Land Disposal Program. These SWRCB cleanup programs are charged with ensuring sites are remediated to protect the State of California's surface and groundwater and return it to beneficial use.

California Air Resources Board

One of the California Air Resources Board's (CARB) major goals is to protect the public from exposure to toxic air contaminants. The California Air Toxics Program establishes the process for the identification and control of toxic air contaminants and includes provisions to make the public aware of significant toxic exposures and for reducing risk.

The Toxic Air Contaminant Identification and Control Act (AB 1807, Tanner 1983) created California's program to reduce exposure to air toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly 1987) supplements the AB 1807 program by requiring a Statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

Under AB 1807, CARB is required to use certain criteria in the prioritization for the identification and control of air toxics. In selecting substances for review, CARB must consider criteria relating to "the risk of harm to public health, amount or potential amount of emissions, manner of, and exposure to, usage of the substance in California, persistence in the atmosphere, and ambient concentrations in the community." AB 1807 also requires CARB to use available information gathered from the AB 2588 program to include in the prioritization of compounds. This report includes available information on each of the above factors required under the mandates of the AB 1807 program. AB 2588 air toxics "Hot Spots" program requires facilities to report their air toxics emissions, ascertain health risks, and to notify nearby residents of significant risks. In September 1992, the "Hot Spots" Act was amended by Senate Bill 1731 which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Accidental Release Prevention Law

California's Accidental Release Prevention Law provides for consistency with Federal laws (i.e., the Emergency Preparedness and Community Right-to-Know Act and the Clean Air Act) regarding accidental chemical releases and allows local oversight of both the State and Federal programs. State and Federal laws are similar in their requirements; however, the California threshold planning quantities for regulated substances are lower than the Federal quantities. Local agencies may set lower reporting thresholds or add additional chemicals to the program. The Accidental Release Prevention Law is implemented by the Certified Unified Program Agencies (CUPA) and requires that any business, where the maximum quantity of a regulated substance exceeds the specified threshold quantity, register with the responsible CUPA as a manager of regulated substances and prepare a Risk Management Plan. A Risk Management Plan must contain an off-site consequence analysis, a five-year accident history, an accident prevention program, an emergency response program, and a certification of the truth and accuracy of the submitted information. Businesses submit their plans to the CUPA, which makes the plans available to emergency response personnel. The Business Plan must identify the type of business, location, emergency contacts, emergency procedures, mitigation plans, and chemical inventory at each location.

Transportation of Hazardous Materials/Wastes

Transportation of hazardous materials/wastes is regulated by *California Code of Regulations* (*CCR*) Title 26. The United States Department of Transportation (DOT) is the primary regulatory authority for the interstate transport of hazardous materials. The DOT establishes regulations for safe handling procedures (i.e., packaging, marking, labeling, and routing). The CHP and Caltrans enforce Federal and State regulations and respond to hazardous materials transportation emergencies. Emergency responses are coordinated as necessary between Federal, State, and local governmental authorities and private persons through a State-mandated Emergency Management Plan.

Worker and Workplace Hazardous Materials Safety

Occupational safety standards exist to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (Cal/OSHA) is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA requires many businesses to prepare Injury and Illness Prevention

Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they handle.

REGIONAL

South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) works with CARB and is responsible for developing and implementing rules and regulations regarding air toxics on a local level. The SCAQMD establishes permitting requirements, inspects emission sources, and enforces measures through educational programs and/or fines.

Los Angeles Fire Department Health Hazardous Materials Division

The Certified Unified Program Agency with jurisdiction over the City of Walnut is the County of Los Angeles Fire Department Health Hazardous Materials Division (HHMD). The HHMD became a CUPA in 1997. The HHMD coordinates the regulation of hazardous materials and hazardous wastes in Los Angeles County through the following programs:

- Aboveground Petroleum Tank
- California Accidental Release Prevention (CalARP)
- Hazardous Waste
- Hazardous Materials (Hazardous Material Handler Permit Requirements)
- Underground Storage Tank

City Fire Agencies within Los Angeles County have joined in partnership with the CUPA as Participating Agencies (PAs). The CUPA provides its regulated businesses several convenient benefits such as a single point of contact for permitting, billing, and inspections; uniformity and consistency in enforcement of regulations; and a single fee system incorporating all of the applicable fees from the CUPA programs. The HHMD provides detailed guidelines to respond to emergency hazardous materials spills or releases and abandonment.

The Hazardous Material Handler Permit Requirements indicates that businesses that handle hazardous materials in quantities equal to or greater than 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of compressed gas, or extremely hazardous substances above the threshold planning quantity, are considered a hazardous materials handler and to report appropriate information (i.e. emergency response and contingency plan and employee training plan) in the California Environmental Reporting System (CERS). Compliance with the Hazardous Materials Handler Permit Requirements would ensure that all hazardous wastes generated by existing and proposed uses are properly handled, recycled, treated, stored, and disposed. This program involves inspection of facilities that generate hazardous waste, evaluation of hazardous waste generating industries, investigation of reports of illegal hazardous waste disposal, and response to emergency hazardous chemical spills. The CalARP program aims to prevent accidental releases of hazardous materials that could cause harm to the public or environment.

HAZARDOUS BUILDING COMPONENTS

Structural building components sometimes contain hazardous materials such as asbestos, polychlorinated biphenyls (PCBs), lead, and mercury. During demolition or renovation of any existing building, these hazardous material building components may be disturbed and thus expose workers, the public, and the environment to these hazards. These materials are subject to various regulatory protocols as described below.

Asbestos

Asbestos is regulated both as a hazardous air pollutant and as a potential worker safety hazard. South Coast Air Quality Management District (SCAQMD) and Cal/OSHA regulations restrict asbestos emissions from demolition and renovation activities, and specify safe work practices to minimize the potential for release of asbestos fibers. These regulations prohibit emissions of asbestos from asbestos-related manufacturing, demolition, or construction activities; require medical examinations and monitoring of employees engaged in activities that could disturb asbestos; specify precautions and safe work practices that must be followed to minimize the potential for release of asbestos fibers; and require notice to federal and local government agencies prior to beginning renovation or demolition that could disturb asbestos. California requires licensing of contractors who conduct asbestos abatement activities.

PCBs

DTSC has classified PCBs as a hazardous waste when concentrations exceed 5 parts per million (ppm) in liquids or 50 ppm in nonliquids. Fluorescent light ballasts may contain PCBs; if so, they are regulated as hazardous waste and must be transported and disposed of as hazardous waste. Ballasts manufactured after January 1, 1978, should not contain PCBs and are required to have a label clearly stating that PCBs are not present. PCBs are regulated under the Federal Toxic Control Substances Control Act.

Lead

Cal/OSHA standards establish a maximum safe exposure level for types of construction work where lead exposure may occur, including demolition of structures where materials containing lead are present; removal or encapsulation of materials containing lead; and new construction, alteration, repair, or renovation of structure with materials containing led. Inspection, testing, and removing lead-containing building materials must be performed by State-certified contractors who are required to comply with applicable health and safety and hazardous materials regulations. Typically, building materials with lead-based paint attached are not considered hazardous waste unless the paint is chemically or physically separated from the building debris. The U.S. Department of Housing and Urban Development has developed Guidelines for Evaluation and Control of Lead-Based Paint Hazards.

Mercury

Spent fluorescent light bulbs, thermostats, and other electrical equipment contain heavy metals that, if disposed of in landfills, can leach into soil or groundwater. Lighting tubes typically contain concentrations of mercury that may exceed regulatory thresholds of hazardous waste and, as such, must be managed in accordance with hazardous waste regulations. Elemental mercury is in many electrical switches, and when disposed of, such mercury is considered hazardous

waste. Mercury thermometers are being (or have been) phased out and replaced with digital thermometers.

5.7.2 ENVIRONMENTAL SETTING

ON-SITE SETTING

The subject site is located north of La Puente Road, south of Meadow Pass Road, east of N. Lemon Avenue, and west of Broken Lance Road within the City of Walnut, County of Los Angeles, State of California. Overall, the subject site is primarily situated within a residential area of Walnut. On-site topography consists of rolling foothills and is primarily associated with the heavily incised Lemon Creek which flows south through the central portion of the subject site. Elevation on-site is approximately 580-660 feet above mean sea level (msl) and slopes to the south.

Three Assessor Parcel Numbers 8709-093-001, -02, and -03 and one associated address 800 Meadow Pass Road comprise the subject site with an approximate gross acreage of 25.8 acres.

On-Site Structures and Roads

The site consists of various equestrian-related structures, one improved roadway, and one unimproved roadway. The majority of the structures are located within the northern portion of the subject site with the exception of two single–horse stables located within the central portion of the subject site. All structures within the subject site appear to be associated with equestrian activities and include three covered barns, residence quarters, open-air stables, fenced corrals, maintenance storage facilities, feed sheds, one outdoor arena, one covered arena (open-air), two maintenance storage sheds, feed sheds, horse washing facilities, one gazebo, one mobile home, and mobile trailers. The two single-story barn structures are connected by the two-story residence quarters and are constructed of wood. The large, open-air arena is of wood-frame construction and includes a dirt floor covered by a pitched V-shape, shingle roof. The two maintenance storage sheds located in the northeastern portion of the subject site are each 40 feet steel shipping containers with wood floors. Additional on-site structures are all of wood-frame construction except for the open-air stables and corrals which are constructed of metal pipe fencing covered by a fabric roof. All structures appeared to be well maintained and in fair condition.

Two roadways exist on-site. One unimproved gravel road enters the subject site along the northern boundary from Meadow Pass Road and traverses south through the subject site transitioning into a riding trail. San Vicente Road, an improved road borders the southeastern boundary of the subject site proceeding in a north to south direction and provides access to adjoining residential properties. Additionally, a network of riding trails exist on site. These unimproved (dirt) riding trails also provide access for maintenance vehicles.

Geologic Setting

Geology and Soils

The USGS Geological Map Index was searched by EDR for available Geological Maps that cover the subject site and surrounding areas. According to the EDR GeoCheck Report, the land consists of a stratified sequence from the Cenozoic era. The subject site is underlain by Calleguas soil. The Calleguas soil is a Class D soil, which includes very slow infiltration rates.

Calleguas soils are clayey, have a high water table or are shallow to an impervious layer. This Calleguas soil is well drained and has intermediate water holding capacity. The depth to the water table is greater than six feet.

Radon

Radon is a radioactive gas that is found in certain geologic environments and is formed by the natural breakdown of radium, which is found in the earth's crust. Radon is an invisible, odorless, inert gas that emits alpha particles, known to cause lung cancer. Radon levels are highest in basements (areas in close proximity to the soil) that are poorly ventilated. A radon survey was not included within the scope of this investigation. According to the "U.S. EPA Map of Radon Zones," the County of Los Angeles is located within Zone 2, which has a predicted average indoor screening level of ≥ 2.0 Picocuries per liter (pCi/L) and ≤ 4.0 Picocuries per liter (pCi/ L). EPA recommends remedial actions when radon levels are greater than 4.0 pCi/L.

Biological Setting

Mixed riparian forest habitat dominated by walnut and ash tree species was in association with Lemon Creek on-site. Additional areas on-site consist of landscaped open space areas comprised of native and non-native species typical of equestrian and urbanized residential areas.

Drainage/Hydrologic Setting

Drainage

Drainage of the subject site is accomplished by infiltration and surface runoff that enters Lemon Creek through a series of storm drains. Lemon Creek flows in a southern direction across the subject site. The on-site drainage is anticipated to follow the general topography of the area, which is generally in a southern direction.

Flood Hazards

Flood Prone Area Maps published by the USGS show areas prone to 100-year floods overlaid on a topographical map. These maps are not considered the official Federal Emergency Management Agency (FEMA) flood maps; therefore, in cases where a property is located immediately adjacent to or within the flood prone boundary, a FEMA map should be obtained. According to the EDR Database search, the subject site is not located within a 100-year flood zone (refer to the Technical Appendix N).

Groundwater

No technical groundwater or water well data was readily available for the subject site during the preparation of the Phase I Environmental Site Assessment. As a result, RBF Consulting assumed groundwater flow would follow the slope of the ground surface elevations towards the nearest open body of water or intermittent stream. The direction of this flow on-site is expected to be generally in a southern direction. Although no groundwater information was available for the subject site, according to EDR the general direction of groundwater flow approximately one mile from the subject site is to the west. In addition, according to EDR, groundwater depth is 23 feet below surface approximately one mile south of the subject site

Water Wells

The USGS Well Database and State Well Database were searched by EDR. According to the EDR Well search, no water wells are located within the boundaries of the subject site. In addition, no water wells were found within a one-mile radius of the subject site.

STANDARD HISTORICAL RESEARCH SOURCES

Historical Uses Summary

Based upon evaluation of the documented land use as demonstrated in the resources reviewed as part of the Phase I ESA, the subject site appears to have consisted primarily of sparse structures, agricultural land uses, and vacant land uses from 1894 to 1981. From 1981 to the present the subject site appears to have consisted of multiple structures associated with equestrian uses and vacant land. Refer to Appendix N Table 3-1.

Oil and Gas Wells

RBF Consulting reviewed the California Department of Oil, Gas, and Geothermal Resources (DOGGR) online mapping system on January 7, 2014, which indicates existing and historical oil and gas wells within the immediate vicinity of the subject site. Current well status for any well indicated in the online mapping system should be confirmed at the appropriate Division of Oil and Gas District Office. According to DOGGR, no oil gas wells are located within the subject site. Two oil gas wells are located within a one-mile radius of the subject site. The first well is located approximately 0.12-mile west of the subject site. This well is reported to be plugged and inactive. The operator is reported to be McVicar-Rood. The second well is located approximately 0.76-mile east of the subject site. This well is reported to be plugged and inactive. The operator is reported to be C. A. Julian and D. Criswell .

In addition, the USGS Well Database and State Well Database were searched by EDR. According to the EDR Well search, no wells utilized for oil and gas are located within the boundaries of the subject site. Two wells utilized for oil and gas are located within a one-mile radius of the subject site.

SITE RECONNAISSANCE

RBF Consulting performed a visual observation of readily accessible areas of the subject site and immediately adjoining properties on December 4, 2013. At this time, the subject site was visually and/or physically observed and any structure(s) located on the subject site to the extent not obstructed by bodies of water, adjacent buildings, or other obstacles were also observed.

The periphery of the subject site was visually and/or physically observed, as well as the periphery of all structures on the subject site, and the subject site was viewed from all public thoroughfares. If roads or paths with no apparent outlet are observed on the subject site, the use of the road or path was identified to determine whether it was likely to have been used as an avenue for disposal of hazardous substances or petroleum products.

On the interior of structures on the subject site, accessible common areas expected to be used by occupants or the public (such as lobbies, hallways, utility rooms, recreation areas, etc.), maintenance and repair areas, including boiler rooms, and a representative sample of occupant

spaces, was visually and/or physically observed. RBF Consulting did not look under floors, above ceilings, or behind walls.

DESCRIPTION OF PAST USES OF THE SUBJECT SITE

Past uses of the subject site are reported to consist of vacant land and agricultural land uses. During an unknown year between 1981 and 1990 recreational uses were introduced within the subject site. No evidence to suggest the presence of other past uses was noted during the site visit.

Hazardous Substances and Petroleum Products

RBF Consulting observed storage of petroleum products and other hazardous substances in and around a metal shipping container in the northeastern portion of the subject site. Hazardous materials including paint, gasoline, motor oil, one small generator and lubricants were observed. Staining was observed upon the wood floor of the metal container and adjoining bare soil. In addition, miscellaneous tools, parts, piping, bricks, roofing material, wiring, trash cans, and paint buckets were observed on bare soil outside of the metal shipping container. Staining on bare soil was observed in this area as well. No additional hazardous substances or petroleum product storage or staining was observed on-site.

Chemical Storage Tanks (ASTs and USTs)

During the December 4, 2013 site inspection the subject site was inspected for fill pipes, vent pipes, areas of abnormal or heavy staining, manways, manholes, access covers, concrete pads not homogenous with surrounding surfaces, concrete build-up areas potentially indicating pump islands, abandoned pumping equipment, or fuel pumps. No ASTS or USTS were observed within the subject site during the December 4, 2013 site inspection.

Spills

Staining on the wood floor of the on-site metal shipping container and adjoining bare soil was observed in association with the storage of hazardous materials including paint, gasoline, motor oil, and lubricants in the northeastern portion of the subject site. Staining was also observed on bare soil adjoining the metal container to the east. Soil staining appeared to be the result of hazardous substance and petroleum product spillage.

Solid Waste Disposal

No indication of on-site solid waste disposal practices (i.e., landfills) was apparent during the December 4, 2013 site inspection. Although no land-filling operations were noted, two steel waste containers (dumpsters) and miscellaneous debris were observed within the subject site. One steel waste container located in the northeastern portion of the subject site was used for miscellaneous trash and debris disposal. An additional roll-off waste container was noted near the eastern boundary of the subject site and was filled with organic debris. No on-site hazardous substances or petroleum products were noted in association with on-site waste containers.

Utilities

Utilities (overhead power lines with transformers) were not noted within the boundaries of the subject site during the December 4, 2013, site inspection. One pad-mounted transformer was observed on concrete within the central portion of the subject site. No associated staining or leakage was noted in association with on-site transformers.

Polychlorinated Biphenyls (PCBs)

Pole-mounted transformers were not noted on-site during the December 4, 2013, site inspection. No evidence of di-electric fluid or staining was noted on-site.

Wells

No water wells were observed within the boundaries of the subject site during the December 4, 2013 site inspection.

Potable Water Supply

No evidence of a potable water supply was noted during the site visit.

Sewage Disposal System

Evidence of a sewage disposal system was indicated by a manhole cover signed with “sewer” within the central portion of the subject site during the December 4, 2013 site reconnaissance.

Heating/Cooling

RBF Consulting did not observe any heating or cooling systems associated with the multiple structures within the subject site during the December 4, 2013 site visit.

Drains and Pumps

RBF Consulting did not observe interior drains or sumps during the December 4, 2013 site visit.

Pits, Ponds, and Lagoons

One small pond was observed in the northwestern portion of the subject site, during the December 4, 2013, site inspection. Standing water was observed within the pond. Based on the location of the pond and the surrounding land uses, this pond was used for equestrian-related events.

DESCRIPTION OF CURRENT USES AND STRUCTURES AT ADJOINING PROPERTIES

Adjoining off-site uses consisted of primarily single family residential development to the east and south, institutional (church) land uses to the north commercial land uses to the south, and landscaped open space combined with residential use to the west, which were observed during the site visit.

During a preliminary observation of adjoining properties from public thoroughfares, no visible or physical evidence was observed to suggest that a surface release of petroleum-based material has recently occurred. No unusual or suspicious materials handling or storage practices were observed with respect to adjacent properties. One gas station was visible to the southwest of the subject site across La Puente Road.

DESCRIPTION OF PAST USES AND STRUCTURES AT ADJOINING PROPERTIES

Based on the available documentation obtained, off-site adjoining uses appear to have historically consisted of agricultural, single family residential, commercial, and vacant land uses. One gas station has been documented within the commercial shopping center to the southwest of the subject site and is known to maintain USTs containing petroleum products. In addition, one fire station is documented adjoining the subject site to the southwest and is reported to maintain USTs containing petroleum products.

Observations of Off-Site Properties

Utilities

Typical utilities (e.g., power lines with transformers) were not noted within adjacent properties during the December 4, 2013 site inspection. No staining or leaking was observed with respect to off-site utilities during the December 4, 2013 site inspection.

Chemical Storage Tanks

No chemical storage tanks were observed within off-site adjoining properties during the December 4, 2013 site visit.

Hazardous Materials

During a preliminary observation of accessible adjoining properties on December 4, 2013, no visible or physical evidence was observed to suggest that a surface release of petroleum based material has recently occurred. No unusual or suspicious materials handling or storage practices were observed with respect to adjacent properties.

5.7.3 SIGNIFICANCE THRESHOLD CRITERIA

Environmental impact thresholds as indicated in *CEQA Guidelines* Appendix G (Environmental Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; refer to Section 8.0, Effects Found Not To Be Significant).

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

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (refer to Section 8.0, Effects Found Not To Be Significant).

- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment; (refer to Section 8.0, Effects Found Not To Be Significant).

- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area (refer to Section 8.0, Effects Found Not To Be Significant).

- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area (refer to Section 8.0, Effects Found Not To Be Significant).

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (refer to Section 8.0, Effects Found Not To Be Significant).

- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands (refer to Section 8.0, Effects Found Not To Be Significant).

Based on these standards, the effects of the proposed project have been categorized as either a “less than significant impact” or a “potentially significant impact.” Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.7.4 PROJECT IMPACTS AND MITIGATION MEASURES

ACCIDENTAL RELEASE OF HAZARDOUS MATERIALS

● **CONSTRUCTION AND OPERATIONAL ACTIVITIES ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT COULD CREATE A SIGNIFICANT HAZARD TO THE PUBLIC OR ENVIRONMENT THROUGH ACCIDENTAL CONDITIONS INVOLVING THE RELEASE OF HAZARDOUS MATERIALS.**

Impact Analysis: The conclusions of the Phase I ESA are summarized below.

Current and Past On-Site Uses

The subject site consists of multiple structures and improvements associated with equestrian uses (Brookside Equestrian Center). RBF Consulting observed staining near one of the metal shipping containers in the northeastern portion of the subject site. Staining was observed on the container floor and on bare soil and appeared to be associated with fuel container storage. Due to visible evidence of surficial staining on bare soil associated with the on-site metal container,

the container should be removed and disposed of at an approved landfill facility. Once removed, a visual inspection of the areas beneath and around the removed container should be performed. Any stained soil should be excavated to determine the exact vertical and lateral extent of the contamination (if any). If during soil removal, evidence of hazardous substances and/or petroleum products appears to continue below the ground surface, sampling should be performed to characterize the extent of contamination and identify appropriate remedial measures. It is the opinion of RBF Consulting that the presence of surficial staining in association with the on-site metal storage container has resulted in an REC at the subject site.

Based upon evaluation of the documented land use as demonstrated in the reviewed resources, the series of historical aerial photographs and maps, the site visit, and interviews with the user and property owner, the subject site appears to have been historically utilized for agricultural, equestrian, and vacant land uses. No historical use information which would point to the potential for an REC has been noted within the boundaries of the subject site. It is RBF Consulting's opinion that past on-site uses have not resulted in an REC on the subject site.

Current and Past Adjoining Properties

RBF noted through the site visit as well as the regulatory database review that one LUST facility, Exxon Station, with open status is identified approximately 115 feet down-gradient to the southwest of the subject site. This facility reported petroleum hydrocarbon contamination to a groundwater aquifer. Although this facility has reported groundwater contamination near the subject site, this facility is located down-gradient from the subject site and Lemon Creek flows to the south between this facility and the subject site. Therefore, it is RBF Consulting's opinion that current adjoining properties have not resulted in an REC on the subject site.

Past adjoining uses in addition to the open LUST facility discussed in the Phase I ESA have been reported to consist of agricultural, residential, institutional, and vacant land uses. These properties have not reported the use or storage of hazardous substances or petroleum products. It is RBF Consulting's opinion that past adjoining uses have not resulted in an REC on the subject site.

On-Site Regulatory Properties

Available public records provided by EDR were reviewed by RBF Consulting on January 9, 2014. The lists that were reviewed did not report any regulatory properties within the boundaries of the subject site. Therefore, no known corrective action, restoration, or remediation has been planned, is currently taking place, or has been completed on the subject site. The subject site has not been under investigation for violation on any environmental laws, regulations, or standards, as identified in the databases reported by EDR. As no contamination or associated cleanup activities associated with a release of hazardous materials on-site has been reported by EDR, it is RBF Consulting's opinion that no REC is present as a result of on-site regulatory properties.

Off-Site Regulatory Properties

The lists identified 12 off-site regulatory properties within a one-mile radius of the subject site. Eleven off-site properties are considered to have a low potential of affecting the subject site for one or more of the following reasons: distance from the subject site, direction of anticipated groundwater flow, site status, and/or no contamination has been reported. One LUST facility, Exxon Station, with open status is identified approximately 115 feet down-gradient to the

southwest of the subject site. This facility reported petroleum hydrocarbon contamination to a groundwater aquifer. Although this facility has reported groundwater contamination near the subject site, this facility is located down-gradient from the subject site and Lemon Creek flows to the south between this facility and the subject site. Therefore, it is RBF Consulting's opinion that off-site regulatory properties have not resulted in an REC on the subject site.

Accidental Release of Hazardous Materials

One of the means through which human exposure to hazardous substances could occur is through accidental release. Incidents that result in an accidental release of hazardous substances into the environment can cause contamination of soil, surface water, and/or groundwater, in addition to any toxic fumes that might be generated. Human exposure to contaminated soil or water can have potential health effects based on a variety of factors, such as the nature of the contaminant and the degree of exposure. Construction activities associated with development of the proposed project could release hazardous materials into the environment through reasonably foreseeable upset and accidental conditions.

Implementation of the proposed project is anticipated to result in the demolition of some existing on-site structures and the construction of new residential uses. Thus, development within the project site may result in the disturbance of existing contaminated building materials and soil, associated with existing and past on-site uses. Site disturbance, demolition/renovation, and/or construction within these areas could result in the disturbance of existing hazardous materials associated with structures and soil.

Transport of Hazardous Materials

Excavation/grading activities and/or site disturbance of existing building materials may result in the off-site transport and disposal of hazardous substances, in the event that these substances are encountered. Off-site transport and disposal of hazardous substances would be short-term in nature, only occurring during demolition/renovation or grading/excavation activities, and would be subject to Federal, State, and local health and safety regulations that protect public safety. Handling, transport, and disposal of these substances are regulated by the DTSC, CalEPA, CalOSHA, and HHMD. Future construction contractors would also be subject to the requirements of the CalOSHA and HHMD governing removal actions. DTSC regulations require specific hazardous materials handling methods, truck haul routes, and schedules to minimize potential exposure during hazardous materials removal actions. With adherence to the requirements of affected regulatory agencies regarding the handling, transport, and disposal of hazardous materials, implementation of the proposed project would not create a significant hazard to the public or the environment. As such, impacts related to the temporary off-site hauling and disposal of hazardous building materials during demolition would be less than significant.

Other Construction-Related Impacts

Other means by which accidental spills could result during construction of future development include proposed construction equipment. Construction equipment may involve petroleum-based fuel spills. The level of risk associated with this type of spill is not considered significant due to the small volume and low concentration of hazardous materials utilized during the construction phases. The proposed project contractor would be required to use standard construction controls and safety procedures that would avoid and minimize the potential for accidental release of such substances into the environment in the event of a spill. Standard

construction practices would be observed such that any materials released would be appropriately contained and remediated as required by local, State, and Federal law. Impacts in this regard would be less than significant.

Impact Conclusion

The project site does not pose an unacceptable adverse impact to future construction workers, future adult residents, or future recreational users.

Site disturbance/demolition activities could expose workers to a variety of potentially hazardous materials. Implementation of Mitigation Measures HAZ-1 through HAZ-3 would reduce potential impacts from site disturbance/demolition activities that would result in accidental conditions at the project site. If unknown wastes or suspect materials are discovered during construction by the contractor, which he/she believes may involve hazardous wastes/materials, the contractor would be required to implement Mitigation Measure HAZ-3.

With implementation of Mitigation Measures HAZ-1 through HAZ-3 and compliance with applicable Federal, State, and local regulatory requirements pertaining to hazardous materials, potential impacts would be reduced to less than significant levels.

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures:

HAZ-1 Prior to demolition of any existing buildings, the asbestos containing building materials shall be appropriately abated by a licensed contractor. Asbestos removal shall be performed by a State certified asbestos containment contractor in accordance with the South Coast Air Quality Management District (SCAQMD) Rule 1403. Contractors performing asbestos removal shall provide evidence of abatement activities to the City's Building and Safety Department.

HAZ-2 Prior to demolition of any existing buildings, the lead-based paint shall be appropriately abated by a licensed contractor. Lead-based paint removal and disposal shall be performed in accordance with California Code of Regulation Title 8, Section 1532.1, which specifies exposure limits, exposure monitoring and respiratory protection, and mandates good worker practices by workers exposed to lead. Contractors performing lead-based paint removal shall provide evidence of abatement activities to the City's Building and Safety Department.

HAZ-3 If unknown wastes or suspect materials are discovered during construction by the contractor that are believed to involve hazardous waste or materials, the contractor shall comply with the following:

- Immediately cease work in the vicinity of the suspected contaminant, and remove workers and the public from the area.
- Notify the City of Walnut Director of Building and Safety.
- Secure the area as directed by the City of Walnut Director of Building and Safety.
- Notify the Los Angeles Fire Department Health Hazardous Materials Division, who shall advise the responsible party of further actions that shall be taken, if required.

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.

5.7.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **THE PROPOSED PROJECT ALONG WITH OTHER RELATED CUMULATIVE PROJECTS COULD INCREASE THE EXPOSURE OF HAZARDOUS SUBSTANCES TO THE PUBLIC OR THE ENVIRONMENT.**

Impact Analysis: Cumulative projects may result in a cumulatively considerable hazardous materials impact, as other projects in proximity to the project site, propose the handling/storage/transport of hazardous substances. However, future on-site residential structures would be located greater than 500 feet from these uses.

The proposed project could also contribute cumulatively, although not significantly, to a hazard involving the transport of hazardous materials during construction. Handling, transport, and disposal of these materials are regulated by the DTSC, CalEPA, CalOSHA, and Los Angeles Fire Department Health Hazardous Materials Division. The construction contractor, on a project-by-project basis, would be subject to the requirements of the DTSC governing removal actions. DTSC regulations require specific hazardous materials handling methods, truck haul routes, and schedules to minimize potential exposure during hazardous materials removal actions. Compliance with all applicable Federal and State laws related to the handling/storage/transportation of hazardous materials would reduce the likelihood and severity of accidents during transit, thereby ensuring that a less than significant cumulatively considerable impact would occur as a result of implementation of the proposed project.

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures: Refer to Mitigation Measures HAZ-1 through HAZ-3 No additional mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.

5.7.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in less than significant project and cumulative impacts related to hazards or hazardous materials during both construction and operation with adherence to the identified mitigation measures and compliance with the applicable Federal, State, and local regulatory requirements. As such, no significant unavoidable impacts would result from implementation of The Brookside Project.

5.7.7 SOURCES CITED

RBF Consulting, *Phase I Environmental Site Assessment, Alpine Pointe Development Lot 1 & 2 Tract No. 45378, 800 Meadow Pass Road (APNs 8709-093-001, -002, And -003), City of Walnut, County of Los Angeles, State of California*, January 2014.

5.8 HYDROLOGY, DRAINAGE, AND WATER QUALITY

This section analyzes potential project impacts on existing drainage patterns, hydrology, flood control facilities, and water quality conditions in the project area. Information in this section is based on information and conclusions contained in the following studies:

- *Standard Urban Stormwater Mitigation Plan (SUSMP) for Tentative Tract No. 45378, City of Walnut, Los Angeles County, CA*, prepared by Michael Baker International, dated April 25, 2016 (included in its entirety as Appendix O).

- *Tentative Tract Map No.45378 Hydrology and Hydraulics Report*, prepared by Michael Baker International, dated April 22, 2016 (included in its entirety as Appendix P).

5.8.1 REGULATORY SETTING

This section discusses the Federal, State, and local drainage policies and requirements applicable to the project site.

FEDERAL LEVEL

Federal Clean Water Act (Section 404)

Development projects are subject to Federal permit requirements under the Federal Clean Water Act (CWA). The CWA requires that the discharge of pollutants to "Waters of the U.S." from any point source be effectively prohibited, unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) Permit. Under the NPDES permit program, the United States Environmental Protection Agency (U.S. EPA) established regulations for discharging storm water by municipal and industrial facilities and construction activities.

The NPDES permit is broken up into two Phases: I and II. Phase I requires medium and large cities, or certain counties with populations of 100,000 or more to obtain NPDES permit coverage for their storm water discharges. Phase II requires regulated small Municipal Separate Storm Sewer Systems (MS4s) in urbanized areas, as well as small MS4s outside the urbanized areas that are designated by the permitting authority, to obtain NPDES permit coverage for their storm water discharges. Polluted storm water run-off is commonly transported through MS4s. This run-off is often untreated and discharged into local water bodies.

National Flood Insurance Program

The National Flood Insurance Program (NFIP) was created by Congress in 1968. It provided a means for property owners to financially protect themselves from flood damage. The NFIP offers flood insurance to homeowners, renters, and business owners if their community participates in the program. Participating communities agree to adopt and enforce ordinances that meet or exceed FEMA requirements to reduce the risk of flooding. The City of Walnut is a participating community and must adhere to the NFIP.

STATE LEVEL

California Porter-Cologne Act

The CWA places the primary responsibility for the control of surface water pollution and for planning the development and use of water resources with the states, although it does establish certain guidelines for the states to follow in developing their programs and allows the U.S. EPA to withdraw control from states with inadequate implementation mechanisms.

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Board (RWQCB) authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its state water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

State Water Resources Control Board

The SWRCB administers water rights, water pollution control, and water quality functions throughout the State, while the RWQCBs conduct planning, permitting, and enforcement activities. For the proposed project, the NPDES permit is divided into two parts: construction and post-construction. The construction permitting is administered by the SWRCB, while the post-construction permitting is administered by the RWQCB.

Development projects typically result in the disturbance of soil that requires compliance with the NPDES General Permit, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activities (Order No. 2009-0009-DWQ, NPDES Number CAS000002). This Statewide General Construction permit regulates discharges from construction sites that disturb one or more acres of soil. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation results in soil disturbance of at least one acre of total land area must comply with the provisions of this NPDES Permit, and develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). The project applicant must submit a Notice of Intent (NOI) to the SWRCB, to be covered by the NPDES General Permit, and prepare the SWPPP before beginning construction. Implementation of the plan starts with the commencement of construction and continues through the completion of the project. Upon completion of the project, the applicant must submit a Notice of Termination (NOT) to the SWRCB to indicate that construction is completed.

Non-Point Source Pollution Control Program

The purpose of the Non-Point Source Pollution (NPS) Control Program (NPS Program Plan) is to improve the State's ability to effectively manage NPS pollution and conform to the requirements of the CWA and the Federal Coastal Zone Act Reauthorization Amendments of

1990. These documents were developed by staff of the SWRCB's Division of Water Quality and the California Coastal Commission (CCC), in coordination with the RWQCBs and staff from over 20 other State agencies.

REGIONAL LEVEL

Los Angeles Regional Water Quality Control Board

On December 13, 2001, the Los Angeles Regional Water Quality Control Board (LARWQCB) adopted a National Pollutant Discharge Elimination System (NPDES) Permit (Order No. 01-182) to regulate municipal and urban runoff storm water discharges within the County of Los Angeles. This Order was superseded by Order No. R4-2012-0175, NPDES No. CAS004001, which was adopted by the LARWQCB on November 8, 2012 and became effective on December 28, 21012. Under this Order, the Los Angeles County Flood Control District and incorporated cities within the County, including the City of Walnut, are required to ensure that all new development and redevelopment projects minimize impacts from storm water runoff and urban runoff discharges. Section VI.D of the Order requires the implementation of a Planning and Land Development Program (Program) pursuant to Part VI.D.7.b for all New Development and Redevelopment projects that trigger the applicability criteria discussed within Part VI.D.7.b. The development of this Standard Urban Stormwater Mitigation Plan (SUSMP) is intended to satisfy the requirements set forth in Order No. R4-2012-0175, Part VI.D.7. The SUSMP also ensures that the proposed post-construction Best Management Practices (BMPs) incorporated into the project will be maintained in perpetuity to reduce the discharge of pollutants from storm water and urban runoff discharges to the maximum extent practicable (MEP).

LOCAL LEVEL

Walnut Municipal Code

Article IV, Standard Urban Storm Water Mitigation Plan

Walnut Municipal Code Article IV, Standard Urban Storm Water Mitigation Plan, requires new development and significant redevelopment projects (as described in the NPDES permit) to prepare a Standard Urban Storm Water Mitigation (SUSMP). Prior to issuance of a grading permit, building permit and/or safety permit for any new development or significant redevelopment, the property owner is required to submit to and obtain the approval of the SUSMP by the City.

5.8.2 ENVIRONMENTAL SETTING

EXISTING HYDROLOGY

Lemon Creek

Lemon Creek is a tributary stream to San Jose Creek which is part of the larger San Gabriel River Watershed system. Lemon Creek enters the project site at the northeast end of the site and exits the site to the south at the double 5-foot x 10-foot box at La Puente Road. A tributary stream to Lemon Creek passes under Lemon Avenue through an 81-inch culvert. This stream joins the main reach of Lemon Creek at a confluence point in the center of the project site. There are three storm drain lines that enter the project site from Meadow Pass Road to the north. Currently, there are no catch basins within the project limits.

Regional Hydrologic Methodology

Existing hydrology reports for the area were sought in order to determine the proper design flows that would be used to analyze the hydraulics of Lemon Creek through the project site. Michael Baker International contacted the Los Angeles Department of Public Works and was provided with minimal data from a hydrology study performed in 1972 for the San Jose Creek Watershed. The data included 50-year design flows for the tributary branches of San Jose Creek and a map of the delineated drainage areas of those branches. The flow rates provided were calculated based on Zone Method and a 50-year frequency rainfall event.

A flow of 2,021 cubic feet per second (cfs) enters the site in Lemon Creek before reaching the stream confluence. Flow from the Lemon Avenue culvert adds 1,153 cfs to Lemon Creek for a total flow of 3,182 cfs. At the La Puente Road culvert, the flow measures 3,255 cfs. Four culverts are located along the Lemon Creek reach within the site limits and serve as trail crossings across the creek.

Since the Los Angeles County Department of Public Works (LACDPW) Water Resources Department has changed its hydrology methodology from that used in 1972, the validity of these flow rates from the San Jose Creek study was analyzed. The main areas of concern are the changes in land use, percent impervious surface area, and transition from rainfall zone curves to isohyets. The San Jose Creek study assumed 21-percent imperviousness for the watershed and used a 24-hour, 50-year frequency, zone mass curve with a cumulative rainfall depth of 8-inches.

To calculate the current imperviousness of the watershed upstream of the project site, the tributary drainage area to the project site was delineated using the San Jose Creek hydrology map and aerial photography. Current land uses for the watershed were referenced from the LACDPW Water Resources Publications website. This website contains links to the LACDPW Hydrology Manual, LACDPW GIS database of soils and land uses, and Modified Rational Method Hydrology Support Files. The current land uses were cross referenced with the delineated drainage area using ArcGIS. From this intersection of elements, the area that each land use occupied of the total area was drainage area was determined. Each land use was assigned a percent impervious number in accordance with the LACDPW Hydrology Manual Appendix D table. Using the composite imperviousness equation specified in LACDPW Hydrology Manual Section 6.3, it was concluded that the current imperviousness of the watershed is 20.5 percent, slightly less the 21 percent used in the San Jose Creek study.

The project site is located in the San Dimas hydrology map for the 50-year, 24-hour isohyet. The rainfall depth at the project site is 6.7 inches, 1.3 inches lower than the 8-inch rainfall zone used in the San Jose Creek study.

Given the minimal change in imperviousness for the watershed, and decrease in rainfall depth, the flow values from the San Jose Creek study would be on the conservative side and acceptable for analyzing the hydraulics through Lemon Creek.

Existing Regional Hydraulics

Exhibit 5.8-1, *Pre-Development 50-Year Existing Floodplain Map* shows the extent of the flooding that occurs in the Lemon Creek reach in the Pre-Development conditions. All four culverts do not have the capacity to convey the 50-year design flows. The existing 81-inch pipe culvert, at station 26+26 in the Lemon Creek reach, experiences a water surface elevation of 595.3 feet, with approximately 1,460 cfs flowing over the top of the trail. The existing 72-inch pipe culvert at station 22+30 experiences the most flooding in both the Pre- and Post-Development conditions. Major flooding occurs at this point due to the 1,153 cfs entering the Lemon Creek reach from the 81-inch culvert from Lemon Avenue. The top width of the water surface elevation (WSE) extends from the lower trail on the east side of the creek to the 81-inch concrete pipe culvert from Lemon Avenue. The water surface for the 50-year design flow is 584.5 feet.

The bridge located at station 14+13 includes a 10.25-ft high by 13.5-ft wide arch culvert. A water surface elevation of 579.0 feet at this location is a result of lack of capacity of the bridge to convey the 50-year design flow of 3,255 cfs. The flooded width at this bridge also extends about 150 feet past the east bank due to the low elevations in the open field. The 72-inch pipe culvert at station 11+16 is also undersized and most of the flow overtops this culvert resulting in a water surface elevation of 573.2 feet.

The existing double 5-foot x10-foot box culvert under La Puente road is undersized for 50-year design flows and does not have the capacity to convey the entire 3,255 cfs flow through the culvert. The lack of capacity means that water ponds upstream of the road until it reaches an elevation in which it flows over the road as weir flow. In order to determine the controlling water surface elevation at the La Puente Road culvert, hydraulic calculations had to be performed for surface overflow and culvert flow simultaneously for the road crossing. This analysis was performed using an iterative approach of culvert (inlet control) hydraulics via WSPGW and Bentley FlowMaster. The system was set up in WSPGW initially from the HEC-RAS cross section at station 11+02, to the outlet of the double 7-foot x 8-foot box culvert downstream. Refer to Hydrology Study Appendix D for P.M. No. 14987 plans of the downstream box culvert. A FlowMaster model using a Broad Crested Weir was set up for the surface flows. A weir elevation of 571.5 feet was used and crest lengths of 400 and 300 feet used for the Pre- and Post-Development conditions respectively.

The capacity of the existing La Puente culvert and the water surface elevation for the HEC-RAS model, for the 50-year design storm was found. The culvert capacity of the double 5-foot x10-foot box was 2,000 cfs and the starting water surface elevation for the existing condition HEC-RAS model is 572.5 feet.

Refer to Hydrology Study Appendix C for all WSPGW, HEC-RAS, and FlowMaster input and output data.

Existing Local Hydraulics

Existing on-site infrastructure includes 24-inch, 18-inch, and 33-inch storm drain pipes. No as-built plans were available for the systems. Flow through these pipes is strictly from off-site flows as no on-site catch basins are present. The 24-inch pipe receives flow from three catch basins located at the intersection of Colt Lane and Meadow Pass Road. Hydraulic calculations were not analyzed for this pipe as no on-site flow would be added to the system. The discharge point for this pipe is located at station 29+40 on the Lemon Creek reach. The 18-inch and 33-inch

pipes receive flow from catch basins located on Meadow Pass Road. The two pipes join at a confluence and discharge into Lemon Creek at station 24+46. Refer to *Exhibit 5.8-2*, *Pre-Development Hydrologic Map* for the location of the existing storm drain lines and *Exhibit 5.8-1* for the existing HEC-RAS stations.

Bentley's Flow Master has been used to perform a full flow capacity computation for the existing storm drain lines capacities. A slope of 2 percent was assumed and the peak 25-year design flow rates analyzed. The full flow capacity of the existing 18-inch and 33-inch RCPs is 14.9 and 74.8 cfs, respectively. The capacity of 18-inch RCP exceeds the 8.3 cfs entering from Subarea 5B. The existing capacity of the 33-inch RCP exceeds the 14.9 cfs from Subarea 6B upstream of the pipe confluence and the 23.2 cfs from the addition of flow from both Subarea 5B and 6B.

Refer to Hydrology Study Appendix C for all FlowMaster input and output data.

Pre-Development Hydrology/Drainage Conditions

The project site receives run-on from approximately 10.3 acres of developed land north of Meadow Pass Road. There is existing storm drain infrastructure on-site, although there are no catch basins or inlets to the existing storm drain lines within the project site limits. Flow from the hills above the project site is conveyed in the street gutters to catch basins on Meadow Pass Road and Colt Lane. Three storm drain conduits convey the flow from the catch basins on Meadow Pass Road to Lemon Creek. Refer to *Exhibit 5.8-2* for on-site infrastructure.

The 24-inch storm drain line to the east receives flow from three catch basins at the corners of Colt Lane and Meadow Pass Road. The hydrologic conditions and hydraulics of this 24-inch line were not analyzed as no on-site flow would be added to the existing line in the proposed condition. In order to address potential site impacts, flows from the tributary area to the upstream end of the system were not considered run-on.

The discussion below outlines the significant drainage nodes and flow paths under Pre-Development conditions (refer to *Exhibit 5.8-2)*.

Node 3A: Represents the inlet to the existing 81-inch culvert at the creek crossing. Flow from subarea 1A, approximately 1.87 acres, and 2A, about 6.26 acres, sheet flow to this point. Subarea 1A will remain unaltered in the proposed condition whereas flow from subarea A2 will be redirected to a point further downstream in the proposed condition.

Subarea 5B: Project site run-on conveyed to Lemon Creek, approximately 3.81 acres in size. A catch basin on the north side of Meadow Pass Road captures runoff from the area where it enters an 18-inch storm drain pipe. Runoff is conveyed to a confluence with a 33-inch pipe and continues southerly, as pipe flow, and is ultimately discharged into Lemon Creek within Subarea 4A, which is approximately 6.29 acres.

Subarea 6B: Project site run-on conveyed to Lemon Creek, approximately 6.49 acres. Catch basins on the north and south sides of Meadow Pass Road capture runoff from the area where it enters a 33-inch storm drain pipe. Runoff is conveyed to the confluence mentioned above and continues southerly, as pipe flow, and is ultimately discharged into Lemon Creek within Subarea 4A.

Node 7AB: Represents a confluence location for pipe flow from subareas 5B and 6B, sheet flow from subarea 4A, and open channel flow from Node 3A. The node is located immediately

upstream of the 72-inch culvert and Lemon Creek crossing. Runoff continues south as open channel flow to Node 10A.

Node 10A: Represents a confluence immediately upstream of the trail bridge crossing. This point receives the open channel flow from node 7AB and sheet flow from subareas 8A and 9A, 6.55 and 2.53 acres in size respectively.

Node 13A: Represents a confluence immediately upstream of the La Puente Road culvert crossing. This point receives the open channel flow from node 10A and sheet flow from subareas 11A and 12A, 3.15 and 1.89 acres in size respectively.

EXISTING DRAINAGE CONDITIONS

The project site is located within the San Gabriel River Watershed, specifically discharging to San Jose Creek prior to discharging to Reach 3 of the San Gabriel River. The San Gabriel River receives drainage from a large area of eastern Los Angeles County; its headwaters originate in the San Gabriel Mountains. The watershed consists of extensive areas of undisturbed riparian and woodland habitats in its upper reaches. Much of the watershed of the West Fork and East Fork of the river is set aside as a wilderness area; other areas in the upper watershed are subject to heavy recreational use. The upper watershed also contains a series of flood control dams. Further downstream, towards the middle of the watershed, are large spreading grounds utilized for groundwater recharge. The watershed is hydraulically connected to the Los Angeles River through the Whittier Narrows Reservoir (normally only during high storm flows). The lower part of the river flows through a concrete-lined channel in a heavily urbanized portion of the County before becoming a soft bottom channel once again near the ocean in the City of Long Beach. Large electrical power poles line the river along the channelized portion; nurseries, small stable areas, and storage facilities are located in these areas.

Groundwater in certain areas of the San Gabriel Basin has been impacted by volatile organics attributable to widespread industrial land use and associated contaminant releases over the last several decades. In 1979, volatile organic compounds (VOCs) were discovered in a number of public water supply wells in the San Gabriel Basin. As a result, the U.S. EPA and the Regional Board entered into a cooperative agreement in 1989 to identify and cleanup the contamination. Subsequent investigations revealed more widespread soil and groundwater contamination in the Basin. During the last 15 years, more than one quarter of the approximately 366 water supply wells in the San Gabriel Valley have been found to be contaminated. The Regional Board, under authority of the California Water Code, locates and abates the sources of pollutants affecting these wells and oversees the remediation of the pollution. Soil and groundwater in the San Gabriel Valley are contaminated by VOCs such as PCE, TCE, and 1,1,1-TCA. Since 1997, new chemicals called emerging chemicals have been found in drinking water and groundwater monitoring wells. These chemicals include perchlorate, NDMA, and 1 and 4-dioxane which are carcinogens or suspected carcinogens.

Pollutants from dense clusters of residential and commercial activities have impaired water quality in the middle and lower watershed. Tertiary effluent from several sewage treatment plants enters the river in its middle reaches (which is partially channelized) while two power generating stations discharge cooling water into the river's estuary. Several landfills are also located in the watershed. Land use in the watershed is diverse and ranges from predominantly open space in the upper watershed to urban land uses in the middle and lower parts of the watershed.

The San Gabriel River Watershed is impaired for multiple pollutants. *Table 5.8-1*, *Receiving Water Body Impairments* provides a list of TMDLs applicable to the watershed to address the impairments. It is imperative to understand the conditions of the receiving waters downstream of the project. Receiving waters which are impaired for one or any of the pollutants of concern which are anticipated from the project need to be addressed through the proposed project BMPs. *Table 5.8-1* provides a list of downstream receiving water body impairments including both 303(d) and TMDL impairments.

Table 5.8-1
Receiving Water Body Impairments

Receiving Water Body	2010 303(d) Impairment(s)	TMDL(s)
San Jose Creek Reach 2	Coliform Bacteria	None
San Jose Creek Reach 1	Ammonia, Coliform Bacteria, pH, Dissolved Solids, Toxicity	Coliform Bacteria
San Gabriel River Reach 3	Indicator Bacteria	None
San Gabriel River Reach 2	Coliform Bacteria, Cyanide, Lead	Metals
San Gabriel River Reach 1	Coliform Bacteria, pH	None
San Gabriel River Estuary	Copper, Dioxin, Nickel, Dissolved Oxygen	Metals
San Pedro Bay Near/Off Shore Zone	Chlordane, DDT, PCBs, Sediment Toxicity	Sediment

Existing Site Drainage Conditions

Under the Pre-Development conditions, runoff on the south side of Meadow Pass Road sheet flows into Lemon Creek. All of the runoff is conveyed to Lemon creek adjacent to Lemon Avenue just west of the site. This creek drains into San Jose Creek Reach 2, which eventually drains into the San Gabriel River. The existing hydrology maps and drainage areas (DA) are broken up slightly different then the proposed areas. All flows still flow south and eventually into Lemon Creek before it goes off-site.

EXISTING STORM WATER QUALITY CONDITIONS

Nonpoint Source Pollutants

A net effect of urbanization can be to increase pollutant export over naturally occurring conditions. The impact of the higher export affects the adjacent streams and also the downstream receiving waters. However, an important consideration in evaluating storm water quality is to assess whether the beneficial use to the receiving waters is impaired. Nonpoint source pollutants have been characterized by the following major categories in order to assist in determining the pertinent data and its use. Receiving waters can assimilate a limited quantity of various constituent elements; however, there are thresholds beyond which the measured amount becomes a pollutant and results in an undesirable impact. Standard water quality categories of typical urbanization impacts are:

- *Sediment*. Sediment is made up of tiny soil particles that are washed or blown into surface waters. It is the major pollutant by volume in surface water. Suspended soil particles can cause the water to look cloudy or turbid. The fine sediment particles also act as a vehicle to transport other pollutants, including nutrients, trace metals, and hydrocarbons. Construction sites are the largest source of sediment for urban areas under development. Another major source of sediment is streambank erosion, which may be accelerated by increases in peak rates and volumes of run-off due to urbanization.

- *Nutrients*. Nutrients are a major concern for surface water quality, especially phosphorous and nitrogen, which can cause algal blooms and excessive vegetative growth. Of the two, phosphorus is usually the limiting nutrient that controls the growth of algae in lakes. The orthophosphorous form of phosphorus is readily available for plant growth. The ammonium form of nitrogen can also have severe effects on surface water quality. The ammonium is converted to nitrate and nitrite forms of nitrogen in a process called nitrification. This process consumes large amounts of oxygen, which can impair the dissolved oxygen levels in water. The nitrate form of nitrogen is very soluble and is found naturally at low levels in water. When nitrogen fertilizer is applied to lawns or other areas in excess of plant needs, nitrates can leach below the root zone, eventually reaching ground water. Orthophosphate from auto emissions also contributes phosphorus in areas with heavy automobile traffic. As a general rule of thumb, nutrient export is greatest from development sites with the most impervious areas. Other problems resulting from excess nutrients are: 1) surface algal scums; 2) water discolorations; 3) odors; 4) toxic releases; and 5) overgrowth of plants. Common measures for nutrients are total nitrogen, organic nitrogen, total Kjeldahl nitrogen (TKN), nitrate, ammonia, total phosphate, and total organic carbon (TOC).

- *Trace Metals*. Trace metals are primarily a concern because of their toxic effects on aquatic life, and their potential to contaminate drinking water supplies. The most common trace metals found in urban run-off are lead, zinc, and copper. Fallout from automobile emissions is also a major source of lead in urban areas. A large fraction of the trace metals in urban run-off are attached to sediment; this effectively reduces the level, which is immediately available for biological uptake and subsequent bioaccumulation. Metals associated with sediment settle out rapidly and accumulate in the soils. Urban run-off events typically occur over a shorter duration, reducing the amount of exposure, which could be toxic to the aquatic environment. The toxicity of trace metals in run-off varies with the hardness of the receiving water. As total hardness of the water increases, the threshold concentration levels for adverse effects increases.

- *Oxygen-Demanding Substances*. Aquatic life is dependent on the dissolved oxygen in the water. When organic matter is consumed by microorganisms, dissolved oxygen is consumed in the process. A rainfall event can deposit large quantities of oxygen demanding substance in lakes and streams. The biochemical oxygen demand of typical urban run-off is on the same order of magnitude as the effluent from an effective secondary wastewater treatment plant. A problem from low dissolved oxygen (DO) results when the rate of oxygen-demanding material exceeds the rate of replenishment. Oxygen demand is estimated by direct measure of DO and indirect measures such as biochemical oxygen demand (BOD), chemical oxygen demand (COD), oils and greases, and TOC.

- *Bacteria*. Bacteria levels in undiluted urban run-off exceed public health standards for water contact recreation almost without exception. Studies have found that total coliform counts exceeded the U.S. EPA's water quality criteria at almost every site and almost every time it rained. The coliform bacteria that are detected may not be a health risk by themselves, but are often associated with human pathogens.

- *Oil and Grease*. Oil and grease contain a wide variety of hydrocarbons, some of which could be toxic to aquatic life in low concentrations. These materials initially float on water and create the familiar rainbow-colored film. Hydrocarbons have a strong affinity for sediment and quickly become absorbed to it. The major source of hydrocarbons in urban run-off is through leakage of crankcase oil and other lubricating agents from automobiles. Hydrocarbon levels are highest in the run-off from parking lots, roads, and service stations. Residential land uses generate less hydrocarbon export, although illegal disposal of waste oil into storm water can be a local problem.

- *Other Toxic Chemicals*. Priority pollutants are generally related to hazardous wastes or toxic chemicals and can be sometimes detected in storm water. Priority pollutant scans have been conducted in previous studies of urban run-off, which evaluated the presence of over 120 toxic chemicals and compounds. The scans rarely revealed toxins that exceeded the current safety criteria. The urban run-off scans were primarily conducted in suburban areas not expected to have many sources of toxic pollutants (with the possible exception of illegally disposed or applied household hazardous wastes). Measures of priority pollutants in storm water include: 1) phthalate (plasticizer compound); 2) phenols and creosols (wood preservatives); 3) pesticides and herbicides; 4) oils and greases; and 5) metals.

PHYSICAL CHARACTERISTICS OF SURFACE WATER QUALITY

Standard parameters, which can assess the quality of storm water, provide a method of measuring impairment. A background of these typical characteristics assists in understanding water quality requirements. The quantity of a material in the environment and its characteristics determine the degree of availability as a pollutant in surface run-off. In an urban environment, the quantity of certain pollutants in the environment is a function of the intensity of the land use. For instance, a high density of automobile traffic makes a number of potential pollutants (such as lead and hydrocarbons) more available. The availability of a material, such as a fertilizer, is a function of the quantity and the manner in which it is applied. Applying fertilizer in quantities that exceed plant needs leaves the excess nutrients available for loss to surface or ground water.

The physical properties and chemical constituents of water traditionally have served as the primary means for monitoring and evaluating water quality. Evaluating the condition of water through a water quality standard refers to its physical, chemical, or biological characteristics. Water quality parameters for storm water comprise a long list and are classified in many ways. Typically, the concentration of an urban pollutant, rather than the annual load of that pollutant, is required to assess a water quality problem. Some of the physical, chemical, or biological characteristics that evaluate the quality of the surface run-off are listed below.

- *Dissolved Oxygen*. Dissolved Oxygen (DO) in the water has a pronounced effect on the aquatic organisms and the chemical reactions that occur. It is one of the most important biological water quality characteristics in the aquatic environment. The DO concentration of a water body is determined by the solubility of oxygen, which is inversely related to water temperature, pressure, and biological activity. DO is a transient property that can

fluctuate rapidly in time and space, and represents the status of the water system at a particular point and time of sampling. The decomposition of organic debris in water is a slow process, as are the resulting changes in oxygen status. The oxygen demand is an indication of the pollutant load and includes measurements of biochemical oxygen demand or chemical oxygen demand.

- *Biochemical Oxygen Demand*. The Biochemical Oxygen Demand (BOD) is an index of the oxygen-demanding properties of the biodegradable material in the water. Samples are taken from the field and incubated in the laboratory at 20°C, after which the residual dissolved oxygen is measured. The BOD value commonly referenced is the standard 5-day values. These values are useful in assessing stream pollution loads and for comparison purposes.

- *Chemical Oxygen Demand*. The Chemical Oxygen Demand (COD) is a measure of the pollutant loading in terms of complete chemical oxidation using strong oxidizing agents. It can be determined quickly because it does not rely on bacteriological actions as with BOD. COD does not necessarily provide a good index of oxygen demanding properties in natural waters.

- *Total Dissolved Solids*. Total dissolved solids (TDS) concentration is determined by evaporation of a filtered sample to obtain residue whose weight is divided by the sample volume. The TDS of natural waters varies widely. There are several reasons why TDS is an important indicator of water quality. Dissolved solids affect the ionic bonding strength related to other pollutants such as metals in the water. TDS are also a major determinant of aquatic habitat. TDS affects saturation concentration of dissolved oxygen and influences the ability of a water body to assimilate wastes. Eutrophication rates depend on TDS.

- *pH*. The pH of water is the negative log, base 10, of the hydrogen ion (H+) activity. A pH of 7 is neutral; a pH greater than 7 indicates alkaline water; a pH less than 7 represents acidic water. In natural water, carbon dioxide reactions are some of the most important in establishing pH. The pH at any one time is an indication of the balance of chemical equilibrium in water and affects the availability of certain chemicals or nutrients in water for uptake by plants. The pH of water directly affects fish and other aquatic life; generally, toxic limits are pH values less than 4.8 and greater than 9.2.

- *Alkalinity*. Alkalinity is the opposite of acidity, representing the capacity of water to neutralize acid. Alkalinity is also linked to pH and is caused by the presence of carbonate, bicarbonate, and hydroxide, which are formed when carbon dioxide is dissolved. A high alkalinity is associated with a high pH and excessive solids. Most streams have alkalinities less than 200 milligrams per liter (mg/l). Ranges of alkalinity of 100-200mg/l seem to support well-diversified aquatic life.

- *Specific Conductance*. The specific conductivity of water, or its ability to conduct an electric current, is related to the total dissolved ionic solids. Long-term monitoring of project waters can develop a relationship between specific conductivity and TDS. Its measurement is quick and inexpensive and can be used to approximate TDS. Specific conductivities in excess of 2000 microohms per centimeter (µohms/cm) indicate a TDS level too high for most freshwater fish.

- *Turbidity*. The clarity of water is an important indicator of water quality that relates to the alkalinity of photosynthetic light to penetrate. Turbidity is an indicator of the property of water that causes light to become scattered or absorbed. Turbidity is caused by suspended clays and other organic particles. It can be used as an indicator of certain water quality constituents, such as predicting sediment concentrations.

- *Nitrogen*. Sources of nitrogen in storm water are from the additions of organic matter to water bodies or chemical additions. Ammonia and nitrate are important nutrients for the growth of algae and other plants. Excessive nitrogen can lead to eutrophication since nitrification consumes dissolved oxygen in the water. Nitrogen occurs in many forms. Organic nitrogen breaks down into ammonia, which eventually becomes oxidized to nitrate-nitrogen, a form available for plants. High concentrations of nitrate-nitrogen (N/N) in water can stimulate growth of algae and other aquatic plants, but if phosphorus (P) is present, only about 0.30 mg/l of nitrate-nitrogen is needed for algal blooms. Some fish life can be affected when nitrate-nitrogen exceeds 4.2 mg/l. There are a number of ways to measure the various forms of aquatic nitrogen. Typical measurements of nitrogen include Kjeldahl nitrogen (organic nitrogen plus ammonia), ammonia, nitrite plus nitrate, nitrite, and nitrogen in plants. The principal water quality criterion for nitrogen focuses on nitrate and ammonia.

- *Phosphorus*. Phosphorus is an important component of organic matter. In many water bodies, phosphorus is the limiting nutrient that prevents additional biological activity from occurring. The origin of this constituent in urban storm water discharge is generally from fertilizers and other industrial products. Orthophosphate is soluble and is considered to be the only biologically available form of phosphorus. Since phosphorus strongly associates with solid particles and is a significant part of organic material, sediments influence concentration in water and are an important component of the phosphorus cycle in streams. Important methods of measurement include detecting orthophosphate and total phosphorus.

Existing Storm Water Quality Conditions

The total project area is approximately 25.8 acres and existing conditions include approximately 3 percent impervious area for the equestrian complex.

GROUNDWATER

The City of Walnut is within the service area of the Walnut Valley Water District (WVWD or District). The WVWD service area comprises a number of suburban residential communities located approximately 20 miles east of downtown Los Angeles. The service area includes all of the City of Diamond Bar together with portions of the cities of Walnut, Industry, West Covina, and Pomona, and the eastern portion of the unincorporated Rowland Heights area. The District's service area encompasses 17,966 acres, or approximately 28 square miles.

The WVWD has very limited natural water resources and is currently limited to four sources: 1) imported water from Metropolitan Water District of Southern California's (MWDSC) Weymouth Water Treatment Plant, 2) water that has been treated and delivered by Three Valleys Municipal Water District (TVMWD), 3) recycled water from the Los Angeles County Sanitation District (CSDLAC) Pomona Water Reclamation Plant (Pomona WRP), and 4) local groundwater from the Puente and Spadra Basins, which is only used to supplement the recycled water system. The District's potable water is provided entirely through wholesale purchases from TVMWD.

There are five imported water connections that feed WVWD's potable water transmission and distribution systems: PM-10, PM-12, PM-15, PM-21, and PM-24. These connections deliver water from MWDSC via TVMWD.

The District operates two water distribution systems: the potable water distribution system and the recycled water distribution system.

Groundwater underlying the District's service area is of poor quality and is not currently used for the potable water supply system. However, it is used to augment supplies for the recycled water system. Approximately 30 to 40 percent of the total quantity of recycled water currently used is derived from the local, non-potable groundwater. The District uses four wells to pump water from basins underlying the service area.

Groundwater Basin Description

There are two groundwater basins that underlie the District service area: Puente Basin and Spadra Basin. The primary basin, Puente Basin, is adjudicated and is governed by the Puente Basin Watermaster representing all overlying interest, including the WVWD, the Rowland Water District and the City of Industry. Potable water is not available from the Puente Basin because it is a narrow, shallow, dense-lensed aquifer that is high in total dissolved solids and nitrate concentrations (WMP, 2002).

The Puente Basin encompasses a surface area of nearly 8,870 acres. The basin is shallow, and bedrock is frequently found at the surface. Boundaries of the Puente Basin are formed on the north and south by the non-water-bearing rocks of the San Jose and Puente Hills.

The eastern boundary runs along the western boundary of the Spadra Basin, separated by bedrock and groundwater divide. To the west, the Puente Basin is bounded by the Main San Gabriel Basin. Groundwater freely flows from the Puente Basin into the Main San Gabriel Basin (MWDSC, 2007).

Primary water-bearing sediments include weathered alluvium from the adjacent hills and recent deposits within San Jose Creek. Well depths range from about 75 feet to 300 feet in the Puente Basin. Total storage within the Puente Basin has been estimated to be approximately 979,650 acre-feet (af) (MWDSC, 2007).

The major sources of natural recharge to the Puente Basin are infiltration of rainfall on the valley floor and percolation of runoff from the adjacent mountains. Additional water is imported into the basin from the Pomona Water Recycling Plant (WRP), as well as from MWDSC via the Rowland and Walnut Valley water districts (MWDSC, 2007). The Puente Basin was adjudicated in 1986. The Operating Safe Yield (OSY) for the Puente Basin has been established at 1,500 acre-feet per year (afy).

The second groundwater basin with the District's service area is the Spadra Basin. Primary producers are the City of Pomona and California State Polytechnic University, Pomona. The conversion of agricultural land to urban in the Spadra Basin and the lining of San Jose Creek have limited the groundwater recharge to Spadra Basin. Estimated groundwater production capacity is approximately 1,500 acre-feet per year (afy) with an average production of 850 afy (MWDSC, 2007).

Imported Water

Imported water is the District's primary water supply and it provides for all potable water demands. The District's imported water supplier is TVMWD, which is one of MWDSC's 26 member agencies. Potable water supplied to the District is processed at MWDSC's Weymouth Treatment Plant (in the City of La Verne), or at TVMWD's Miramar Treatment Plant (in the City of Claremont). The Weymouth treatment plant receives water from the Colorado River Aqueduct (CRA) and State Water Project (SWP), while the Miramar Treatment Plan receives water only from the SWP.

The District's potable water demands are anticipated to be supplied entirely through imported water from TVMWD, remaining relatively constant from 25,911 afy in 2010 to 24,496 afy in 2035.

Recycled Water

The District's recycled water system receives water from the Pomona (WRP). The District purchases the treated effluent and conveys the supply through the North Side Line (NSL) transmission pipeline to the District's main pumping station. The District uses recycled water to irrigate schools, parks, landscape maintenance districts, freeway slopes, street medians, a cemetery and golf course, and several business landscape areas.

Future Supply Projects and Programs

Since the District purchases most of its water from MWDSC, the projects implemented by MWDSC to secure their water supplies have a direct impact on the District.

Projects Planned by MWDSC

As described in its Regional Urban Water Management Plan (UWMP), MWDSC plans to meet its supply reliability goal through the following activities: surface water storage programs related to the SWP and Colorado River; Colorado River water management programs; SWP management programs; Central Valley/SWP storage and transfer programs; water conservation; development of local supplies; water recycling projects; ocean desalination programs; and groundwater banking programs in southern California region.

The projected increase in supply availability due to these programs under average year conditions is summarized in *Table 5.8-2*, *MWDSC Current and Planned Water Supply Programs*. As shown in *Table 5.8-2*, the planned programs are estimated to increase MWDSC's supply in 2035 from 3.8 million acre-feet (MAF) to 4.9 MAF, which equates to a 28 percent increase in supply capacity.

As the majority of the new supplies are related to surface water or groundwater storage programs, these planned programs greatly enhance MWDSC's ability to capture excess supplies during wet years and thereby increase supply reliability during single and multiple dry year periods. These programs combined with water conservation are estimated to increase MWDSC's potential supply surplus in 2035 during average year conditions from 1.71 MAF to 2.76 MAF, which equates to a 61 percent increase in surplus supplies.

Table 5.8-2
MWDSC Current and Planned Water Supply Programs

Program Description	2015 (AFY)	2020 (AFY)	2025 (AFY)	2030 (AFY)	2035 (AFY)
Current Programs					
In-Region Storage and Programs	685,000	931,000	1,076,000	964,000	830,000
California Aqueduct	1,550,000	1,629,000	1,763,000	1,733,000	1,734,000
Colorado River Aqueduct	1,250,000	1,250,000	1,250,000	1,250,000	1,250,000
Capability of Current Programs	***3,485,000***	***3,810,000***	***4,089,000***	***3,947,000***	***3,814,000***
Under Development					
In-Region Storage and Programs	206,000	306,000	336,000	336,000	336,000
California Aqueduct	382,000	383,000	715,000	715,000	715,000
Colorado River Aqueduct	187,000	187,000	187,000	182,000	182,000
Capability of Planned Programs	***588,000***	***689,000***	***1,051,000***	***1,051,000***	***1,051,000***
Supply Increase					
Total (afy)	***4,073,000***	***4,499,000***	***5,140,000***	***4,998,000***	***4,865,000***
Total (%)	***+17%***	***+18%***	***+26%***	***+27%***	***+28%***
Source: Table 2-11, MWDSC Regional Urban Water Management Plan (MWDSC, 2010)					
Notes: afy – acre-feet per year					

On-Site Groundwater Elevation

Current groundwater was encountered at depths of 27 to 35 feet below current grade at the southern portion of Lot 1, corresponding to an elevation of 546 to 548 feet (MSL). Groundwater was not encountered at the northern portion of Lot 1 to the maximum depth of 20 feet explored. Exploration in Lot 2 encountered groundwater at 18 to 28 feet below current grade, corresponding to an elevation of 586 to 591 feet (MSL).

The historical highest groundwater contours and borehole log data (San Dimas Quadrangle, CGS, 1998) does not have adequate coverage at the project site. The adjacent data indicates that the historical highest groundwater at this area is deeper than 20 feet below ground surface.

5.8.3 SIGNIFICANCE THRESHOLD CRITERIA

Environmental impact thresholds as indicated in *CEQA Guidelines* Appendix G (Environmental Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it 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 pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

- Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

- Otherwise substantially degrade water quality.

- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. (Refer to Section 8.0, Effects Found Not To Be Significant).

- Place within a 100-year flood hazard area structures which would impede or redirect flood flows. (Refer to Section 8.0, Effects Found Not To Be Significant).

- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. (Refer to Section 8.0, Effects Found Not To Be Significant).

- Inundation by seiche, tsunami, or mudflow. (Refer to Section 8.0, Effects Found Not To Be Significant).

Based on these standards, the proposed project's effects have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.8.4 PROJECT IMPACTS AND MITIGATION MEASURES

WATER QUALITY – SHORT-TERM IMPACTS

- **GRADING, EXCAVATION, AND CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE PROPOSED PROJECT COULD IMPACT WATER QUALITY.**

Impact Analysis: There are three sources of short-term construction-related storm water pollution associated with the proposed project, which include the following:

- Handling, storage, and disposal of construction materials containing pollutants;
- Maintenance and operation of construction equipment; and
- Earthmoving activities.

These sources, if not controlled, can generate soil erosion and on- and off-site transport via storm run-off or mechanical equipment. Poorly maintained vehicles and heavy equipment leaking fuel, oil, antifreeze, or other vehicle-related fluids on the project site are also common sources of storm water pollution and soil contamination. Generally, standard safety precautions for handling and storing construction materials can adequately reduce the potential pollution of storm water by these materials. These types of standard procedures can be extended to non-hazardous storm water pollutants such as sawdust, concrete washout, and other wastes.

In addition, grading activities can greatly increase erosion processes, leading to impacts on storm drains and sediment loading to storm run-off flows. Two general strategies are recommended to prevent soil materials from entering local storm drains. First, erosion control procedures should be implemented for those areas that must be exposed, and secondly, the project site should be secured to control off-site transport of pollutants.

In order to reduce the amount of on-site exposed soil, graded areas would be protected against erosion once they are brought to final grade through the implementation of Best Management Practices (i.e., hydraulic mulching, hydroseeding, soil binders, etc.). Furthermore, the proposed project would be required to prepare and submit a Notice of Intent (Mitigation Measure HWQ-1) and a SUSMP (Mitigation Measure HWQ-2) to the SWRCB demonstrating compliance with the Construction General NPDES Permit. Construction activities for the proposed project would be subject to inspection by the City's Department of Public Works. The General Permit requires that non-storm water discharges from construction sites be eliminated or reduced to the maximum extent practicable, that a SUSMP be developed governing construction activities for the proposed project, and that routine inspections be performed of all storm water pollution prevention measures and control practices being used at the site, including inspections before and after storm events. Upon completion of the project, the applicant would be required to submit a Notice of Termination to the SWRCB (Mitigation Measure HWQ-3) to indicate that construction is completed.

Construction activities associated with the proposed project would have a less than significant impact on surface water quality and would not significantly impact the beneficial uses of receiving waters with compliance with Mitigation Measures HWQ-1 through HWQ-3, which would ensure adherence to construction requirements per the Statewide General Construction permit. With implementation of Mitigation Measures HWQ-1 through HWQ-3, short-term water quality impacts would be reduced to less than significant levels.

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures:

HWQ-1 Prior to Grading Permit issuance and as part of the project's compliance with the NPDES requirements, a Notice of Intent (NOI) shall be prepared and submitted to the State Water Resources Control Board (SWRCB), providing notification and intent to comply with the State of California Construction General Permit.

HWQ-2 The proposed project shall conform to the requirements of an approved Standard Urban Stormwater Mitigation Plan (SUSMP) and the NPDES Permit for General Construction Activities No. CAS000002, Order No, 2009-0009-DWQ, including implementation of all recommended Best Management Practices (BMPs), as approved by the State Water Resources Control Board (SWRCB).

HWQ-3 Upon completion of project construction, the Applicant shall submit a Notice of Termination (NOT) to the State Water Resources Control Board (SWRCB) to indicate that construction is completed.

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.

LONG-TERM OPERATIONAL IMPACTS

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD RESULT IN SIGNIFICANT IMPACTS RELATED TO INCREASED RUN-OFF AMOUNTS AND DEGRADED WATER QUALITY.**

Impact Analysis: This section analyzes the proposed project conditions and compares them to the existing conditions to determine resultant impacts on drainage, runoff, and water quality.

POST-DEVELOPMENT HYDROLOGY AND HYDRAULIC CONDITIONS

Proposed on-site development and improvements would not result in a significant diversion of runoff. Runoff from the site under Pre-Development conditions enters Lemon Creek entirely as sheet flow with the exception of off-site pipe flow from Subareas 4B and 5B. The Post-Development conditions would convey most of the runoff as pipe flow into Lemon Creek.

The discussion below outlines the significant drainage nodes and flow paths under Post-Development conditions. Refer to *Exhibit 5.8-3*, *Post-Development Hydrologic Map*.

Subarea 1A: This area increased in size in comparison to the Pre-Development condition by approximately 2.62 acres due to the addition of area on the right bank (looking downstream). Proposed grading directs a portion of this area downstream through pipe flow to Node 6AB.

Subarea 2B: The runoff in this area would flow into catch basins at the Street A roundabout. The subarea was slightly reduced in size compared to the Pre-Development condition due to area being added to subarea 1A and slight changes in boundary lines. The flow would no longer enter Lemon Creek upstream of the bridge crossing. Instead it would be conveyed as pipe flow and discharge into the creek downstream of the bridge at Node 6AB.

Subarea 3B: Runoff flows from the north high point in Street A to the catch basins west of the bridge. Area on the opposite side of Lemon Creek from Lot 17 was added due to the proposed grading and slope of the road. The subarea measures approximately 6.54 acres.

Subarea 5B: Same as Pre-Development condition.

Subarea 6B: Same as Pre-Development condition.

Node 6AB: Represents the discharge point of pipe flow from Subareas 2B, 3B, 4B, 5B, and the addition of open channel flow from Subarea 1A. Runoff continues southerly to Node 8A as open channel flow.

Node 8A: Corresponds to Node 7AB of the Pre-Development conditions. This node receives open channel flow from node 6AB and sheet flow from subarea 7A. The node is located immediately upstream of the 72-inch culvert and Lemon Creek crossing. Runoff continues south as open channel flow to Node 10A.

Subarea 9A: Represents an initial subarea starting at Lot 18 and ending at a proposed catch basin at the end of the cul-de-sac. Runoff is then directed as pipe flow to Node 13A at the La Puente Road culvert.

Subarea 10A: Runoff from the undeveloped area along Lemon Creek (3.97 acres) is added to the channel at Node 10A. Runoff continues south as open channel flow to Node 13A.

Node 13A: Remains unchanged from the Pre-Development conditions. Represents a confluence immediately upstream of the La Puente Road double 5-foot x 10-foot box culvert. This node would still receive open channel flow from Node 10A and runoff from Subarea 11A.

Hydrology Design Flows

Table 5.8-3 and *Table 5.8-4* summarize the hydrologic analyses for the project site discharge locations under Pre- and Post-Development conditions. The change in flow was also analyzed at the river confluence of Lemon Creek and the 81-inch RCP culvert. Flow generated from the off-site hydrologic areas was not considered in the summary tables below. The flow from the off-site area was analyzed when determining the capacity of the existing and proposed storm drain infrastructure.

Table 5.8-3
Hydrologic Summary – Discharge to Lemon Creek
(Node 7AB Pre- and 8A Post-Development)

Design Flow Condition	Total Area (ac)	25-Year (cfs)	50-Year (cfs)
Pre-Development	15.58	43.89	50.47
Post-Development	16.27	45.96	55.60
Source: Michael Baker International, April 2016			
Note: Off-Site Area and Flow Omitted			

Table 5.8-4
Hydrologic Summary – Discharge to La Puente Road Culvert (Node 13A)

Design Flow Condition	Total Area (ac)	25-Year (cfs)	50-Year (cfs)
Pre-Development	28.54	77.60	91.04
Post-Development	28.54	76.26	92.16
Source: Michael Baker International, April 2016			
Note: Off-Site Area and Flow Omitted			

Discharge flows from the project site into the upper portion of Lemon Creek increased slightly. The tributary area to this point increased by approximately 0.70 acres, adding 2.07 cfs to Lemon Creek during a 25-year storm event and 5.13 cfs during a 50-year event. The total amount of flow from the project site is discharged at Node 13A into the La Puente Road culvert. The total flow from the site in the Pre-Development condition for the 50-year storm was 91 cfs. In the Post-Development condition this number increased to approximately 92 cfs. The total change in flow between the Pre- and Post-Development conditions is minimal and would have a less than significant impact on the existing hydraulics of Lemon Creek.

Proposed Regional Hydraulics

To determine the starting water surface elevation in the proposed condition, the same process with WSPGW and FlowMaster was utilized. The crest length was reduced to 300 feet as the Post-Development conditions and proposed lots would constrict the overflow on the road by about 100 feet in comparison to the Pre-Development condition. The resulting water surface elevation (WSE) was 572.75 feet, 3 inches above the Pre-Development elevation. The water conveyed through the culvert measured 2,025 cfs, slightly higher than the existing condition.

At station 26+61, a 10-foot x 14-foot box culvert has been proposed for the Post-Development condition, which lowers the water surface elevation to 591.2 feet. The resulting water surface elevation is below the proposed grading, minimizing the need for additional bank protection. Flooding in the Post-Development condition would not have any effect on the proposed grading along the banks of the creek. Flooding along the east bank of the Lemon Creek was a concern at the bridge/culverts located at station 14+13 and 11+16.

The low elevation of the east bank in the Pre-Development condition resulted in major flooding towards San Vicente Drive and overtopping of both trail crossings. In order to address the issue, the downstream culvert at 11+31 would be removed so the channel does not experience a constriction. In addition, the trail across the bridge at 14+26 would be graded in such a way to act as a small levee to keep water from entering the proposed road. The result of these improvements yields a water surface elevation at the bridge of 578.2 feet.

Downstream of the bridge, the water surface at station 11+51 is 573.2 feet. Flooding in this area is a result of the undersized culvert at La Puente Road. The ponding depth at the bridge does not allow water to be conveyed efficiently through these sections. The flood waters would inundate the water quality control basin and proposed road. However, the proposed pad elevations on Lots 34, 35, 36, and 37 are above the water surface elevation. The pad elevation of Lot 34 is 577 feet, about 4.5 feet above the water surface elevation at station 12+58 which measured 572.5 feet. Lot 37 has an elevation of 574 feet, 1.25 feet above overflow water

surface elevation which is 572.75 feet. Refer to *Exhibit 5.8-4*, *Post-Development 50-Year Floodplain Map*.

Proposed Local Hydraulics

The proposed storm drain lines have been designed to convey the 25-year design flows to Lemon Creek. Refer to *Exhibit 5.8-3* for the location of the proposed storm drain lines. To convey flow from Subarea 2B to Subarea 3B in the Post-Development condition, a 21-inch pipe is proposed. The full flow capacity of the 21-inch RCP is 22.4 cfs, which exceeds the 11.2 cfs flow entering from Subarea 2B during a 25-year storm event. To convey flow from Subarea 5B to the mainline 33-inch Reinforced Concrete Pipe (RCP), an 18-inch pipe is proposed, which has a capacity of 14.9 cfs. The flow produced from Subarea 5B is 9.1 cfs, below the 18-inch pipe's full flow capacity.

The proposed 33-inch RCP has a capacity of 74.8 cfs. In the Post-Development condition, the flow at the confluence of the proposed 18-inch and 33-inch RCPs is 23.6 cfs. This flow was determined by the adding the peak flows of Subarea 5B and 6B. At the discharge location of the 33-inch pipe into Lemon Creek, the flow measures 52.3 cfs. This discharge flow is the addition of all peak flows from Subareas 2B, 3B, 5B, and 6B.

All proposed on-site inlets and storm drains would be sized to comply with Los Angeles County Department of Public Works drainage design criteria.

Hydrology and Hydraulics Conclusion

The proposed project would not adversely impact the hydrologic and hydraulic properties of the site and tributary area. The proposed project would increase the 50-year total discharge to the existing La Puente Road culvert by 1 cfs compared to Pre-Development conditions. Per the storm drain improvement plans for PM No. 14987, the off-site system was designed to accommodate a 25-year 1,750-cfs flow rate from the upstream reach of Lemon Creek.

STORM WATER QUALITY

The total project area is approximately 25.8 acres and would be approximately 27 percent impervious, as compared to the 3 percent for existing conditions (equestrian complex area). The residential lots total approximately 12.7 acres and are 24 percent impervious.

Portions of the proposed project area are considered as maintenance and are excluded areas (Drainage Areas 7A, 10A, 11A and part of 1A); these areas would not require mitigation. These areas include the majority of the improvements taking place on Lemon Creek trail and the hillside slopes tributary to Lemon Creek.

All other Drainage Areas (2B, 3B, 9A and part of 1A) on-site, either pervious or impervious, were included in the Storm Water Quality Design Volume (SWQDv) calculation for mitigation. Although all of the areas have been included in the hydrology calculations, Drainage Areas 7A, 10A, 11A and part of 1A would remain the same and are not required to be treated because these areas are not being developed. Existing vegetation would remain on all areas and flow would drain straight into Lemon Creek. These areas would have non-structural source control Best Management Practices (BMPs) to prevent any pollutants of concern draining to Lemon Creek. Refer *to Exhibit 5.8-5*, *BMP Map* for tributary area locations.

Under Post-Development conditions, runoff from the project site is conveyed to three biofiltration Best Management Practices (BMPs) – Bioretention with underdrains – located south of the proposed homes (34.0242887, -1178668198) northeast of the existing buildings (34.0252119, -117.8657186) and adjacent to the cul-de-sac near La Puente Road (34.0212115, -117.8652225). All of the impervious areas have been included in the hydrology calculations; existing Drainage Areas 7A, 10A, 11A and part of 1A would remain in existing conditions and are not addressed in the proposed project's SUSMP. Refer to *Exhibit 5.8-5* for tributary area locations and *Table 5.8-5*, *Biofiltration Siting*.

Table 5.8-5
Biofiltration Siting

Siting Criteria for SUSMP Volume							Biofiltration Area		
BMP ID	DA ID	Tributary Drainage Area (Ac)	SWQDv = Design Volume (Ft^3)	Biofiltration Factor	VR On-site (Ft^3)	VB = VM (Ft^3)	VB = VM (Ft^3)	Eff. Depth (Ft)	Bioretention Area Required – Bottom (Ft^2)
DA 2B	1A-1	1.72	1,783	1.5	---	9,760	9,760	3.85	2,535
	2B	3.85	4,724						
DA 3B	3B	654	10,265	1.5	---	15,398	15,398	3.15	4,888
DA 9A	9A	5.98	9,724	1.5	---	14,586	14,586	3.50	4,167

Source: Michael Baker International, April 2016.

Notes:
DA = Drainage Area, Ac - Acres; VR - volume retained on-site, VB = VM – biofiltration volume, Eff – effective; SWQDv - Storm Water Quality Design Volume

Drainage Areas 1A and 2B would be tributary to the bioretention with underdrains located in the upper center of the project area. Drainage Area 3B would be tributary to a second bioretention with underdrains located in the western side of the project area. Drainage Area 9A would be tributary to a third bioretention with underdrains located adjacent to the cul-de-sac on the proposed private street near La Puente Road.

The water quality first flush runoff infiltrates into the engineered soil while runoff generated during larger storm events overflow into the proposed storm drain system that traverses south and ties into Lemon Creek. The proposed bioretention BMPs' bottom footprint consists of 2,535 ft^2, 4,888 ft^2 and 4,167 ft^2 for Drainage Areas 28, 3B, and 9A, respectively. The planting mix (soil media) for the BMPs is 3 feet and the ponding depth is 1.5 feet. Additionally, 1.5 feet of crushed, angular stone with a porosity of 40 percent would be placed around all sides of the 6-inch diameter underdrain.

Outflow from the biofiltration basins would be directed into Lemon Creek and then conveyed into the San Jose Creek. San Jose Creek confluences with Reach 3 of the San Gabriel River Channel between Santa Fe Dam and the Whittier Narrows Basin. This reach is located in the middle of the watershed and is soft-bottomed with riprap sides. The lower part of the river flows through a concrete-lined channel in a heavily urbanized portion of the County before becoming a soft bottom channel once again before draining into the San Gabriel River Estuary and finally the Pacific Ocean in the City of Long Beach.

Criteria pollutants generated by the proposed residential housing, parking, and private streets would be controlled using the previously described BMP. The proposed BMP was selected considering Low Impact Development (LID) Strategies and would be implemented by the

proposed project to address pollutants that are likely to be generated and reduce changes to Pre-Development hydrology. The SUSMP also identifies Treatment Control and Source Control BMPs. Thus, the BMPs identified in the proposed project's SUSMP ensure that the increase in impervious area does not generate water quality impacts.

Hydromodification Control Criteria

The proposed project would not exceed the Pre-Development condition for the 2-year, 24-hour rainfall event. The 2-year, 24-hour rainfall depth is 2.59 inches for the project site. The proposed LID BMPs have sufficient storage to provide for the difference in runoff flow rate, volume, velocity, and duration.

Table 5.8-6, *Hydromodification Analysis* provides a summary of the results for each basin.

Table 5.8-6
Hydromodification Analysis

Basin	Drainage Area (Acreage)	Hydrocalc Existing Volume Runoff (Ft^3)	Hydrocalc Proposed Volume Runoff (Ft^3)	Delta Volume (Ft^3)	Effective Basin Volume (Ft^3)
2B	5.57	29,497	27,521	---	7,985
3B	6.54	32,735	28,736	---	15,398
9A	5.98	17,934	28,150	10,217	13,127
Source: Michael Baker International, April 2016					
Notes: Refer to SUSMP Appendix A Table 4 and Table 5 for further analysis of the proposed project's Hydromodification Analysis.					

Table 5.8-6 shows that Basins 2B and 3B have no delta volume, due to the fact that the development in those areas reduces the amount of runoff in the proposed conditions. As for Basin 9A, which has a Delta Volume of 10,217 ft^3, Michael Baker International ran a hydromodification analysis and determined an effective volume of 14,586 feet. This was achieved by calculating the effective depth [Ponding Depth + (Soil Media Porosity * Soil Media Height) + (Gravel Porosity * Gravel Depth)] and multiplying that by the Effective Surface Area (refer to SUSMP Appendix A Table 4) to get the effective volume, which mitigates and helps rescues the amount of runoff from the basin. Calculations can be found in on *Table 5.8-6*, *Hydromodification Analysis* (and SUSMP Appendix A Table 5), which provides a summary for the proposed project's hydrologic findings.

In conclusion, implementation of the BMPs in the SUSMP would ensure that construction and post-construction water quality impacts, including impacts to beneficial uses of receiving waters, associated with the proposed project would be reduced to the Maximum Extent Practicable (MEP). Thus, water quality impacts would be reduced to a less than significant level.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

GROUNDWATER

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD DEPLETE GROUNDWATER SUPPLIES OR INTERFERE WITH GROUNDWATER RECHARGE.**

Impact Analysis: The project site is currently developed with 3 percent of the area being impervious. Future development associated with implementation of the proposed project would result in an increase in impervious area to 27 percent, allowing for less groundwater recharge when compared to existing conditions. As previously concluded, the proposed project maintains 63 percent of the site in pervious areas and includes on-site biofiltration BMPs. Thus, impacts would be less than significant in this regard.

Impacts to groundwater supplies as a result of increased on-site development are not anticipated to occur, as the Walnut Valley Water District (WVWD) has very limited natural water resources and is currently limited to four sources: 1) imported water from Metropolitan Water District of Southern California's (MWDSC) Weymouth Water Treatment Plant, 2) water that has been treated and delivered by Three Valleys Municipal Water District (TVMWD), 3) recycled water from the Los Angeles County Sanitation District (CSDLAC) Pomona Water Reclamation Plant (Pomona WRP), and 4) local groundwater from the Puente and Spadra Basins, which is only used to supplement the recycled water system.

The District's potable water is provided entirely through wholesale purchases from TVMWD, and not from local groundwater. Thus, the increased water demand at the project site would not contribute to an over pumping of the Puente or Spadra Basins, and local groundwater supplies would not be significantly depleted. Thus, impacts would be less than significant in this regard.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.8.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **THE PROPOSED PROJECT ALONG WITH OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS RELATED TO INCREASED RUN-OFF AMOUNTS AND DEGRADED WATER QUALITY.**

Impact Analysis: The proposed project, in combination with the identified cumulative projects, would have the potential to affect water quality during construction and long-term operation. The projects would contribute storm water flows to the local and regional drainage facilities. Although runoff from some of the cumulative projects may not interact with runoff from future development within the project site, interaction could occur downstream. Future development would be required to account for higher flows on a project-by-project basis.

Construction activities associated with cumulative projects would have a less than significant impact on surface water quality with adherence to State-required construction requirements. Each project would also be required to comply with existing water quality standards, and include BMPs as necessary. Therefore, cumulative impacts associated with construction activities would be less than significant.

Development of the proposed project, along with related cumulative projects, would result in increased potential for short-term construction and long-term operational water quality impacts within the area. However, the proposed project would adhere to NPDES requirements and implement a SUSMP with specific BMPs, as required by Mitigation Measures HWQ-1 through HWQ-3 during construction and project operational activities. Therefore, the proposed project's impacts would not be cumulatively considerable, and impacts in this regard are less than significant.

Cumulative projects have the potential to affect hydrology and drainage of the area. The projects would contribute storm water flows to the local and regional storm water system and drainage facilities. However, each individual project would be required to submit individual analyses to the respective City for review and approval prior to issuance of grading or building permits. Each analysis must illustrate how peak flows generated from each related project site would be accommodated by the respective City's existing and/or proposed storm drainage facilities. Future projects would also be required to comply with existing water quality standards, implement site-specific improvements, and include BMPs as necessary. Therefore, overall cumulative impacts would be less than significant.

Implementation of the proposed project, in conjunction with related cumulative projects, would result in increased potential for hydrology and drainage impacts. Therefore, the proposed project's impacts would not be cumulatively considerable, and impacts in this regard are less than significant.

Level of Significance Before Mitigation: Potentially Significant Impact.

Mitigation Measures: Refer to Mitigation Measures HWQ-1 through HWQ-3. No additional mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact with Mitigation Incorporated.

5.8.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in less than significant project and cumulative impacts related to hydrology and water quality during both construction and operation with adherence to the identified mitigation measures and compliance with the applicable Federal, State, and local regulatory requirements. As such, no significant unavoidable impacts would result from implementation of The Brookside Project.

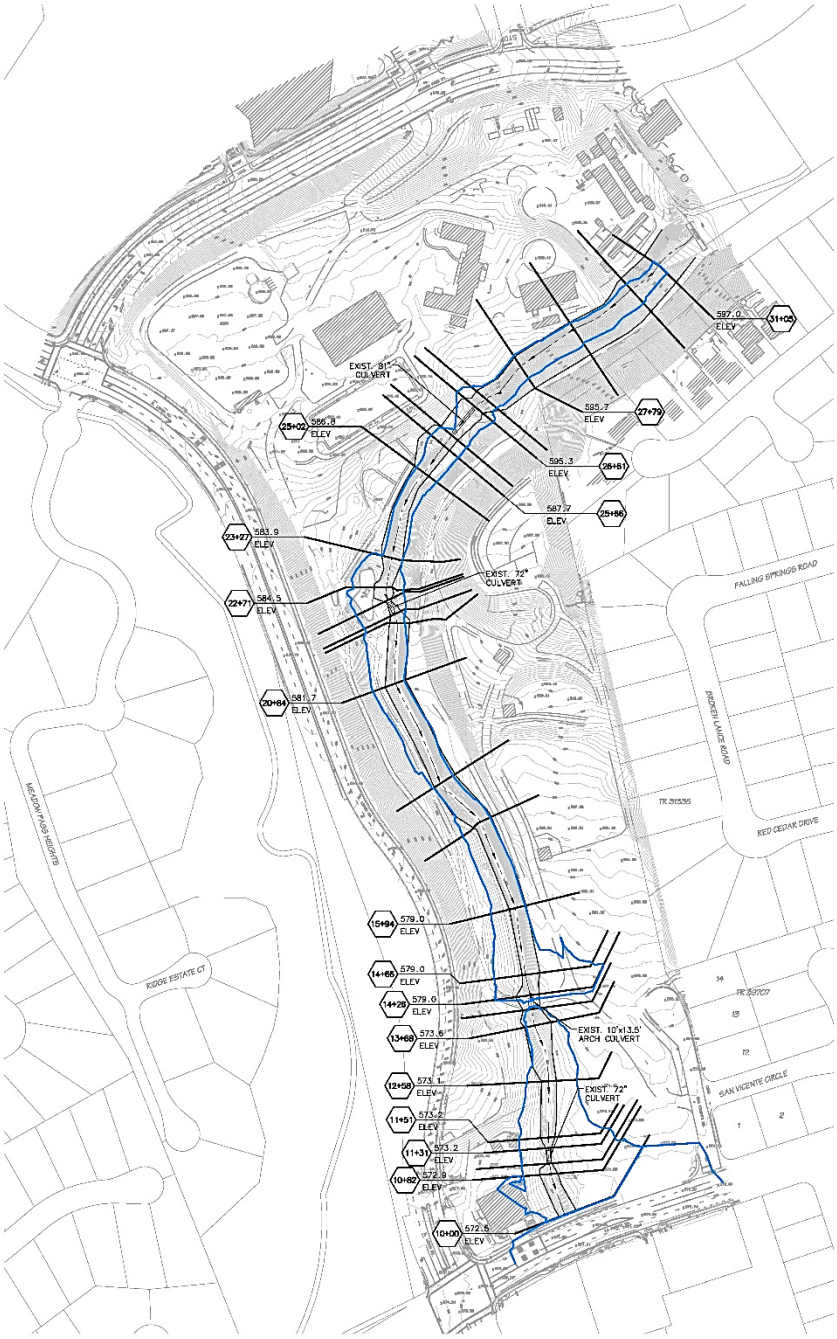
5.8.7 SOURCES CITED

Carollo Engineers, *Walnut Valley Water District 2010 Urban Water Management Plan, Final*, July 2011.

City of Walnut, *Municipal Code*, Article IV, Standard Urban Storm Water Mitigation Plan.

Michael Baker International, *Standard Urban Stormwater Mitigation Plan (SUSMP) for Tentative Tract No. 45378, City of Walnut, Los Angeles County, CA*, prepared by Michael Baker International, April 25, 2016.

Michael Baker International*, Tentative Tract Map No.45378 Hydrology and Hydraulics Report*, April 22, 2016.



Source: Michael Baker International
April 2016

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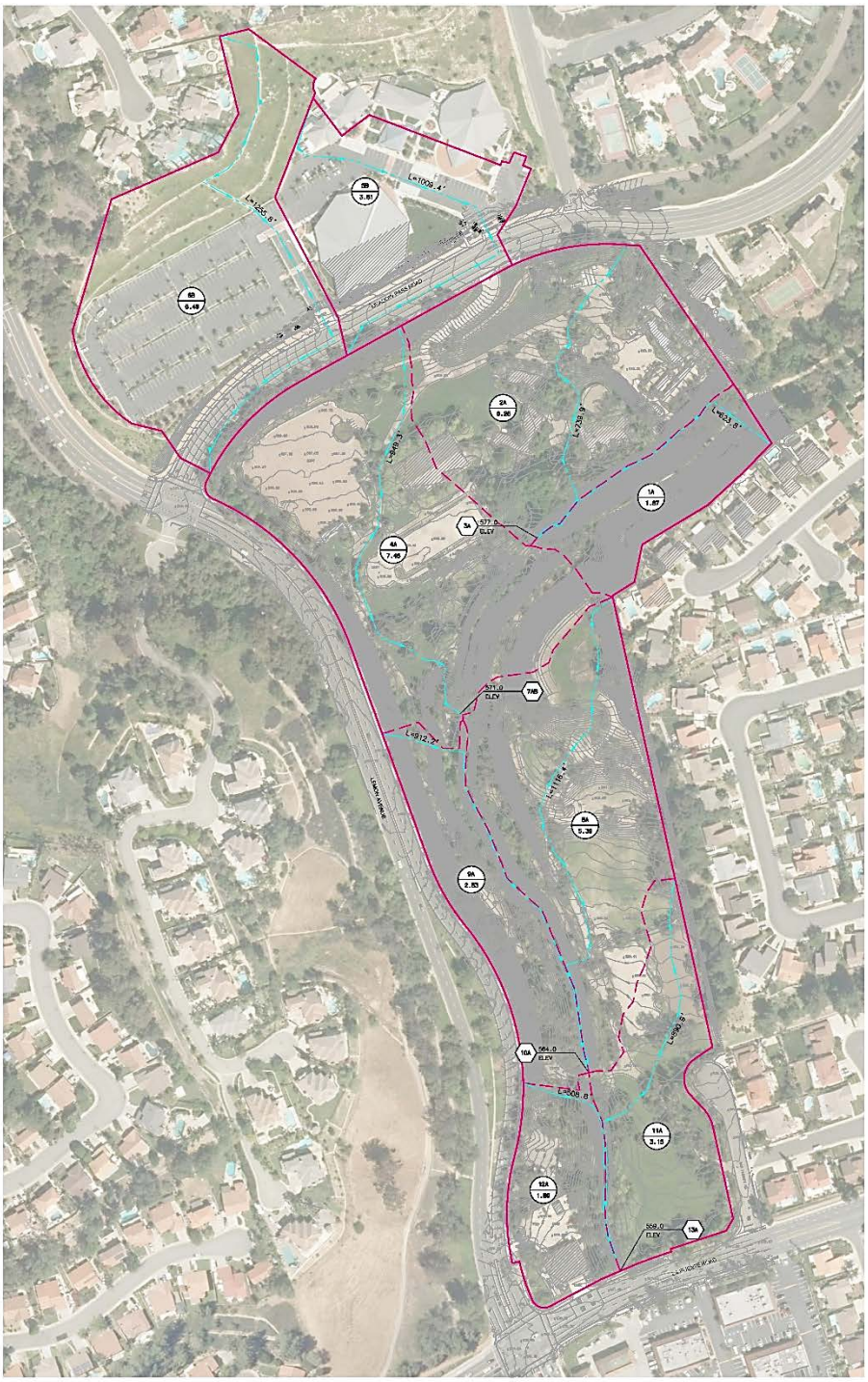
Exhibit 5.8-1

PRE-DEVELOPMENT 50-YEAR FLOODPLAIN MAP



Source: Michael Baker International
April 2016

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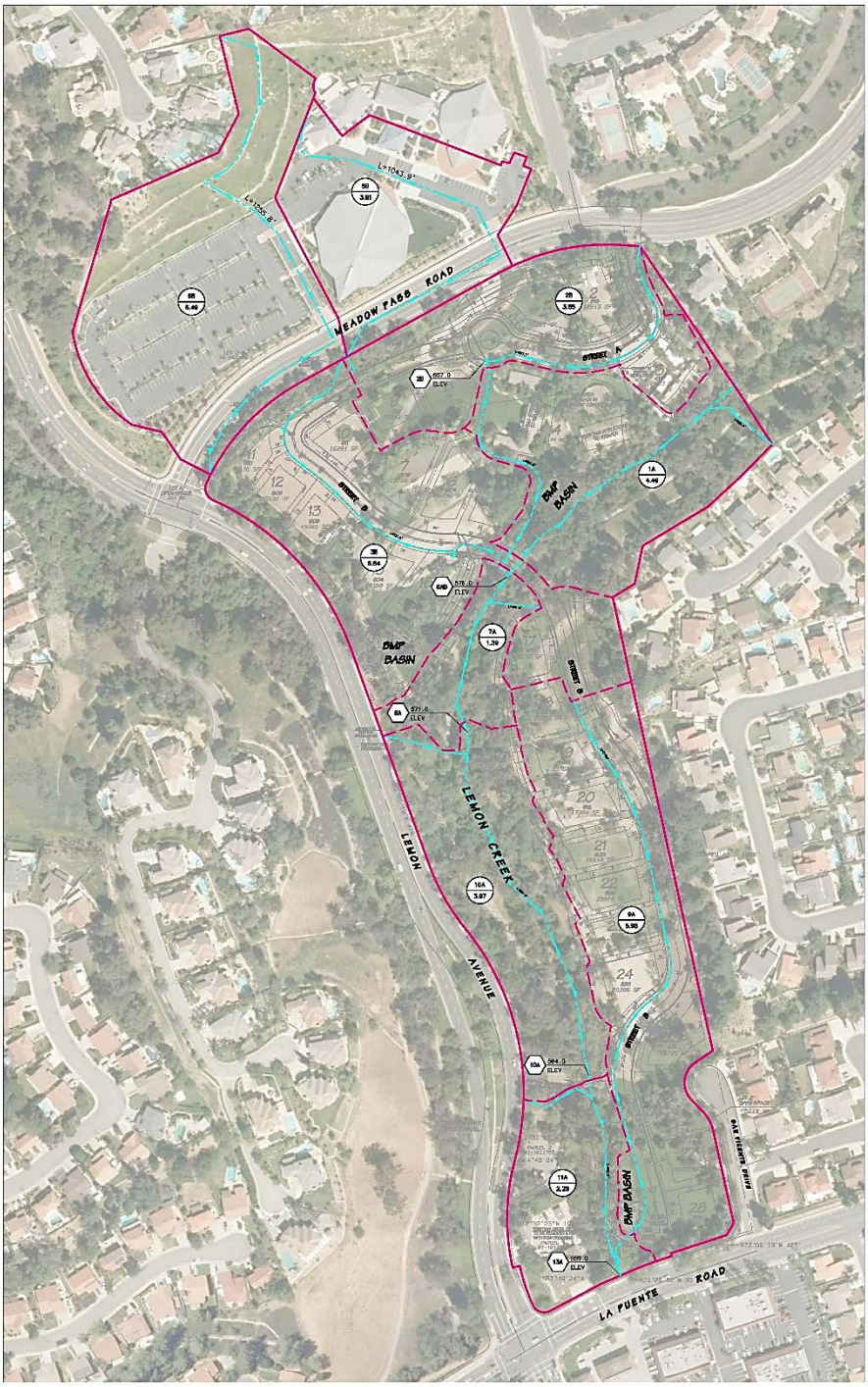
Exhibit 5.8-2

PRE-DEVELOPMENT HYDROLOGIC MAP



Source: Michael Baker International
April 2016

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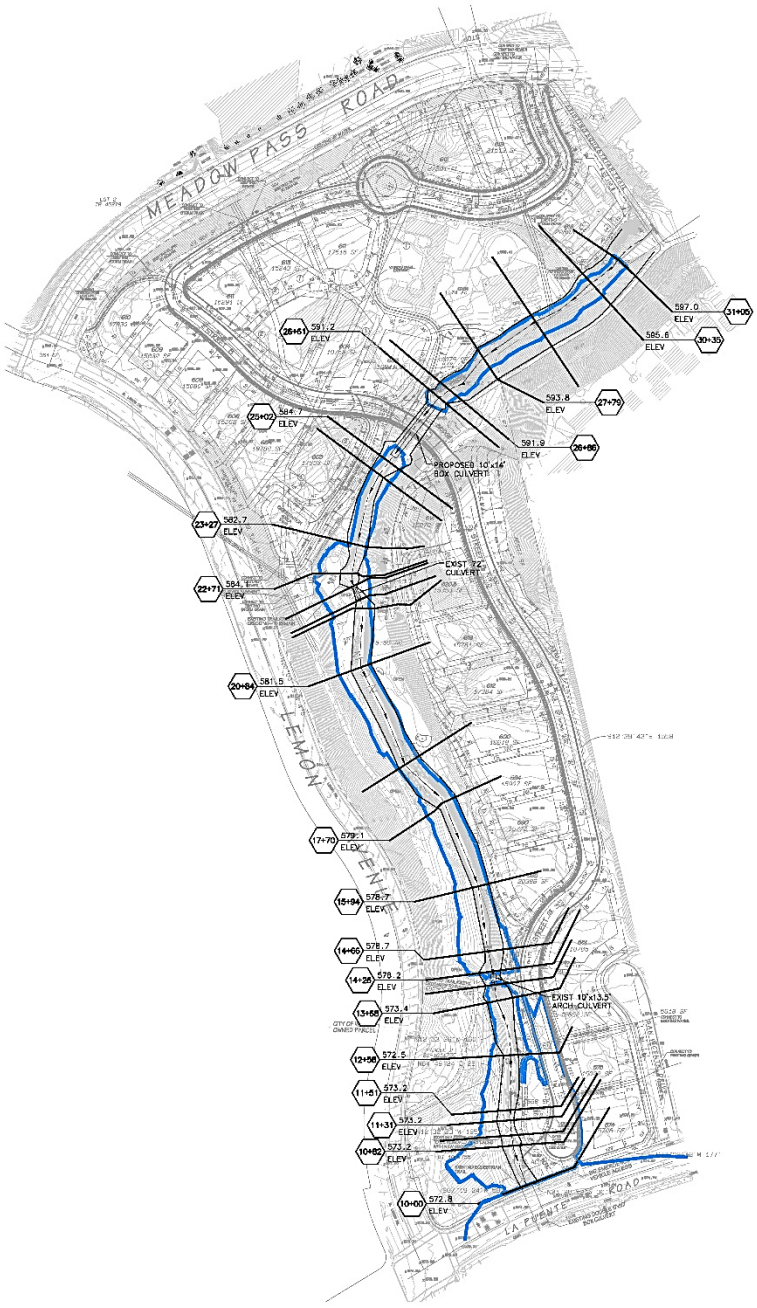
Exhibit 5.8-3

POST-DEVELOPMENT HYDROLOGIC MAP



Source: Michael Baker International
April 2016

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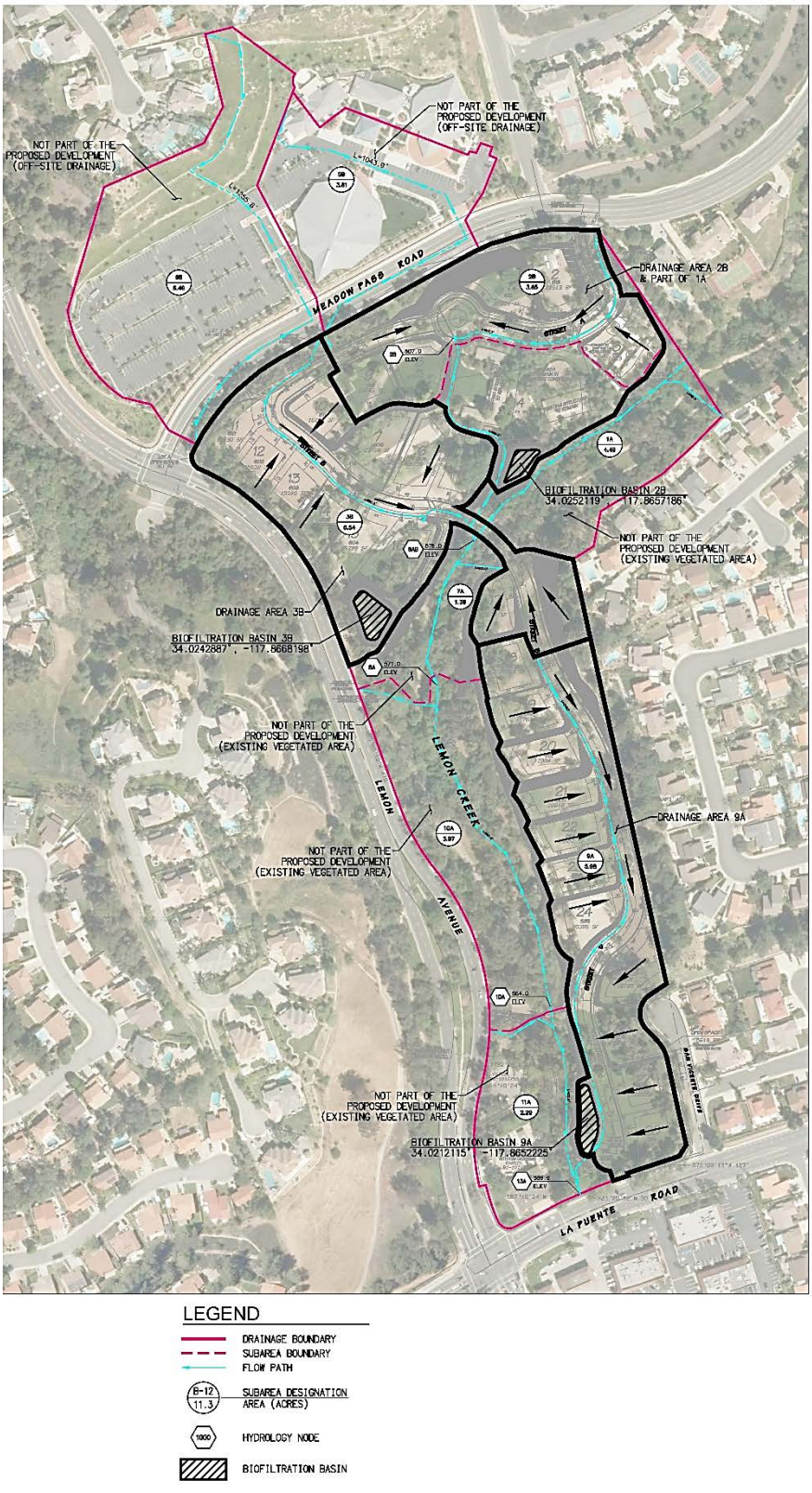
Exhibit 5.8-4

POST-DEVELOPMENT 50-YEAR FLOODPLAIN MAP



Source: Michael Baker International
April 2016

The Brookside Project
Environmental Impact Report

Exhibit 5.8-5

BMP MAP

5.9 LAND USE

The purpose of this section is to identify the existing land conditions and evaluate consistency with relevant planning policies. This section identifies on-site and surrounding land use conditions and land use policy requirements set forth by the City of Walnut or other agencies.

5.9.1 REGULATORY SETTING

REGIONAL

Regional plans/policies created by planning agencies such as the Southern California Association of Governments (SCAG) influence land use planning in the City of Walnut.

Southern California Association of Governments

SCAG functions as the Metropolitan Planning Organization (MPO) for six counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The region encompasses a population exceeding 19 million persons in an area of more than 38,000 square miles. As the designated MPO, SCAG is mandated by the Federal government to research and draw up plans for transportation, growth management, hazardous waste management, and air quality. Additional mandates exist at the State level. SCAG is responsible for the maintenance of a continuous, comprehensive, and coordinated planning process. SCAG is also responsible for the development of demographic projections, as well as integrated land use, housing, employment, transportation programs, measures, and strategies for portions of the SCAQMD's *2012 Air Quality Management Plan for the South Coast Air Basin* (*2012 AQMP*).

Regional Comprehensive Plan

The *2008 Regional Comprehensive Plan: Helping Communities Achieve a Sustainable Future* (*RCP*) was prepared in response to SCAG's Regional Council directive in the 2002 Strategic Plan to develop a holistic, strategic plan for defining and solving the region's inter-related housing, traffic, water, air quality, and other regional challenges. The *RCP* serves as an advisory document to local agencies in the southern California region for their information and voluntary use for preparing local plans and handling local issues of regional significance. The *RCP* is a collaborative effort that addresses the region's challenges and sets a path forward in two key ways: 1) it ties together SCAG's role in transportation, land use, and air quality planning and demonstrates why further action is needed; and 2) it recommends key roles and responsibilities for public and private sector stakeholders and invites them to implement reasonable policies that are within their control.

Compass Blueprint Growth Visioning Program

In 2001, SCAG started a regional visioning process (i.e., Southern California Compass) to develop a strategy for regional growth that would accommodate growth while providing for livability, mobility, prosperity, and sustainability. The Compass Blueprint Growth Vision is a response, supported by a regional consensus, to the land use and transportation challenges facing southern California now and in the coming years. The Growth Vision is driven by four key principles:

- *Mobility*. Getting where we want to go
- *Livability*. Creating positive communities
- *Prosperity*. Long-term health for the region
- *Sustainability*. Promoting efficient use of natural resources

To realize these principles on the ground, the Growth Vision encourages:

- Focusing growth in existing and emerging centers and along major transportation corridors
- Creating significant areas of mixed-use development and walkable communities
- Targeting growth around existing and planned transit stations
- Preserving existing open space and stable residential areas

The *Growth Vision Repo*rt presents the comprehensive Growth Vision for the six-county SCAG region as well as the achievements of the Compass process. It details the evolution of the draft vision, from the study of emerging growth trends to the effects of different growth patterns on transportation systems, land consumption, and other factors. The *Growth Vision Report* concludes with a series of implementation steps – including tools for each guiding principle and overarching implementation strategies – that will guide Southern California toward its envisioned future.

2012-2035 Regional Transportation Plan/
Sustainable Communities Strategy: Towards A Sustainable Future

The *Regional Transportation Plan* (*RTP*) is developed, maintained, and updated by SCAG, southern California's MPO. On April 4, 2012, SCAG's Regional Council adopted the *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy: Towards a Sustainable Future (2012-2035 RTP/SCS)* with the primary goal of increasing mobility for the region's residents and visitors, while also emphasizing sustainability and integrated planning. The vision of the *RTP/SCS* encompasses three principles that collectively work as the key to the region's future: mobility; economy; and sustainability. The *2012–2035 RTP/SCS* includes a strong commitment to reduce emissions from transportation sources to comply with Senate Bill 375, improve public health, and meet the National Ambient Air Quality Standards as set forth by the Federal Clean Air Act. As such, the *2012–2035 RTP/SCS* contains a regional commitment for the broad deployment of zero- and near-zero emission transportation technologies. The *2012-2035 RTP/SCS* also contains a host of improvements to the region's multimodal transportation system and a financial plan that identifies how much money is available to support the region's transportation investments.

Within the RTP, the SCS demonstrates the region's ability to attain and exceed the GHG emission-reduction targets set forth by the California Air Resources Board (CARB). The SCS outlines a plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. The SCS focuses the majority of new housing and job growth in high-quality transit areas and other opportunity areas in existing main streets, downtowns, and commercial corridors, resulting in an improved jobs-housing balance and more opportunity for transit-oriented development. This overall land use development pattern supports and complements the proposed transportation network.

Intergovernmental Review

SCAG's Intergovernmental Review (IGR) Section is responsible for performing consistency review of regionally significant local plans, projects, and programs with SCAG's adopted regional plans. The criteria for projects of regional significance are outlined in *CEQA Guidelines* Sections 15125 and 15206, and include projects that directly relate to the policies and strategies contained in the *RCP* and the *RTP*. There are two sets of minimum criteria for classification of projects as regionally significant: Criteria 1 through 12 are recommended for use by *CEQA Guidelines* Section 15206; Criteria 13 through 22 reflect SCAG's mandates and regionally significant projects that directly relate to policies and strategies contained in SCAG's adopted regional plans and policies.

A proposed plan, project, or program is directed to demonstrate how it is consistent with the 2012–2035 RTP/SCS, which is established through consistency with *2012–2035 RTP/SCS* Goals and Adopted Growth Forecasts. SCAG encourages the use of the SCAG List of Mitigation Measures extracted from the *2012–2035 RTP/SCS Program Environmental Impact Report* to aid with demonstrating consistency with regional plans and policies.

The proposed project does not meet any of the criteria set forth in CEQA Guidelines 15206 for project of statewide, regional, or areawide significance. Thus, no further analysis is required.

San Gabriel Valley Council of Governments

SCAG has 14 sub-regional organizations. The City of Walnut is a member agency of the San Gabriel Valley Association of Governments (SGVCOG). The SGVCOG is a joint powers authority of 31 incorporated cities (inclusive of Walnut), the unincorporated communities in Los Angeles County Supervisorial Districts 1, 4, and 5, and the three San Gabriel Valley Municipal Water Districts (San Gabriel Valley Municipal Water District, Three Valleys Municipal Water District, and Upper San Gabriel Valley Municipal Water District). The SGVCOG is the largest and most diverse sub-regional council of governments in Los Angeles County. It encompasses more than 374 square miles and has more than 2 million residents.

The SGVCOG was formed for the following broad purposes, among others:

- Serve as an advocate in representing the Members of the Council at the regional, state and federal levels on issues of importance to the San Gabriel Valley.
- Serve as a forum for the review, consideration, study, development and recommendation of public policies and plans with regional significance.
- Explore practical avenues for voluntary intergovernmental cooperation, coordination and action in the interest of local public welfare and improving the administration of governmental services;
- Assist in coordinating sub-regional planning efforts and in resolving conflicts among the cities and unincorporated areas in the San Gabriel Valley as they work toward achieving planning goals.
- Build a consensus among the Members on the implementation of policies and programs for addressing sub-regional and regional issues.
- Serve as a mechanism for obtaining state, federal, and regional grants to assist in financing the expenditures of the Council.

CITY OF WALNUT

Walnut General Plan

The City adopted the *City of Walnut General Plan* in July 1978. The *General Plan* consists of broad goals, policies, and programs that reflect the values and visions of the community. The *General Plan* contains the following mandatory and optional elements:

- Land Use
- Circulation
- 2013-2021 Housing Element
- Environmental Resources Management – Conservation, Open Space, Recreation and Scenic Highways
- Public Safety
- Noise
- Sewer

The relevant portions of the Land Use Element, which has the broadest scope of all the General Plan elements, are discussed below. Additionally, the proposed project would involve new housing. Therefore, relevant portions of the Housing Element are also discussed.

LAND USE ELEMENT

This portion of the General Plan addresses itself to the identification of land use issues, provides a statement of land use policies and goals, and designates the proposed general distribution and general location and the extent of the uses of land for housing, commercial, industrial, open space, and a wide variety of supporting facilities. The Land Use Element also suggests standards of population density and building intensity for the various districts defined in the plan, suggests standards and criteria for physical development within each use area, and finally suggests implementation measures necessary to achieve the land use objective and policies suggested in the General Plan.

General Plan Designation

The *City of Walnut General Plan* Land Use & Circulation Map designates the project site as Hillside Single-Family Residential, and is defined in the *City of Walnut General Plan* Land Use Element.

> *The intent of this land use category is to provide for single-family residential developments designed at low density levels. Maximum consideration should be given to the physical, environmental and social characteristics deemed desirable for preservation and inclusion in developments permitted in these areas. Provision should be made for the various forms of recreation and open space land uses so that these areas are complementary or integral parts of the residential development.*
>
> *A maximum dwelling unit per acre assignment is proposed within each area. The proposed maximum level of development is arrived at after determination that the nature of Walnut as a suburban residential area with a rural character can best be preserved by evaluating the development capability of the remaining undeveloped portions of the community.*

The develop capability is evaluated in terms of topography, open space desires, natural constraints, and public services. The capability of the land to accommodate residential development while retaining its present topographic character is determined by assigned a unit density (dwelling units per acre) to a slope classification. To preserve the rural character of the community requires that a significantly high percentage of remaining undeveloped areas be devoted to some form of open space.

The project site falls into Hillside Single-Family Residential Area F with the following suggested guidelines:

> *Moderately good access and relatively small ownerships characterize this area. The potential for extensive grading should be carefully controlled. The application of the City's present auxiliary use relating to animals should be maintained and extended within this area consistent with its compatibility with healthful and high quality residential uses.*

Area F has an area of 480 acres with a unit density of 1.3 dwelling units per an acre according to the *City of Walnut General Plan*.

Walnut City Code

The *Walnut City Code* is the method the City uses to implement control of land uses, in accordance with General Plan goals and policies.

Title VI Planning and Zoning, Chapter 25 Zoning

The purpose of this chapter is to encourage, classify, designate, regulate, restrict and segregate the highest and best location and use of buildings, structures and land for agriculture, residence, commerce, trade, industry or other purposes in appropriate places; to regulate and limit the height, number of stories and size of buildings and other structures hereafter designed, erected or altered; to regulate and determine the size of yards and other open spaces; and to regulate and limit the density of population, and for such purposes to divide the city into zones of such number, shape and area as may be deemed suited to carry out these regulations and provide for their enforcement.

Such regulations are necessary in order to encourage the most appropriate use of land; to conserve and stabilize the value of property; to provide adequate open spaces for light and air and to prevent and fight fires; to prevent undue concentration of population; to lessen congestion of streets; to facilitate adequate provisions for community utilities such as transportation, water, sewerage, schools, parks and other public requirements; and to promote the public health, safety and general welfare of the city.

Zoning Map

The Zoning Map designates the project site as Residential Planned Development Zone (RPD). The *Walnut City Code* Title VI, Chapter 25, Article VIII defines the RPD zoning district.

> *The intent and purpose of a Residential Planned Development Zone is to create a better living environment; to promote the achievement of residential land use amenities than could otherwise be obtained under conventional development; to achieve greater design flexibility of residential acreage than could otherwise be possible through the application of conventional residential zone regulations; to encourage well planned developments*

through creative and imaginative planning encourage well planned developments through creative and imaginative planning principals, practice and techniques; to reserve a greater proportion of open space land for recreation, conservation, parking and other similar uses than is otherwise required by conventional residential zone regulations; to provide for a more efficient, appropriate and desirable use of land which is sufficiently unique in its physical characteristics and other circumstances to warrant special methods of development; to provide areas of natural scenic beauty, vistas, land marks, promontories and other environmental features through integrated land planning, design and unified control of physical development patterns, and, to set forth use regulations and property development regulations that will best assure that the intent and purpose of this chapter is carried out.

The project site is specifically located in zone designation RPD – 28,500 – 1.3 DU. The zone is designated to decide the lot size and dwelling units per an acre when the property is developed.

In the changing of zone classification to a designation of residential planned development, hereafter also referred to as RPD, the planning commission and city council shall set forth for each parcel or lot of land in the RPD Zone, the minimum lot area to be applied, in the event the property is developed in a conventional R-1 manner as opposed to a residential planned development. This designation shall conform to one of the R-1 minimum lot areas of this code, i.e., R-1 (7200), R-1 (8500), R-1 (10,000), R-1 (15,000) or R-1 (20,000). In the event property is thereafter developed in a conventional manner, the development shall conform to the same limitations and conditions of the R-1 lot area.

In addition thereto, at the time of change of zone to RPD, the planning commission and the city council shall also designate the overall net acre density of the proposed residential planned development, which in no event shall exceed four and two tenths dwelling units per acre. The density factor, as well as the minimum lot area, shall be set forth in the following manner at time of the change of zone, e.g., RPD (10,000) — 3.5. (Ord. No. 237, § 2).

Property in an RPD Zone may be used for:

(a) Any use permitted in an R-1 Zone, of the specific minimum lot size specified at the time of change of zone, e.g., RPD (10,000) — 3.5, under the same limitations and conditions including area requirements, front, side, and rear yards, garages and auxiliary uses.

(b) A residential planned development, if a conditional use permit has first been obtained as provided in article XIX, which will provide the same or a lesser density of dwelling units than specified in the RPD Zone designation as applicable to the subject property.

5.9.2 ENVIRONMENTAL SETTING

ON-SITE LAND USES

The approximately 25.84-acre project site is comprised of three parcels, and is currently occupied by the Brookside Equestrian Center, which is no longer operating. On-site topography consists of rolling foothills and is primarily associated with the heavily incised Lemon Creek which flows south through the central portion of the subject site. The site consists of various equestrian-related structures including three covered barns, stables, fenced corrals, maintenance storage facilities, feed sheds, and a covered arena. Additional land uses include a trail riding network, improved and unimproved (gravel) roads, parking facilities, large irrigated lawns, horse paddocks, and vacant undeveloped land.

The majority of the structures are located within the northern portion of the subject site with the exception of two single-horse stables located within the central portion of the proposed site. Two roadways exist on-site. An unimproved road enters the subject site along the northern boundary from Meadow Pass Road and traverses south through the site transitioning into a riding trail. San Vicente Road, an improved road, borders the southeastern boundary of the subject site proceeding in a north to south direction and provides access to adjoining residential properties. Additionally, a network of riding trails exists on-site. The unimproved (dirt) riding trails also provide access for maintenance vehicles.

SURROUNDING LAND USES

The project site is surrounded by the following uses:

North: Meadow Pass Road is immediately adjacent to the project site. Single-family homes and institutional (St. Lorenzo Ruiz Catholic Community church) land uses are located to the north across Meadow Pass Road.

East: Single-family homes that back up to the project site and front onto Broken Lance Road.

South: La Puente Road is immediately adjacent to the project site. Single-family homes and commercial land uses are located to the south across La Puente Road.

West: The Los Angeles County Fire Department Station No. 61 backs up to the project site and fronts onto North Lemon Avenue. North Lemon Avenue is immediately adjacent to the project site. Single-family homes are located to the west across North Lemon Avenue.

5.9.3 SIGNIFICANCE THRESHOLD CRITERIA

Environmental impact thresholds as indicated in CEQA Guidelines Appendix G (Environmental Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it would:

- Physically divide an established community (refer to Section 8.0, Effects Found Not To Be Significant).

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

- Conflict with any applicable habitat conservation plan or natural community conservation plans (refer to Section 8.0, Effects Found Not To Be Significant).

For the purposes of this impact analysis, a significant impact would occur if project implementation would result in inconsistencies or conflicts with the General Plan's adopted Goals and Policies and/or the Zoning Code's applicable rules and regulations. Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.9.4 PROJECT IMPACTS AND MITIGATION MEASURES

PROJECT OVERVIEW

As detailed in Section 3.0, Project Description, the Applicant seeks approval of a Conditional Use Permit and Tentative Tract Map to allow 28 single-family custom home lots and 10 open space lots at a density of 1.08 dwelling units per acre. One lot – lot 4 would retain two of the existing equestrian center structures.

CITY OF WALNUT GENERAL PLAN

● **IMPLEMENTATION OF THE PROPOSED PROJECT COULD CONFLICT WITH A WALNUT GENERAL PLAN LAND USE PLAN OR POLICY.**

Impact Analysis:

General Plan Policies

Table 5.9-1, *General Plan Policy Consistency Analysis*, provides an analysis of the proposed project's consistency with the relevant *General Plan* policies. As demonstrated in *Table 5.9-2*, the proposed project is determined to be consistent with the relevant General Plan Policies.

Table 5.9-1
General Plan Policy Consistency Analysis

Policy #	Policy	Determination of Consistency
Land Use Element[1]		
1	Promote the concept of attractive, quality residential environments that meet the individual, social and cultural needs of the residents of each neighborhood.	Consistent. The project proposes a tentative tract map with single-family residential and open space lots. Future development of the single-family residential lots would be subject to the City's design and development review process to ensure attractive and quality homes would be built.
3	Determine intensities and form of land use on the basis of natural land characteristics, efficient supporting services capabilities, and the goals of the community to generally maintain a low-density single family residential in the City.	Consistent. The project proposes a tentative tract map with single-family residential lots of a minimum lot size of 15,000 sf, which is compatible with surrounding residential uses with minimum lot sizes of 7,200 sf to the west, 15,000, 20,000, or 28,500 sf to the north, and 8,500, 20,000, or 28,500 sf the east. Only single-family residences could be built on the site.
5	Minimize alteration of the natural terrain.	Consistent. The project site has been previously graded for previous uses, including the Brookside Equestrian Center. The proposed project has been designed to utilize existing developed areas and would require approximately 55,000 cubic yards of balanced cut and fill on-site. Therefore, minimal alteration of the site's previously developed or natural terrain would occur.
7	Encourage maintenance of all land and improvements in a safe healthful and attractive condition.	Consistent. The proposed project would include common landscape and walkways, and private yards. Once constructed, the common landscape would be maintained by a common homeowner's association (HOA). The maintenance and appearance of the common landscaping would be enforced by the HOA.
Housing Element[2]		
2.1	Provide a variety of residential opportunities in the City including low density single-family homes, multi-family developments for families and seniors, and housing for persons with disabilities (including persons with developmental disabilities).	Consistent. The proposed project includes the addition of 28 single-family residential lots to the City's residential inventory. It is anticipated that the lots and custom homes would be sold and developed at market rate and would likely be available to moderate and above moderate income households.
Environmental Resources Element – Environmental Quality[1]		
3	Protect scenic, historic, natural wildlife, archaeological and cultural resources of this area.	Consistent. The proposed project includes 10 open space lots that would maintain the existing natural on-site habitat for plants and wildlife surrounding Lemon Creek.
Environmental Resources Element - Open Space[1]		
2	Provide open space to enhance rural character, aesthetics, and efficiency.	Consistent. The proposed project includes 10 open space lots that would maintain the existing natural on-site habitat for plants and wildlife surrounding Lemon Creek, which traverses the site.

Sources:
1. *City of Walnut 2005-2020*, July 1978 (as amended through 2002).
2. *City of Walnut 2013-2021 Housing Element*, January 2014.

Overall, as concluded in the discussions presented below, the proposed project would not conflict with the *Walnut General Plan*, therefore, a less than significant impact would occur in this regard.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

WALNUT CITY CODE

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD CONFLICT WITH THE WALNUT CITY CODE STANDARDS AND REGULATIONS.**

Impact Analysis: The project site is zoned Residential Planned Development (RPD) – 28,500 – 1.3 DU. This designation indicates a minimum lot size of 28,500 square feet (sf) and maximum density of 1.3 dwelling units per acre.

The proposed project is seeking approval a Conditional Use Permit that would permit development at a maximum density of 1.3 dwelling units per acre (du/ac). The maximum development allowed on the project site at 1.3 du/ac is 33 dwelling units. The proposed project is proposing 28 residential lots, which results in a density of 1.08 du/ac, which is below the 1.3 du/ac maximum.

The minimum residential lot size established for the proposed project is 15,000 square feet (sf). The minimum lot size shown on the Tentative Tract Map is lot 27 with 15,022 sf; the maximum is lot 4 with 75,773 square feet. As previously noted, the two equestrian structures on lot 4 would be preserved in place.

No residential development is being proposed with Tentative Tract Map. The Applicant has shown that the future development of the proposed residential lots is feasible, as shown in the lot area table on the following page, which provides a summary of each lot number, lot area, and pad area.

The design of the proposed 28 residential and 10 open space lots is consistent with the size and layout of existing developed tract neighborhoods within the immediate area. The proposed lot sizes are larger than the residential tracts to the west and east (southern portion of project site) - 7,200 sf and 8,500 sf, respectively; and smaller than the residential development to the east (northern portion of project site) and north – 28,500 sf and 15,000 or 20,000 sf, respectively.

As shown on *Exhibit 3-3*, *Tentative Tract Map*, Lots 1 – 3, located in the northeastern corner of the project site south of Meadow Pass Road would have the largest lot sizes ranging from 21,513 to 27 291 sf. These three lots would be closest to neighboring residential uses zoned with minimum lots sizes of 28,500 sf to the east.

Lots 17 to 28, located along the central to southeastern boundary of the project site, north of La Puente Road and east of San Vicente Road would have lots sizes ranging from 15,022 to 20,386 sf. These lots would be closest to neighboring residential uses zoned with minimum lots sizes of 8,500 sf to the east.

Residential Lot Number	Lot Area (SF)	Pad Area (SF)	Residential Lot Number	Lot Area (SF)	Pad Area (SF)
1	27,291	11,318	***15***	19,788	16,178
2	21,513	12,625	***16***	17,633	17,194
3	22,801	20,035	***17***	15,070	11,549
4[1]	75,773	64,066	***18***	15,353	14,161
5	16,841	16,841	***19***	15,761	14,172
6	19,758	18,154	***20***	17,384	13,438
7	21,728	18,469	***21***	16,618	11,498
8	17,616	15,105	***22***	15,907	12,837
9	15,243	13,876	***23***	15,772	13,457
10	16,291	12.257	***24***	20,386	15,145
11	17,830	13,823	***25***	18,785	15,996
12	15,032	14,599	***26***	15,652	13,647
13	15,080	14,597	***27***	15,022	13,570
14	15,268	12,679	***28***	15,706	15,130

Notes:
1. Two of the existing equestrian structures would be preserved in place on Lot 4.

Lots 5 to 16, located along the northern and western boundary of the project site, south of Meadow Pass Road, and east of Lemon Avenue would have lot sizes ranging from 15,032 to 19,789 sf. These lots would be closest to neighboring residential uses zoned with minimum lots sizes of 7,500 sf to the west.

As previously noted, the proposed project includes 10 open space lots (lots A to J) totaling 9.55 acres, which represents 33.2 percent of the project site. The Applicant intends to dedicate lots D and H to the City.

All future actions and development must comply with conditions imposed upon approval of the Conditional Use Permit, and the requirements set forth in *City Code* Title VI Planning and Zoning, Chapter 25 Zoning, Article VIII RPD Residential Planned Development Zone, Sections 25-88 Through 25-89.2. In addition, future development of the Tentative Tract Map would be subject to design and development review processes. Thus, the proposed project would not conflict with the *Walnut City Code* and a less than significant impact would occur in this regard.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.9.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT AND OTHER RELATED CUMULATIVE PROJECTS COULD CONFLICT WITH APPLICABLE LAND USE PLANS, POLICIES, OR REGULATIONS.**

Impact Analysis: As indicated in *Table 4-1*, *Cumulative Projects*, the related projects and other possible development would occur within the City of Walnut. Based on the projects identified in *Table 4-1*, cumulative development would result in a variety of new residential and non-residential uses. Development of the proposed project, combined with other development, would not result in any cumulative land use impacts as other projects are implemented within the City of Walnut. Projects would be evaluated on a project-by-project basis and subject to the land use requirements of the City of Walnut.

Each project would undergo a similar plan review process as the proposed project, in order to determine potential land use planning policy and regulation conflicts. Each cumulative project would be analyzed independent of other projects, within the context of their respective land use and regulatory setting. As part of the review process, each project would be required to demonstrate compliance with the provisions of the applicable land use designation(s) and zoning district(s). It is assumed that cumulative development would progress in accordance with the *Walnut General Plan* and *City Code*. Each project would be analyzed in order to ensure that the goals, objectives, and policies of the General Plan, and regulations and guidelines of the City Code are consistently upheld. Further, as concluded above, the proposed project would be consistent with the *Walnut General Plan* and *City Code*. Thus, project implementation would not result in cumulatively significant land use impacts.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.9.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in less than significant project and cumulative impacts related to land use and planning. As such, no significant unavoidable impacts would result from implementation of The Brookside Project.

5.9.7 SOURCES CITED

City of Walnut, *City of Walnut General Plan,* adopted July 1978 (amendments through 2002).

City of Walnut, *City of Walnut 2013-2021 Housing Element*, adopted January 2014.

City of Walnut, *Walnut City Code,* Title IV Planning and Zoning, Chapter 25 Zoning.

Southern California Association of Governments, *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): Towards a Sustainable Future*.

Southern California Association of Governments, *Adopted 2012 RTP Growth Forecast*.

Southern California Association of Governments, *2008 Regional Comprehensive Plan: Helping Communities Achieve a Sustainable Future* (*RCP*).

5.10 NOISE

The purpose of this section is to evaluate noise source impacts on-site and to surrounding land uses as a result of implementation of the proposed project. This section evaluates short-term construction-related impacts, as well as future buildout conditions. Information in this section is based on information and conclusions contained in the following study:

- Michael Baker International, Inc., Acoustical Assessment for The Brookside Project, City of Walnut, Michael Baker International, March 28, 2016 (included in its entirety as Appendix Q).

5.10.1 REGULATORY SETTING

Land uses deemed sensitive by the State of California (State) within the vicinity of the project site include schools. Many jurisdictions also consider single- and multi-family residential uses particularly noise-sensitive because families and individuals expect to use time in the home for rest and relaxation, and noise can interfere with those activities. Some jurisdictions may also identify other noise-sensitive uses such as churches. Land uses that are relatively insensitive to noise include office, commercial, and retail developments. There is a range of insensitive noise receptors that include uses that generate significant noise levels and that typically have a low level of human occupancy.

This noise analysis was conducted in accordance with Federal, State, and local criteria described in the following sections.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

The U.S. Environmental Protection Agency (U.S. EPA) offers guidelines for community noise exposure in the publication *Noise Effects Handbook – A Desk Reference to Health and Welfare Effects of Noise*. These guidelines consider occupational noise exposure as well as noise exposure in homes. The U.S. EPA recognizes an exterior noise level of 55 decibels day-night level (dB L_{dn}) as a general goal to protect the public from hearing loss, activity interference, sleep disturbance, and annoyance. The U.S. EPA and other Federal agencies have adopted suggested land use compatibility guidelines that indicate that residential noise exposures of 55 to 65 dB L_{dn} are acceptable. However, the U.S. EPA notes that these levels are not regulatory goals, but are levels defined by a negotiated scientific consensus, without concern for economic and technological feasibility or the needs and desires of any particular community.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

The State Office of Planning and Research Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The Noise Element Guidelines contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the CNEL. *Table 5.10-1*, *Land Use Compatibility for Community Noise Environments*, presents guidelines for determining acceptable and unacceptable community noise exposure limits for various land use categories. The guidelines also present adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

Table 5.10-1
Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Exposure (Ldn or CNEL, dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential - Low Density, Single-Family, Duplex, Mobile Homes	50 – 60	55 - 70	70-75	75-85
Residential - Multiple Family	50 – 65	60 - 70	70 – 75	70 - 85
Transient Lodging - Motel, Hotels	50 – 65	60 - 70	70 – 80	80 - 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 – 70	60 - 70	70 – 80	80 - 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 - 70	NA	65 - 85
Sports Arenas, Outdoor Spectator Sports	NA	50 - 75	NA	70 - 85
Playgrounds, Neighborhood Parks	50 – 70	NA	67.5 – 75	72.5 - 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 – 70	NA	70 – 80	80 - 85
Office Buildings, Business Commercial and Professional	50 – 70	67.5 - 77.5	75 – 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 – 75	70 - 80	75 – 85	NA
Source: Office of Planning and Research, California, *General Plan Guidelines*, October 2003.				
NA: Not Applicable; Ldn: average day/night sound level; CNEL: Community Noise Equivalent Level				
Notes: Normally Acceptable - Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements. Conditionally Acceptable - New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. Normally Unacceptable - New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. Clearly Unacceptable – New construction or development should generally not be undertaken.				

LOCAL JURISDICTION

City of Walnut General Plan

The City adopted noise guidelines and standards within the Noise Element of the *City of Walnut General Plan*. The *City of Walnut General Plan Noise Element* (*Noise Element*) sets forth maximum noise level standards by land use; refer to *Table 5.10-2*, *Noise Levels by Land Use*. The ambient noise level standards quantify the goals and objectives of the City with respect to acceptable noise levels.

Table 5.10-2
Noise Levels by Land Use

Land Use Zone	Maximum Noise Level dB(A)	
	Day (7:00 a.m. to 10:00 p.m.)	Night (10:00 p.m. to 7:00 a.m.)
Single-Family Residential	60	45
Multi-Family Residential	60	50
Commercial	65	55
Industrial	70	65
Source: Urban Engineering, *City of Walnut General Plan Noise Element*, July 1978.		

The *Noise Element* provides criteria for compatible noise levels for local fixed point noise sources such as construction sites. Qualitative criteria have been developed by various associations such as the League of California Cities and the American Speech and Hearing Association. These criteria state that noise "shall not cause annoyance or discomfort to a reasonable person of normal sensitiveness residing in the general area." The *Noise Element* acknowledges that construction site noise level varies, but is only temporary in nature.

In addition, the *Noise Element* contains the following objectives related to noise that are pertinent to the proposed project:

Objective 1. Single Family Residential Land Use.

- *a) Single family residential districts should be generally quiet.*
- *b) Single family residential districts should be quieter at night than during the day.*
- *c) Single family residential districts should be quieter than multi-family residential, commercial and industrial districts.*
- *d) The interiors of all residential dwellings shall be free from excessive sound transmission.*

Objective 5. Special Land Uses.

- *a) Noise levels for the following land uses should not exceed single family residential levels:*
  - *1. Hospitals, rest homes, long term medical care, libraries, churches, schools, and outdoor recreational areas.*

City of Walnut Municipal Code

The *City of Walnut Municipal Code* (*Municipal Code*) Chapter 16B Noise regulates noise from construction, emergency work and signals, and the use of leaf blowers. Section 16B-3(a), *Certain Noise Prohibited – Construction* indicates that construction operation or causing the operation of any tools, equipment, impact devices, derricks or hoists used in construction, drilling, repair, alteration, demolition or earthwork are prohibited between the weekday hours of 8:00 p.m. and 7:00 a.m. the following day, or at any time on Saturdays, Sundays or holidays; except for construction by City Manager approval, emergency work, testing of emergency signal devices, an alarm signal activated by violent nature conditions or other extraordinary circumstances, and public telephone utility audible alarms whose only duty is to furnish telephone service pursuant to tariffs on file with the California Public Utilities Commission.

Section 16B-4, *Exceptions* states the following activities shall be exempt from Section 16B-3, *Certain Noise Prohibited* including: (b) Emergency work. Work performed for the purpose of preventing or alleviating the physical trauma or property damage threatened or caused by an emergency or work by private or public utilities when restoring utility service shall be permitted, provided the person performing such work notifies the city manager within one day after the office of said manager is first opened subsequent to performing such activity; (c) Testing of emergency signaling devices. Testing on emergency signaling devices may be performed between the hours of 8:00 a.m. and 10:00 p.m.; and (d) An alarm signal activated by violent conditions of nature or other extraordinary circumstances which are not subject to the control of the alarm owner shall not constitute a false alarm.

Additionally, leaf blowers have limited hours of operation per Section 16B-3(h), *Certain Noise Prohibited – Leaf Blowers*. The use of or operation of any mechanized machine or equipment

used to clean, cut, blow, vacuum, or sweep grass, leaves, dirt and other debris off sidewalks, driveways, lawns and other surfaces shall not be allowed between the hours of 8:00 p.m. and 7:00 a.m. daily.

The Municipal Code also provides exterior noise levels for all receptor properties by time interval. *Table 5.10-3*, *City of Walnut Exterior Noise Standards*, presents exterior noise standards in Section 16B-5 of the City's Municipal Code. It should be noted that exterior noise standards in *Table 5.10-3* are for stationary source noise, not for traffic noise.

Table 5.10-3
City of Walnut Exterior Noise Standards

Receptor Land Use	Level dB	
	Day (7:00 a.m. to 10:00 p.m.)	Night (10:00 p.m. to 7:00 a.m.)
Residential Properties	50	45
Commercial Properties	60	55
Industrial Properties	70	70
Source: City of Walnut, *City of Walnut Municipal Code Section 16B-5a Exterior Noise Standards*, October 2015.		
Note: If the measurement location is on a boundary property between two different zones, exterior noise level utilized in Section 16B-5a to determine the exterior standard shall be the daytime exterior noise level of the subject receptor property.		

DESCRIPTION OF NOISE METRICS

Standard Unit of Measurement

Sound is described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by differentiating among frequencies in a manner approximating the sensitivity of the human ear.

Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dBA higher than another is perceived to be twice as loud and 20 dBA higher is perceived to be four times as loud, and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). Examples of various sound levels in different environments are illustrated on *Exhibit 5.10-1*, *Common Environmental Noise Levels*.

Many methods have been developed for evaluating community noise to account for, among other things:

- The variation of noise levels over time
- The influence of periodic individual loud events
- The community response to changes in the community noise environment

Table 5.10-4, Noise Descriptors, provides a listing of methods to measure sound over a period of time.

Table 5.10-4
Noise Descriptors

Term	Definition
Decibel (dB)	The unit for measuring the volume of sound equal to 10 times the logarithm (base 10) of the ratio of the pressure of a measured sound to a reference pressure (20 micropascals).
A-Weighted Decibel (dBA)	A sound measurement scale that adjusts the pressure of individual frequencies according to human sensitivities. The scale accounts for the fact that the region of highest sensitivity for the human ear is between 2,000 and 4,000 cycles per second (hertz).
Equivalent Sound Level (L_{eq})	The sound level containing the same total energy as a time varying signal over a given time period. The L_{eq} is the value that expresses the time averaged total energy of a fluctuating sound level.
Maximum Sound Level (L_{max})	The highest individual sound level (dBA) occurring over a given time period.
Minimum Sound Level (L_{min})	The lowest individual sound level (dBA) occurring over a given time period.
Community Noise Equivalent Level (CNEL)	A rating of community noise exposure to all sources of sound that differentiates between daytime, evening, and nighttime noise exposure. These adjustments are +5 dBA for the evening, 7:00 PM to 10:00 PM, and +10 dBA for the night, 10:00 PM to 7:00 AM.
Day/Night Average (L_{dn})	The L_{dn} is a measure of the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency for developing criteria for the evaluation of community noise exposure. It is based on a measure of the average noise level over a given time period called the L_{eq}. The L_{dn} is calculated by averaging the L_{eq}'s for each hour of the day at a given location after penalizing the "sleeping hours" (defined as 10:00 PM to 7:00 AM) by 10 dBA to account for the increased sensitivity of people to noises that occur at night.
Exceedance Level (L_n)	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% (L_{01}, L_{10}, L_{50}, L_{90}, respectively) of the time during the measurement period.
Source: Cyril M. Harris, *Handbook of Noise Control*, 1979.	

Health Effects of Noise

Human response to sound is highly individualized. Annoyance is the most common issue regarding community noise. The percentage of people claiming to be annoyed by noise generally increases with the environmental sound level. However, many factors also influence people's response to noise. The factors can include the character of the noise, the variability of the sound level, the presence of tones or impulses, and the time of day of the occurrence. Additionally, non-acoustical factors, such as the person's opinion of the noise source, the ability to adapt to the noise, the attitude towards the source and those associated with it, and the predictability of the noise, all influence people's response. As such, response to noise varies widely from one person to another and with any particular noise, individual responses would range from "not annoyed" to "highly annoyed."

When the noise level of an activity rises above 70 dBA, the chance of receiving a complaint is possible, and as the noise level rises, dissatisfaction among the public steadily increases. However, an individual's reaction to a particular noise depends on many factors, such as the source of the sound, its loudness relative to the background noise, and the time of day. The

reaction to noise can also be highly subjective; the perceived effect of a particular noise can vary widely among individuals in a community.

The effects of noise are often only transitory, but adverse effects can be cumulative with prolonged or repeated exposure. The effects of noise on the community can be organized into six broad categories:

- Noise-Induced Hearing Loss
- Interference with Communication
- Effects of Noise on Sleep
- Effects on Performance and Behavior
- Extra-Auditory Health Effects
- Annoyance

Although it often causes discomfort and sometimes pain, noise-induced hearing loss usually takes years to develop. Noise-induced hearing loss can impair the quality of life through a reduction in the ability to hear important sounds and to communicate with family and friends. Hearing loss is one of the most obvious and easily quantified effects of excessive exposure to noise. While the loss may be temporary at first, it could become permanent after continued exposure. When combined with hearing loss associated with aging, the amount of hearing loss directly caused by the environment is difficult to quantify. Although the major cause of noise-induced hearing loss is occupational, substantial damage can be caused by non-occupational sources.

According to the United States Public Health Service, nearly ten million of the estimated 21 million Americans with hearing impairments owe their losses to noise exposure. Noise can mask important sounds and disrupt communication between individuals in a variety of settings. This process can cause anything from a slight irritation to a serious safety hazard, depending on the circumstance. Noise can disrupt face-to-face communication and telephone communication, and the enjoyment of music and television in the home. It can also disrupt effective communication between teachers and pupils in schools, and can cause fatigue and vocal strain in those who need to communicate in spite of the noise.

Interference with communication has proven to be one of the most important components of noise-related annoyance. Noise-induced sleep interference is one of the critical components of community annoyance. Sound level, frequency distribution, duration, repetition, and variability can make it difficult to fall asleep and may cause momentary shifts in the natural sleep pattern, or level of sleep. It can produce short-term adverse effects on mood changes and job performance, with the possibility of more serious effects on health if it continues over long periods. Noise can cause adverse effects on task performance and behavior at work, and non-occupational and social settings. These effects are the subject of some controversy, since the presence and degree of effects depends on a variety of intervening variables. Most research in this area has focused mainly on occupational settings, where noise levels must be sufficiently high and the task sufficiently complex for effects on performance to occur.

Recent research indicates that more moderate noise levels can produce disruptive after-effects, commonly manifested as a reduced tolerance for frustration, increased anxiety, decreased incidence of “helping” behavior, and increased incidence of “hostile” behavior. Noise has been implicated in the development or exacerbation of a variety of health problems, ranging from hypertension to psychosis. As with other categories, quantifying these effects is difficult due to the amount of variables that need to be considered in each situation. As a biological stressor,

noise can influence the entire physiological system. Most effects seem to be transitory, but with continued exposure some effects have been shown to be chronic in laboratory animals.

Annoyance can be viewed as the expression of negative feelings resulting from interference with activities, as well as the disruption of one's peace of mind and the enjoyment of one's environment. Field evaluations of community annoyance are useful for predicting the consequences of planned actions involving highways, airports, road traffic, railroads, or other noise sources. The consequences of noise-induced annoyance are privately held dissatisfaction, publicly expressed complaints to authorities, and potential adverse health effects, as discussed above. In a study conducted by the United States Department of Transportation, the relationship between the effects of annoyance and the community were quantified. In areas where exterior noise levels were consistently above 60 dBA Community Noise Equivalent Level (CNEL), approximately nine percent of the community is highly annoyed. When levels exceed 65 dBA CNEL, that percentage rises to 15 percent. Although evidence for the various effects of noise have differing levels of certainty, it is clear that noise can affect human health. Most of the effects are, to a varying degree, stress related.

5.10.2 ENVIRONMENTAL SETTING

NOISE MEASUREMENTS

In order to quantify existing ambient noise levels in the project area, noise measurements were conducted on July 7, 2015; refer to *Table 5.10-5*, *Noise Measurements*. The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to the project site. Ten-minute measurements were taken, between 11:00 a.m. and 1:00 p.m., at each site during the day. Short-term (L_{eq}) measurements are considered representative of the noise levels in the project vicinity.

Table 5.10-5
Noise Measurements

Site No.	Location	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	Peak (dBA)	Time
1	Along Meadow Pass Road, within the northern portion of the project site.	56.7	37.9	85.8	83.3	10:59 a.m.
2	Southwest corner of the intersection of Meadows Pass Road and Lemon Avenue.	60.1	38.7	78.2	96.4	11:14 a.m.
3	Along Rim Ridge Road, approximately 265 feet east of the project site.	49.6	33.4	70.5	95.8	11:30 a.m.
4	Along San Vicente Road within the southwest portion of the project site.	50.1	39.6	70.9	93.9	12:36 p.m.
Source: Michael Baker International, July 7, 2015.						

Meteorological conditions were clear skies, cool temperatures, with light wind speeds (0 to 5 miles per hour), and low humidity. Measured noise levels during the daytime measurements ranged from 49.6 to 60.1 dBA L_{eq}. Noise monitoring equipment used for the ambient noise survey consisted of a Brüel & Kjær Hand-held Analyzer Type 2250 equipped with a Type 4189 pre-polarized microphone. The monitoring equipment complies with applicable requirements of the American National Standards Institute (ANSI) for Type I (precision) sound level meters. The results of the field measurements are included in Appendix Q. Refer to *Exhibit 5.10-2*, *Noise Measurement Locations*, for the noise measurement sites.

SENSITIVE RECEPTORS

Certain land uses are particularly sensitive to noise, including schools, hospitals, rest homes, long-term medical and mental care facilities, and parks and recreation areas. Residential areas are also considered noise sensitive, especially during the nighttime hours. Existing sensitive receptors located in the project vicinity include residential uses, schools, places of worship, parks, and recreational areas. Sensitive receptors are listed in *Table 5.10-6, Sensitive Receptors*.

Table 5.10-6
Sensitive Receptors

Type	Name	Distance from Project Site (feet)[1]	Direction from Project Site	Location
Residential	Residential Uses	Adjacent	East	East of San Vicente Road
		105 feet	Southeast	South of La Puente Road
		170 feet	North	North of Meadow Pass Road.
		258 feet	West	West of Lemon Avenue
		385 feet	Southwest	Southwest of La Puente Road and Lemon Avenue intersection
Schools	Vejar Elementary School	1,655 feet	South	20222 East Vejar Road
	Cyrus J Morris Elementary School	2,628 feet	Southwest	19875 Calle Baja
	Walnut United Methodist Pre-School	3,088 feet	East	20601 La Puente Road
	Stanley G. Oswalt Academy	3,200 feet	Northwest	19501 Shadow Oak Drive
	Montessori of Walnut	3,234 feet	South	20121 Alisu Court
	Cross Schools	3,470 feet	East	20675 La Puente Road
	Suzanne Middle School	3,850 feet	East	525 Suzanne Road
	Walnut High School	3,900 feet	East	400 Pierre Road
	Westhoff Elementary	4,550 feet	Northeast	20151 Amar Road
Places of Worship	St. Lorenzo Ruiz Catholic Parish Community Church	170 feet	North	747 Meadow Pass Road
	Walnut Valley First Baptist Church	2,290 feet	East	20425 La Puente Road
	Evangelical Formosan Church of East Valley	3,260 feet	East	20625 La Puente Road
	Walnut Blessing Church-Nazarene	4,650 feet	East	20801 La Puente Road
	The Church of Jesus Christ of Latter-day Saints	4,682 feet	East	20801 Marcon Drive
	Christ the King Lutheran Church	5,350 feet	East	555 Gartel Drive
Parks/Recreational Areas	Arroyo Park	1,625 feet	West	19891 Camino Arroyo
	Lemon Creek Park	2,115 feet	South	130 Avenida Alipaz
	Butterfield Park	2,555 feet	West	19730 Camino Arroyo
	Creekside Park	2,940 feet	West	780 Creekside Drive
	Suzanne Park	3,660 feet	East	625 Suzanne Road
	Walnut Hills Park	4,355 feet	West	19475 Avenida Del Sol
	Walnut Ranch Park	4,366 feet	Northeast	20101 Amar Road

Sources: Michael Baker International, March 2016
Google Earth, 2016.

Note:
1. Distances are measured from the exterior project boundary only and not from individual construction areas within the interior of the project site.

EXISTING NOISE LEVELS

Mobile Sources

The majority of the existing noise in the project area is generated from vehicles traveling along Lemon Avenue, Amar Road, La Puente Road, and Valley Boulevard. Noise models were run using the Federal Highway Administration's Highway Noise Prediction Model (FHWA RD-77-108) together with several roadway and site parameters. These parameters determine the projected impact of vehicular traffic noise and include the roadway cross-section (such as the number of lanes), roadway width, average daily traffic (ADT), vehicle travel speed, percentages of auto and truck traffic, roadway grade, angle-of-view, and site conditions ("hard" or "soft"). The model does not account for ambient noise levels (i.e., noise from adjacent land uses) or topographical differences between the roadway and adjacent land uses. Noise projections are based on modeled vehicular ADT estimates derived from the *Brookside Project Traffic Impact Analysis* (Traffic Impact Analysis), prepared by Michael Baker International, dated November 20, 2015. *Table 5.10-7*, *Existing Traffic Noise Levels*, depict the existing traffic noise levels in the vicinity of the project site. A 25- to 50-mile per hour (mph) average vehicle speed was assumed for existing conditions based on empirical observations and posted maximum speeds along the adjacent roadways. The ADT estimates were obtained from the project's Traffic Impact Analysis; refer to Appendix Q. As shown in *Table 5.10-7*, noise within the area from mobile noise ranges from 39.1 dBA to 70.2 dBA.

Table 5.10-7
Existing Traffic Noise Levels

Roadway Segment	Existing Conditions				
	ADT	dBA @ 100 Feet from Roadway Segment	60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour
Lemon Avenue					
North of Amar Road	1,600	50.7	14	4	1
Amar Road to Meadow Pass Road	15,000	64.3	352	111	35
Meadow Pass Road to La Puente Road	17,900	65.5	420	133	42
La Puente Road to Valley Boulevard	21,100	66.2	495	157	50
South of Valley Road	24,900	67.0	584	185	58
Amar Road					
West of Lemon Avenue	24,900	68.3	775	245	77
East of Lemon Avenue	23,100	68.0	718	227	72
Meadow Pass Road					
West of Lemon Avenue	100	39.1	1	0	0
Lemon Avenue to Colt Lane	4,400	56.9	54	17	5
East of Colt Lane	4,100	56.6	51	16	5
La Puente Road					
West of Lemon Avenue	15,100	66.1	470	148	47
East of Lemon Avenue	13,800	64.5	323	102	32
Valley Boulevard					
West of Lemon Avenue	30,200	70.0	1220	386	122
East of Lemon Avenue	31,400	70.2	1268	401	127
Sources: Michael Baker International, March 2016 Noise modeling is based on traffic data within the *Brookside Project Traffic Impact Analysis*, prepared by Michael Baker International. (November 20, 2015).					
Notes: ADT = average daily traffic; dBA = A-weighted decibels; CNEL = community noise equivalent level					

Stationary Sources

The primary sources of stationary noise in the project vicinity are those associated with the operations of residential uses on all sides, commercial uses to the south, the Los Angeles County Fire Department station to the west, and institutional uses to the north. The noise associated with these sources may represent a single-event noise occurrence, short-term, or long-term/continuous noise.

5.10.3 SIGNIFICANCE THRESHOLD CRITERIA

Environmental impact thresholds as indicated in *CEQA Guidelines* Appendix G (Environmental Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it 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 ground borne vibration or ground borne noise.
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels (refer to Section 8.0, Effects Found Not To Be Significant).
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels (refer to Section 8.0, Effects Found Not to Be Significant).

Based on these standards, the proposed project's effects have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

SIGNIFICANCE OF CHANGES IN TRAFFIC NOISE LEVELS

An off-site traffic noise impact typically occurs when there is a discernable increase in traffic and the resulting noise level exceeds an established noise standard. In community noise considerations, changes in noise levels greater than 3 dB are often identified as substantial, while changes less than 1 dB will not be discernible to local residents. In the range of 1 to 3 dB, residents who are very sensitive to noise may perceive a slight change. In laboratory testing situations, humans are able to detect noise level changes of slightly less than 1 dB. However, this is based on a direct, immediate comparison of two sound levels. Community noise exposures occur over a long period of time and changes in noise levels occur over years (rather

than the immediate comparison made in a laboratory situation). Therefore, the level at which changes in community noise levels become discernible is likely to be some value greater than 1 dB, and 3 dB is the most commonly accepted discernable difference. A 5 dB change is generally recognized as a clearly discernable difference.

As traffic noise levels at sensitive uses likely approach or exceed the applicable land use compatibility standard, a 3 dB increase as a result of a project is used as the increase threshold for a project. Thus, a project would result in a significant noise impact when a permanent increase in ambient noise levels of 3 dB occur upon project implementation and the resulting noise level exceeds the applicable exterior standard at a noise sensitive use.

5.10.4 PROJECT IMPACTS AND MITIGATION MEASURES

SHORT-TERM CONSTRUCTION NOISE IMPACTS

- **GRADING AND CONSTRUCTION ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT COULD RESULT IN SIGNIFICANT TEMPORARY NOISE IMPACTS TO NEARBY NOISE SENSITIVE RECEIVERS.**

Impact Analysis: Construction activities would occur in a single phase and would include demolition, site preparation, grading, paving, building construction, and the application of architectural coatings. Ground-borne noise and other types of construction-related noise impacts would typically occur during excavation activities of the grading phase. This phase of construction has the potential to create the highest levels of noise. Typical noise levels generated by construction equipment are shown in *Table 5.10-8*, *Maximum Noise Levels Generated by Construction Equipment*. It should be noted that the noise levels identified in *Table 5.10-8* are maximum sound levels (L_{max}), which are the highest individual sound occurring at an individual time period. Operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be due to random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts).

Pursuant to *Municipal Code* Section 16B-3(a), construction activities may occur between the hours of 7:00 a.m. and 8:00 p.m. on weekdays. No construction activities are permitted outside of these hours or on Saturdays, Sundays and holidays. These permitted hours of construction are included in the code in recognition that construction activities undertaken during daytime hours are a typical part of living in an urban environment and do not cause a significant disruption.

Table 5.10-8
Maximum Noise Levels Generated by Construction Equipment

Type of Equipment	Acoustical Use Factor[1]	L_{max} at 50 Feet (dBA)
Concrete Saw	20	90
Crane	16	81
Concrete Mixer Truck	40	79
Backhoe	40	78
Dozer	40	82
Excavator	40	81
Forklift	40	78
Paver	50	77
Roller	20	80
Tractor	40	84
Water Truck	40	80
Grader	40	85
General Industrial Equipment	50	85

Source: Federal Highway Administration, *Roadway Construction Noise Model (FHWA-HEP-05-054),* January 2006.

Note:
1. Acoustical Use Factor (percent): Estimates the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.

The potential for construction-related noise to affect nearby residential receptors would depend on the location and proximity of construction activities to these receptors. Construction would occur throughout the project site and would not be concentrated or confined in the area directly adjacent to sensitive receptors. It should be noted that the noise levels depicted in *Table 5.10-8* are maximum noise levels, which would occur sporadically when construction equipment is operated in proximity to sensitive receptors. With implementation of time limits specified in the Municipal Code, noise impacts would be reduced to a less than significant level. Additionally, to further reduce the potential for noise impacts, Mitigation Measure NOI-1 would be implemented to incorporate best management practices during construction and to ensure nuisances do not occur. Implementation of Mitigation Measure NOI-1 would further minimize impacts from construction noise as it requires construction equipment to be equipped with properly operating and maintained mufflers and other state required noise attenuation devices. Thus, a less than significant noise impact would result from construction activities.

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures:

NOI-1 Prior to Grading Permit issuance, the Project Applicant/Contractor shall demonstrate, to the satisfaction of the City of Walnut Planning Division that the project complies with the following:

- Construction contracts specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state required noise attenuation devices.

- The Project Applicant/Contractor shall utilize construction noise reduction methods to minimize construction noise at sensitive receptors in the project area. These reduction methods include shutting off idling equipment, maximizing the distance between construction equipment staging areas and occupied residential areas, and electric air compressors and similar power tools.

- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.

- Construction activities shall not take place outside of the allowable hours specified by the City of Walnut's Municipal Code Section 16B-3(a) (7:00 a.m. and 8:00 p.m. on weekdays; construction activities are not permitted on Saturdays, Sundays or holidays).

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.

VIBRATION IMPACTS

● **IMPLEMENTATION OF THE PROPOSED PROJECT COULD RESULT IN SIGNIFICANT VIBRATION IMPACTS TO NEARBY SENSITIVE RECEPTORS.**

Impact Analysis:

Short-Term Construction

Project construction can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures.

The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations. In general, the FTA architectural damage criterion for continuous vibrations (i.e., 0.2 inch/second) appears to be conservative. The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. For example, for a building that is constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.20 inch per second (in/sec) is considered safe and would not result in any construction vibration damage. The vibration produced by construction equipment, is illustrated in *Table 5.10-9*, *Typical Vibration Levels for Construction Equipment*.

Table 5.10-9
Typical Vibration Levels for Construction Equipment

Equipment	Approximate peak particle velocity at 25 feet (inches/second) [2]	Approximate peak particle velocity at 50 feet (inches/second) [2]	Approximate peak particle velocity at 105 feet (inches/second) [2]
Large bulldozer	0.089	0.031	0.010
Loaded trucks	0.076	0.027	0.009
Small bulldozer	0.003	0.001	0.0003

Notes:
1 – Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Guidelines*, May 2006. Table 12-2.
2 – Calculated using the following formula:

$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

where: PPV (equip) = the peak particle velocity in in/sec of the equipment adjusted for the distance
PPV (ref) = the reference vibration level in in/sec from Table 12-2 of the FTA *Transit Noise and Vibration Impact Assessment Guidelines*
D = the distance from the equipment to the receiver

Groundborne vibration decreases rapidly with distance. As indicated in *Table 5.10-9*, based on the FTA data, vibration velocities from typical heavy construction equipment operation that would be used during proposed project construction range from 0.003 to 0.089 in/sec peak particle velocity (PPV) at 25 feet from the source of activity. The majority of adjacent structures are at least 25 to 50 feet from the project site boundaries and would not be exposed to significant vibration from construction activities. As such, vibration at the nearest sensitive receptor (approximately 25 feet) during construction activities would be a maximum of approximately 0.089 PPV, which would be below the FTA's 0.20 PPV threshold. Therefore, vibration impacts associated with the proposed project would be less than significant.

Long-Term Operations

The project proposes 28 residential units and 10 open space lots that would not generate ground-borne vibration that could be felt at surrounding uses. The proposed project would not involve railroads or substantial heavy truck operations, and therefore would not result in vibration impacts at surrounding uses. No impact would occur in this regard.

Level of Significance Before Mitigation: Less Than Significant Impact for short-term construction. No Impact for long-term operations.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact for short-term construction. No Impact for long-term operations.

LONG-TERM OPERATIONAL NOISE IMPACTS

- **TRAFFIC GENERATED BY THE PROPOSED PROJECT COULD SIGNIFICANTLY CONTRIBUTE TO EXISTING TRAFFIC NOISE IN THE AREA OR EXCEED THE CITY'S ESTABLISHED STANDARDS OR COULD RESULT IN A SIGNIFICANT INCREASE IN LONG-TERM STATIONARY AMBIENT NOISE LEVELS.**

Impact Analysis:

Off-Site Mobile Noise

Future development generated by the proposed project would result in additional traffic on adjacent roadways, thereby increasing vehicular noise in the vicinity of existing and proposed land uses. Based on the Traffic Impact Analysis, the proposed project would result in approximately 267 daily trips. The "Future Without Project" and "Future With Project" scenarios are compared in *Table 5.10-10*, *Future Project Traffic Noise Levels*. As depicted in *Table 5.10-10*, under the "Future Without Project" scenario, noise levels would range from approximately 39.1 dBA to 70.3 dBA, with the highest noise levels occurring along Valley Boulevard (east of Lemon Avenue). The "Future With Project" scenario noise levels would range from approximately 39.1 dBA to 70.3 dBA with the highest noise levels also occurring along the same roadway segment. The noise levels would result in a maximum increase of 0.2 dBA. This increase in noise would occur along Meadow Pass Road (between Lemon Avenue and Colt Lane). Since the proposed project would not significantly increase noise levels along the roadway segments analyzed, a less than significant impact would occur.

On-Site Mobile Noise

The proposed project includes the construction of 28 detached single-family homes and 10 open space lots. The future residents of the proposed project could be exposed to elevated noise levels from traffic noise along La Puente Road, Lemon Avenue, and Meadow Pass Road. The Federal Highway Administration (FHWA) Traffic Noise Model version 2.5 (TNM 2.5) was used to evaluate the noise impacts from traffic along these roadways to the proposed on-site uses; refer to the TNM 2.5 outputs provided as part of Appendix Q. Noise levels from typical daily traffic along La Puente Road, Lemon Avenue, and Meadow Pass Road were modeled at a total of 33 receptor locations on the project site. The TNM 2.5 noise modeling is based on the details and specifications as part of the proposed project (e.g., site plan, tentative tract map, etc.), and the existing acoustical conditions in the surrounding area (e.g., existing berms, buildings, topography, etc.).

The "Exterior" dBA CNEL/L_{dn} noise standards for Single Family Residential is 60 dBA; refer to *Table 5.10-2*. The exterior noise levels were modeled using TNM 2.5. *Table 5.10-11*, *Traffic Noise Modeling Results*, depicts the results of the modeling, and *Exhibit 5.10-3*, *Noise Modeling Locations*, indicates the location of the modeled noise receptors. Based on the modeling results, a combination of 7-foot and 8-foot perimeter walls on the project site would attenuate the modeled receptors (Receptors 1, 2, and 19 through 23) to below 60 dBA and the anticipated exterior noise levels at the receptor locations would range from 49.5 to 59.6 dBA; refer to *Table 5.10-11* and *Exhibit 5.10-3*. It should be noted that the traffic noise levels depicted in *Table 5.10-11* differ from the measured levels depicted in *Table 5.10-5* because they represent noise levels at different locations on the project site and are also reported in different noise metrics (e.g., noise measurements are the L_{eq} values and traffic noise are reported in CNEL).

Therefore, Mitigation Measure NOI-2 would require that the proposed perimeter walls on the project site adhere to the locations and heights in *Exhibit 5.10-3* to ensure that exterior noise levels remain within the City's 60 dBA CNEL noise standard for Single Family Residential. With implementation of the recommended mitigation, the proposed project would result in a less than significant impact to the future on-site residences from traffic noise levels.

Table 5.10-10
Future Project Traffic Noise Levels

Roadway Segment	Future Without Project					Future With Project					Difference In dBA @ 100 Feet from Roadway
	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			
			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour	
Lemon Avenue											
North of Amar Road	1,600	50.7	14	4	1	1,600	50.7	14	4	1	0.0
Amar Road to Meadow Pass Road	15,200	64.3	356	113	36	15,300	64.4	359	114	36	0.1
Meadow Pass Road to La Puente Road	18,300	65.6	428	136	43	18,400	65.7	431	136	43	0.1
La Puente Road to Valley Boulevard	21,500	66.3	504	159	50	21,600	66.3	507	160	51	0.1
South of Valley Boulevard	25,300	67.0	592	187	59	25,300	67.0	592	187	59	0.0
Amar Road											
West of Lemon Avenue	25,300	68.4	786	249	79	25,400	68.4	789	250	79	0.0
East of Lemon Avenue	23,500	68.0	730	231	73	23,500	68.0	730	231	73	0.0
Meadow Pass Road											
West of Lemon Avenue	100	39.1	1	0	0	100	39.1	1	0	0	0.0
Lemon Avenue to Colt Lane	4,600	57.1	57	18	6	4,800	57.3	59	19	6	0.2
East of Colt Lane	4,300	56.8	53	17	5	4,300	56.8	53	17	5	0.0
La Puente Road											
West of Lemon Avenue	15,300	66.2	476	151	48	15,300	66.2	476	151	48	0.0
East of Lemon Avenue	14,000	64.6	328	104	33	14,000	64.6	328	104	33	0.0
Valley Boulevard											
West of Lemon Avenue	31,000	70.2	1251	396	125	31,000	70.2	1251	396	125	0.0
East of Lemon Avenue	32,100	70.3	1295	409	129	32,100	70.3	1295	409	129	0.0
Project Driveway	-	-	-	-	-	300	43.4	3	1	0	-

Sources:
Michael Baker International, March 2016
Noise modeling is based on traffic data within the *Brookside Project Traffic Impact Analysis*, prepared by Michael Baker International. (November 20, 2015).

Notes: ADT = average daily traffic; dBA = A-weighted decibels; CNEL = community noise equivalent level

Table 5.10-11
Traffic Noise Modeling Results

Receptor #	Exterior Noise Level (dBA CNEL/L_{dn}) [1, 2]	
	No Barrier	With 7-foot and 8-foot Barriers
1	**66.8**	59.6[3]
2	**60.2**	55.5
3	56.8	54.5
4	54.6	53.9
5	53.5	53.2
6	52.8	52.6
7	52.2	52.1
8	56.8	56.8
9	56.9	56.9
10	57.5	57.5
11	58.0	58.0
12	59.3	59.3
13	59.9	59.8
14	59.5	59.2
15	58.9	58.2
16	58.3	57.4
17	55.7	55.4
18	59.0	58.2
19	**61.1**	57.9
20	**62.0**	56.4
21	**62.7**	56.0
22	**63.3**	59.6
23	**62.1**	56.0
24	52.6	52.1
25	52.9	52.3
26	54.1	53.5
27	55.1	54.3
28	57.6	55.3
29	56.7	55.1
30	55.6	54.4
31	53.0	52.7
32	53.8	53.6
33	49.9	49.5

Notes:
1. Noise levels were modeled using FHWA TNM 2.5.
2. Refer to Exhibit 5.10-3, Noise Modeling Locations, for receptor and barrier locations. Refer to Appendix Q for detailed modeling outputs.
3. The 8-foot wall is only required for the segment facing La Puente Road, adjacent to Receiver 1. 7-foot walls are necessary for the other locations; refer to Exhibit 5.10-3.

Stationary Noise Impacts

Residential Uses

The proposed project would include the development of 28 single-family residential units on the project site. Stationary noise that is typical of residential uses include children playing, pets, amplified music, car repair, and home repair. Noise from residential stationary sources would be typical of surrounding residential uses in the project area and would primarily occur during the "daytime" activity hours. Noise impacts to surrounding uses from residential uses associated with future development that would occur under the proposed project are anticipated to be less than significant.

Mechanical Equipment

Another stationary noise source associated with the proposed residential development would be heating, ventilation, and air conditioning (HVAC) units. HVAC units would be positioned on the property of each single-family residence. HVAC systems typically result in noise levels that average between 40 and 50 dBA Leq at 50 feet from the equipment. The closest the HVAC units would be positioned to an adjoining residential structure would be approximately 100 feet from the nearest proposed building footprint.[1] As the proposed project would not place mechanical equipment associated with the residential uses near adjacent residential uses, noise from the HVAC units would not be perceptible at the nearest residents (adjacent to the eastern property line). Impacts from mechanical equipment would be less than significant.

Recreational Uses

The project proposes the development of 10 open space lots, the retention of two former equestrian center's barn structures in the northeastern portion of the project site as well as the existing equestrian trail that traverses the site. Stationary noise associated with operational activities of these uses include horses trotting, hiking, children playing, and pets. It is anticipated that noise from the recreational open space facilities or areas would not disturb surrounding uses due to the quiet nature of these activities. In addition, the use of leaf blowers could be used to clean, cut, and maintain the open space areas. With implementation of time limits specified in the *Municipal Code,* noise impacts from leaf blower operations would be reduced to a less than significant level. Therefore, noise impacts associated with recreational uses are considered less than significant.

Fire Department Station Activity

The project site is adjacent to the Los Angeles County Fire Department Station No. 61 to the west. Fire Station No. 61 has a paramedics unit and a fire engine.[2] Fire siren and vehicle noise is audible at the project site when emergency vehicles depart and return to the station and when fire engines idle in front of the station. However, fire siren activities are occasional, intermittent, and short-term in nature. As fire department sirens would occur as vehicles depart the site, the noise would only be audible for a few seconds and would not occur over a long enough duration to exceed the City's noise standards, which apply to average noise levels from longer term exposure. Per Section 16B-4 of the *Municipal Code,* emergency work, testing of emergency signaling devices, and alarm signals activated by extraordinary circumstances are exempt from the City prohibiting certain noises (Section 16B-3). Further, testing on emergency signaling

1 Michael Baker International, *The Brookside Concept Site Plan Tentative Tract No. 72798,* May 20, 2015.
2 City of Walnut, *Fire Department,* http://ci.walnut.ca.us/general.asp?id=154, accessed March 23, 2016.

devices would be performed between the hours of 8:00 a.m. and 10:00 p.m. Due to the noise exemptions and testing time limits set in the *Municipal Code* as well as the temporary and necessary nature of fire engine sirens, noise generated by the fire station is considered a less than significant impact.

Level of Significance Before Mitigation: Potentially Significant Impact for on-site mobile noise. Less Than Significant Impact for off-site mobile noise and stationary noise.

Mitigation Measures:

NOI-2 Prior to the issuance of building permits, the Project Applicant shall demonstrate, to the satisfaction of the City of Walnut Building Official that proposed perimeter walls of 7-feet and 8-feet in height are located along the identified locations of the project site. The perimeter walls should be located as shown on Exhibit 5.10-3, Noise Modeling Locations. Acceptable materials for the construction of the barrier shall have a density of 3.5 pounds per square foot of surface area and maybe composed of the following: masonry block, stucco veneer over wood framing (or foam core), glass, Plexiglass, or Lexan 9 ¼ inch thick). The barrier may also be constructed out of a combination of the above listed materials.

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated for on-site mobile noise. Less Than Significant Impact for off-site mobile noise and stationary noise.

5.10.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

SHORT-TERM CONSTRUCTION NOISE IMPACTS

- **THE PROPOSED PROJECT ALONG WITH OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN SIGNIFICANT SHORT-TERM NOISE IMPACTS TO NEARBY NOISE SENSITIVE RECEIVERS.**

Impact Analysis: Construction activities associated with the proposed project and cumulative projects may overlap, resulting in construction noise in the area. However, as analyzed above, construction noise impacts primarily affect the areas immediately adjacent to the construction site. Construction noise for the proposed project was determined to be less than significant with adherence to the City's *Noise Ordinance*, and implementation of Mitigation Measure NOI-1. This project-level impact is due to local receptors and would not contribute cumulatively to construction noise in other areas of the City of Walnut.

Furthermore, the City of Walnut has no control over the timing or sequencing of the related projects, and as such, any quantitative analysis to ascertain the daily noise that assumes multiple, concurrent construction would be highly speculative. Construction-related noise for the proposed project and each related project would be localized. In addition, it is likely that each of the related projects would have to comply with the applicable City Municipal Code and/or Noise Ordinance, as well as mitigation measures that may be prescribed pursuant to CEQA provisions that require significant impacts to be reduced to the extent feasible.

Thus, as construction noise is localized in nature and drops off rapidly from the source, and with implementation of project-specific mitigation measures, less than significant cumulative construction related noise impacts would result.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

LONG-TERM CUMULATIVE NOISE IMPACTS

- **THE PROPOSED PROJECT ALONG WITH OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN CUMULATIVELY CONSIDERABLE LONG-TERM NOISE IMPACTS.**

Impact Analysis:

Cumulative Stationary Noise

As previously noted, the proposed project would not result in significant stationary noise impacts. The proposed project would not result in stationary long-term equipment that would significantly affect surrounding sensitive uses resulting in a significant cumulative impact. Thus, less than significant impacts would occur in this regard.

Cumulative Mobile Noise

A project's contribution to a cumulative traffic noise increase would be considered significant when the combined effect exceeds perception level (i.e., auditory level increase) threshold. The combined effect compares the "cumulative with project" condition to "existing" conditions. This comparison accounts for the traffic noise increase generated by a project combined with the traffic noise increase generated by projects in the cumulative project list. The following criteria have been utilized to evaluate the combined effect of the cumulative noise increase.

- *Combined Effect.* The cumulative with project noise level ("Future With Project") would cause a significant cumulative impact if a 3.0 dB increase over existing conditions occurs and the resulting noise level exceeds the applicable exterior standard at a sensitive use. Although there may be a significant noise increase due to the proposed project in combination with other related projects (combined effects), it must also be demonstrated that the project has an incremental effect. In other words, a significant portion of the noise increase must be due to the proposed project. The following criteria have been utilized to evaluate the incremental effect of the cumulative noise increase.

- *Incremental Effects*. The "Future With Project" causes a 1.0 dBA increase in noise over the "Future Without Project" noise level.

A significant impact would result only if both the combined and incremental effects criteria have been exceeded. Noise by definition is a localized phenomenon, and reduces as distance from the source increases. Consequently, only the proposed project and growth due to occur in the project site's general vicinity would contribute to cumulative noise impacts. *Table 5.10-12*, *Cumulative Noise Scenario*, lists the traffic noise effects along roadway segments in the project vicinity for "Existing," "Future Without Project," and "Future With Project," conditions, including incremental and net cumulative impacts.

Table 5.10-12
Cumulative Noise Scenario

Roadway Segment	Existing	Future Without Project	Future With Project	Combined Effects	Incremental Effects	Cumulatively Significant Impact?
	dBA @ 100 Feet from Roadway Centerline	dBA @ 100 Feet from Roadway Centerline	dBA @ 100 Feet from Roadway Centerline	Difference In dBA Between Existing and Future With Project	Difference In dBA Between Future Without Project and Future With Project	
Lemon Avenue						
North of Amar Road	50.7	50.7	50.7	0.0	0.0	No
Amar Road to Meadow Pass Road	64.3	64.3	64.4	0.1	0.1	No
Meadow Pass Road to La Puente Road	65.5	65.6	65.7	0.2	0.1	No
La Puente Road to Valley Boulevard	66.2	66.3	66.3	0.1	0.0	No
South of Valley Boulevard	67.0	67.0	67.0	0.0	0.0	No
Amar Road						
West of Lemon Avenue	68.3	68.4	68.4	0.1	0.0	No
East of Lemon Avenue	68.0	68.0	68.0	0.0	0.0	No
Meadow Pass Road						
West of Lemon Avenue	39.1	39.1	39.1	0.0	0.0	No
Lemon Avenue to Colt Lane	56.9	57.1	57.3	0.4	0.2	No
East of Colt Lane	56.6	56.8	56.8	0.2	0.0	No
La Puente Road						
West of Lemon Avenue	66.1	66.2	66.2	0.1	0.0	No
East of Lemon Avenue	64.5	64.6	64.6	0.1	0.0	No
Valley Boulevard						
West of Lemon Avenue	70.0	70.2	70.2	0.2	0.0	No
East of Lemon Avenue	70.2	70.3	70.3	0.1	0.0	No
Project Driveway	-	-	43.4	-	-	-

Sources:
Michael Baker International, March 2016
Noise modeling is based on traffic data within the *Brookside Project Traffic Impact Analysis, prepared by* Michael Baker International (November 20, 2015).
Notes: ADT = average daily traffic; dBA = A-weighted decibels; CNEL = community noise equivalent level

As indicated in *Table 5.10-12* the proposed project would not result in long-term mobile noise impacts based on proposed project-generated traffic as well as cumulative and incremental noise levels. None of the roadway segments would exceed both the *Incremental Effects* and *Combined Effects* criteria; thus, none of the roadway segments would be significantly impacted. Therefore, the proposed project in combination with cumulative background traffic noise levels would result in a less than significant cumulative impact in this regard.

Level of Significance Before Mitigation: Less Than Significant Impact for cumulative stationary and mobile noise.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact for cumulative stationary and mobile noise.

5.10.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in no or less than significant project and cumulative impacts related to noise during both construction and operation with adherence to the identified mitigation measure and compliance with the applicable Federal, State, and local regulatory requirements. As such, no significant unavoidable impacts would result from implementation of The Brookside Project.

5.10.7 SOURCES CITED

City of Walnut, *City of Walnut Municipal Code*, current through Ordinance 15-07 and the October 2015 code supplement.

City of Walnut, *Fire Department,* http://ci.walnut.ca.us/general.asp?id=154, accessed March 23, 2016.

Federal Highway Administration, *Effective Noise Control During Nighttime Construction*, 2006, http://ops.fhwa.dot.gov/wz/workshops/accessible/Schexnayder _paper.htm

Federal Highway Administration, *Roadway Construction Noise Model (FHWA-HEP-05-054),* January 2006.

Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Guidelines*, May 2006.

Federal Highway Administration, *Highway Traffic Noise Prediction Model (FHWA-RD-77-108)*.

Federal Highway Administration, *Traffic Noise Model Version 2.5,* 2004.

Google Earth, 2016.

Harris, Cyril M., *Handbook of Noise Control,* 1979.

Los Angeles County Airport Land Use Commission, *Brackett Field Airport Land Use Compatibility Plan Noise and Overflight Factors Map*, December 9, 2015.

Michael Baker International, *Brookside Project Traffic Impact Analysis,* November 20, 2015.

Michael Baker International, *The Brookside Tentative Tract No. 72798,* May 20, 2015.

Michael Baker International, *The Brookside Concept Site Plan Tentative Tract No. 72798,* May 20, 2015.

Office of Planning and Research, California, *General Plan Guidelines*, October 2003.

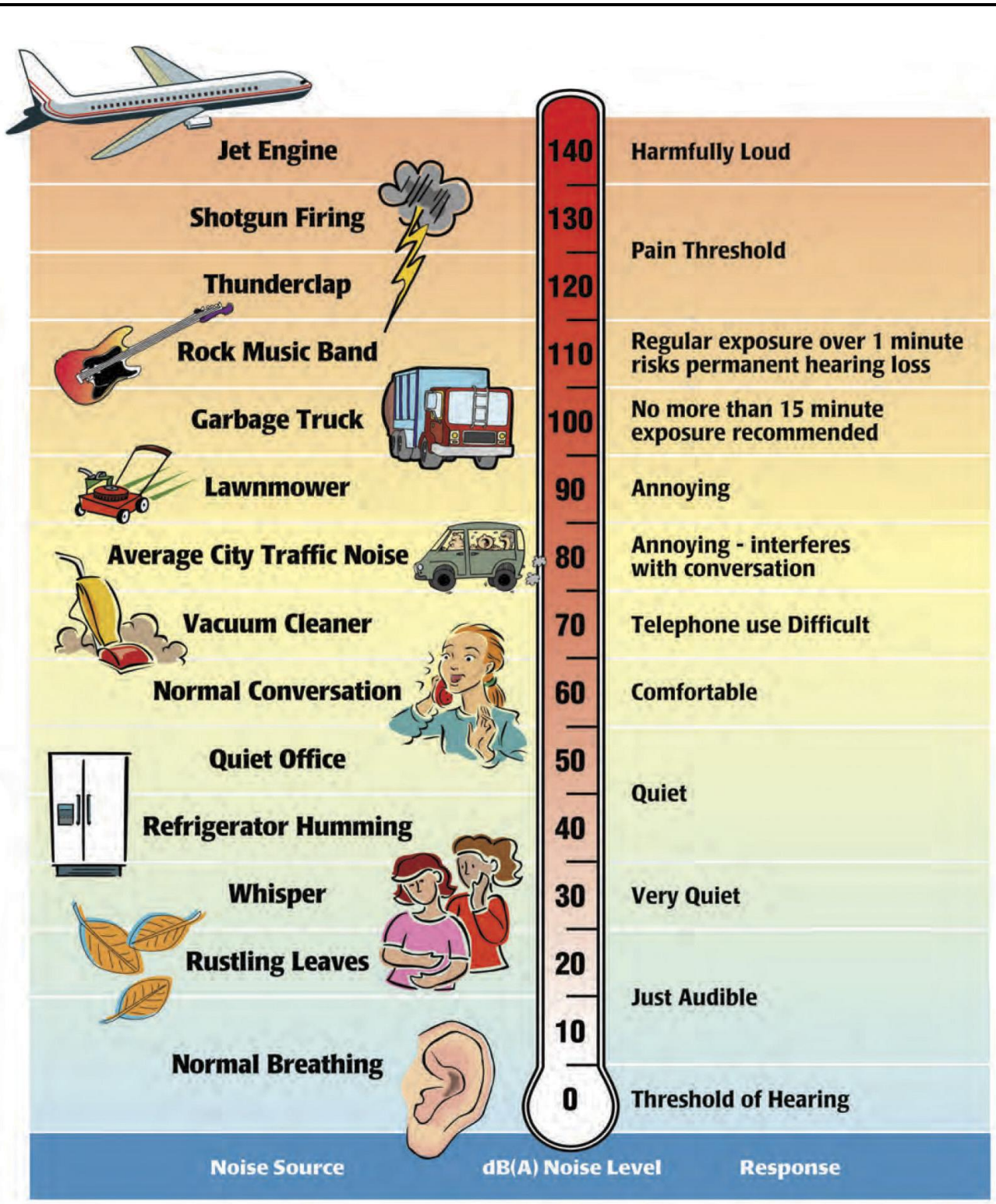
State of California, Governor's Office of Planning and Research, *General Plan Guidelines,* October 2003.

U.S. Department of Housing and Urban Development, *The Noise Guidebook*, March 2009.

U.S. Environmental Protection Agency, *Noise Effects Handbook – A Desk Reference to Health and Welfare Effects of Noise*, October 1979 (revised July 1981).

U.S. Environmental Protection Agency, *Protective Noise Levels (EPA 550/9-79-100)*, November 1979.

Urban Engineering, *City of Walnut General Plan Noise Element*, July 1978.

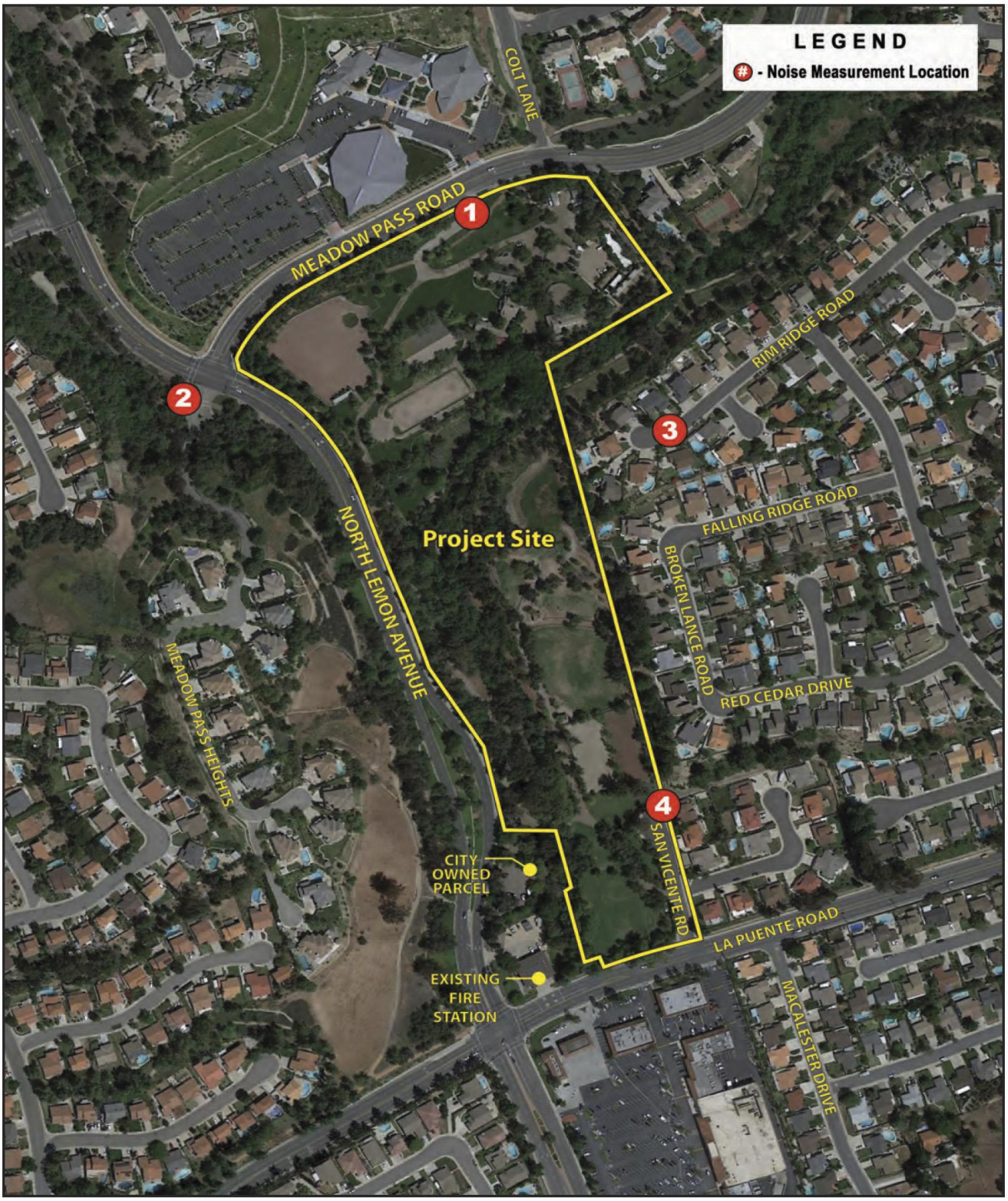


Source: Environmental Protection Agency, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (EPA/ONAC 550/9-74-004), March 1974.

The Brookside Project
Environmental Impact Report

Exhibit 5-10.1

COMMUNITY ENVIRONMENTAL NOISE LEVELS



Source: Michael Baker International, April 2016

The Brookside Project
Environmental Impact Report

Exhibit 5-10.2

NOISE MEASUREMENT LOCATIONS

Source: Michael Baker International, April 2016

The Brookside Project
Environmental Impact Report

Exhibit 5-10.3

NOISE MODELING LOCATIONS

5.11 FIRE PROTECTION

This section provides an analysis of fire services, which is based on information provided by the County of Los Angeles Fire Department (LACoFD). The LACoFD maintains ultimate review and approval authority over aspects of the proposed project that relate to fire protection, and may identify further recommendations and/or requirements.

5.11.1 REGULATORY SETTING

STATE

Fire Hazard Severity Zones

The California Department of Forestry and Fire Protection (CAL FIRE) created Fire Hazard Severity Zones using a computer model that factor in the fire history, existing and potential fuel (natural vegetation), flame length, blowing embers, terrain, and typical weather for an area. The severity of the hazard is based on the likelihood that an area will burn over a 30- to 50-year period without fuel-reduction efforts. Given the results of the modeling, the State identifies an area as a "moderate," "high," or "very high" fire hazard severity zone.

Wildland-Urban Interface Fire Area Building Standards

Title 24, Part 2 of *California Code of Regulations* (*CCR*), also known as the *2010 California Building Standards Code* (*CBSC*), addresses building standards for new structures constructed in or near a designated fire hazard severity zone. New buildings located in any fire hazard severity zone must comply with all sections of the current *CBSC*. Specifically, minimum standards are established for materials and to provide a reasonable level of protection from wildfire exposure for buildings in Wildland-Urban Interface (WUI) Fire Areas. Ignition-resistant materials and design are required to reduce the risk from flame or burning embers projected by a vegetation fire.

California Fire Plan

CAL FIRE and the State Board of Forestry (Board) regulate wildland fire protection in California through the *2010 Strategic Fire Plan* (*Fire Plan*), June 2010. The mission of the Board is to lead California in developing policies and programs that serve the public interest in environmentally, economically, socially sustainable forest and rangeland management, and a fire protection system that protects and serves the people of the state. In concert with the mission of the Board, the mission of CAL FIRE is to serve and safeguard the people and protect the property and resources of California. The central goals of the Fire Plan that are critical to reducing and preventing the impacts of fire revolve around both suppression efforts and fire prevention efforts.

LOCAL

Walnut Fire Code

Walnut City Code Title III Public Health, Safety and Welfare, Chapter 13 Fire Prevention, adopts as its Fire Code the fire code as adopted by Ordinance No. 14-0492 of the County of Los Angeles, entitled "Fire Code, County of Los Angeles, 2014."

Walnut General Plan

The City of Walnut Public Safety Element introduces safety considerations in the planning process in order to reduce the potential for loss of life, injuries, damage to property, or economic and social dislocation resulting from fire, geologic hazard, or seismic hazards.

In order to provide an environment which is reasonably and economically safe from hazards, permits the residents of Walnut to conduct their daily lives free from fear and apprehension, and minimizes as much as possible the loss of life, injuries, damage to property, and social and economic dislocation resulting from regional and local seismic activity, the following policies are established:

1. Provide for the highest quality fire, police, and health protection feasible for all Walnut residents.

3. Provide fast, efficient and reliable assistance to disaster victims and also to areas where conditions warrant evacuation of people and property.

4. Intensify public education programs pertaining to fire and major geologic problems.

5.11.2 ENVIRONMENTAL SETTING

FIRE PROTECTION

The City of Walnut is within the jurisdiction and is part of the Consolidated Fire Protection District of Los Angeles County, also known as the Los Angeles County Fire Department (LACoFD). LACoFD's jurisdictional area encompasses approximately 2,305 square miles and includes 58 cities and all unincorporated area of Los Angeles County.

Two fire stations serve Walnut: Fire Station 61 and Fire Station 146. Fire Station 61 is located at 20011 La Puente Road, adjacent to the southwest boundary of the project site. Fire Station 146 is located at 20604 Loyalton Drive approximately 2.6 miles northeast of the project site.

Fire Station 61 is the jurisdictional station (1st due) for the project site responding to all emergencies including accidents, fires and hazardous materials spills. This station is staff with a three-person engine company (one fire captain, one fire fighter specialist, and one fire fighter paramedic) and two-person paramedic squad (two fire fighter paramedics).

Fire Station 146 has one fire engine and also responds to the same emergencies as Fire Station. 61 and provides automatic aid to West Covina. In the event that a mutual aid emergency will be for a period exceeding a one half-hour, another engine will be deployed to this Station. This is so that a unit is available to respond to other emergencies that might occur.

LACoFD uses national guidelines of a five-minute response time for 1st arriving unit for fire and EMS responses and eight minutes for the advanced life support (paramedic) unit in urban areas.

LACoFD has indicated that current staff levels and facilities are adequate for the project area.

FIRE HAZARDS

Natural fires caused by lightning or spontaneous ignition are very infrequent and represent little threat to the safety of the community. Natural areas of dry vegetation adjacent to urban areas such as the San Jose Hills are exposed to man-induced fire hazards and are designated as high fire risk areas during the dry season. During extreme dry periods combined with high winds, fire in the San Jose Hills has the potential of becoming a major threat to lives and property in the community above La Puente Road.

The project site is located within a Non-Very High Fire Hazard Severity Zone[1] for local, State, or Federal responsibility areas. Very High Fire Hazard Severity Zones are located in the northeastern portion of the City.

FIRE PREVENTION

Development within the City is subject to compliance with all relevant LACoFD requirements, which include ingress and egress access for emergency response, access, and fire and life safety requirements during construction, water mains, fire flows and hydrants, access roadways to fire department apparatus and maintenance of access roads and fire sprinkler systems. Specific fire and life safety requirements for construction are addressed at building fire plan check.

5.11.3 SIGNIFICANCE THRESHOLD CRITERIA

Environmental impact thresholds as indicated in *CEQA Guidelines* Appendix G (Environmental Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it would:

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

Based on these significant thresholds and criteria, the proposed project's effects have been categorized as either "no impact," a "less than significant impact," or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through application of mitigation measures, it is categorized as a significant unavoidable impact.

[1] Source: Walnut Very High Fire Hazard Severity Zones in LRA as Recommended by CAL FIRE Map, September 2011.

5.11.4 PROJECT IMPACTS AND MITIGATION MEASURES

FIRE SERVICES

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD RESULT IN IMPACTS TO FIRE SERVICES.**

Impact Analysis: Implementation of the proposed project would allow for increased development on the project site, including residential and open space uses. The increased development could result in an increased demand for fire protection services to the project area. LACoFD has estimated that Fire Station 61 would have an emergency response time of less than two minutes to the project site.

While an increased demand for services may occur, the LACoFD has confirmed that project implementation would not result in the need for new or physically altered fire facilities in order to serve the proposed project or additional staffing.[2] The LACoFD anticipates that property tax revenue generated by the proposed project would mitigate any impact the proposed project may have on fire department services.

Future construction of single-family homes would be reviewed on a project-by-project basis and would be required to comply with *Walnut City Code* Title III Public Health, Safety and Welfare, Chapter 13 Fire Prevention and fire department requirements such as emergency response access and water requirements. Adherence to the recommended mitigation measures and conditions of approval identified by the LACoFD, and compliance with the *Walnut City Code* ensures that project implementation would result in a less than significant impact to fire protection services.

Refer to Section 5.7, Hazards and Hazardous Materials, for a discussion of potential hazardous materials.

Level of Significance Before Mitigation: Potentially Significant Impact.

Mitigation Measures:

Construction

FP-1 Adequate access to all buildings on the project site shall be provided and properly maintained for emergency vehicles during the building construction process to the satisfaction of the County of Los Angeles Fire Department.

FP-2 Adequate water availability shall be provided to service construction activities.

Operational

FP-3 All on-site development shall comply with the applicable Los Angeles County and City of Walnut code requirements for construction, access, water mains, fire flows, and fire hydrants, as stipulated by the Los Angeles County Fire Department or the City of Walnut through project approvals or building plan reviews.

[2] County of Los Angeles Fire Department, Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, July 19, 2016.

FP-4 Prior to the issuance of building permits, the Applicant, or responsible party, shall obtain the necessary clearances from and shall comply with all applicable conditions imposed by Los Angeles County Fire Department, including but not limited to those from the Planning Division, Land Development Unit, Forestry Division, or Fuel Modification Unit.

FS-5 Access to and around structures shall meet Los Angeles County Fire Department and California Fire Code requirements.

FP-6 Prior to issuance of building permits, a will-serve letter from the Walnut Valley Water District shall be obtained by the Applicant, which states that the Walnut Valley Water District can adequately meet water flow requirements.

FS-7 A water supply system shall be in place to supply fire hydrants and automatic fire sprinkler systems.

FS-8 All new structures shall have automatic fire sprinkler systems.

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.

5.10.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT AND OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS TO FIRE SERVICES.**

Impact Analysis: Neighboring cities, including San Dimas, Pomona, and Diamond Bar also receive fire protection services from the LACoFD. Implementation of the proposed project and related cumulative projects could increase demand on fire protection services provided by the LACoFD. Individual cities have standards for reviewing new development projects to ensure that adequate fire protection services would be available and that fire codes and requirements are met. Each cumulative project would be reviewed on a project-by-project basis for compliance with minimum standards and if necessary, would be required to mitigate to the extent feasible potential impacts to fire protection services associated with the proposed development. As stated, the proposed project would result in less than significant impacts to fire protection services. Therefore, implementation of the proposed project would not result in significant cumulative impacts in regards to fire protection services.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.11.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in less than significant project and cumulative impacts related to fire protection services and facilities during both construction and operation with adherence to the identified mitigation measures and compliance with the City's City Code and LACoFD conditions of approval for individual development projects. As such, no significant unavoidable impacts would result from implementation of The Brookside Project.

5.11.7 SOURCES CITED

City of Walnut, *City of Walnut General Plan,* adopted July 1978 (amendments through 2002).

City of Walnut, *Walnut City Code* Title III Public Health, Safety and Welfare, Chapter 13 Fire Prevention.

County of Los Angeles Fire Department, Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, written correspondence, July 19, 2016.

County of Los Angeles Fire Department, *Walnut Very High Fire Hazard Severity Zones in LRA as Recommended by CAL FIRE Map*, September 2011.

5.12 POLICE PROTECTION

This section provides an analysis of police services, which is based on information provided by the Los Angeles County Sheriff's Department (LASD). The LASD maintains ultimate review and approval authority over aspects of proposed development that relate to police protection, and may identify further recommendations and/or requirements.

NOTE: STILL AWAITING RESPONSE FROM LASD.

5.12.1 REGULATORY SETTING

CALIFORNIA PENAL CODE

The *California Penal Code* establishes the basis for the application of criminal law in California.

5.12.2 ENVIRONMENTAL SETTING

The LASD is a law enforcement agency that serves Los Angeles County with an area totaling approximately 4,084 square miles and a population of almost 10 million people It is the largest Sheriff's Department in the world, with approximately 18,000 employees.

LASD provides general law enforcement services to 40 contract cities, 90 unincorporated communities, 216 facilities, hospitals, and clinics located throughout the County, nine community colleges, the Metropolitan Transit Authority, and 47 Superior Courts. LASD also provides services such as laboratories and academy training to smaller law enforcement agencies within the County. Additionally, LASD is responsible in securing approximately 18,000 inmates daily in 7 custody facilities which includes providing food and medical treatment.

The LASD provides law enforcement services to the City of Walnut. The sheriff's station serving the City of Walnut is the Walnut/Diamond Bar Station located at 21695 East Valley Boulevard in the City of Walnut. The Walnut Diamond Bar Station is located approximately 3 miles east of the project site.

LASD's targets for response times are 60 minutes for routine calls; 20 minutes for priority calls; and 10 minutes for emergency calls. Current response times are 35.4 minutes for routine calls, 6.8 minutes for priority calls and 5.9 minutes for emergency calls.[1]

Staffing is determined by the City in combination with an agreement that there are sufficient units to handle workload. According to the LASD, current staff levels are sufficient.[2]

5.12.3 SIGNIFICANCE THRESHOLD CRITERIA

Environmental impact thresholds as indicated in *CEQA Guidelines* Appendix G (Environmental Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it would:

[1] Los Angeles County Sheriff's Department, Sgt. John L. Carter, Walnut Liaison Sergeant, email correspondence, date.
[2] Ibid.

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

Based on these significant thresholds and criteria, the proposed project's effects have been categorized as either "no impact," a "less than significant impact," or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through application of mitigation measures, it is categorized as a significant unavoidable impact.

5.12.4 PROJECT IMPACTS AND MITIGATION MEASURES

POLICE SERVICES

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD RESULT IN IMPACTS TO POLICE SERVICES.**

Impact Analysis: Implementation of the proposed project would allow for increased development within the Plan Area, including residential and open space uses. The increased development could result in an increased demand for police protection services to the project area. While an increased demand for services may occur, the LASD has confirmed that project implementation would not result in a significant impact and additional calls for service are not anticipated to require any additional units.[3] Further, the LASD does not anticipate the need for any new construction of facilities as a result of the proposed project. However, the LASD may make suggestions to the City for increased services once the proposed project is complete and if any unanticipated problems arise.[4] Through contractual agreements, the City and LASD would ensure that adequate law enforcement services are available to serve the City. Impacts would be less than significant in this regard.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.12.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT AND OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS TO POLICE SERVICES.**

Impact Analysis: The cities wherein cumulative development projects would occur are served either by LASD or their own police departments. Thus, development associated with the proposed project and related cumulative projects within neighboring jurisdictions would not result in cumulatively considerable impacts on law enforcement services. Development of the proposed project and cumulative projects within the City of Walnut could result in increased

[3] Ibid.
[4] Ibid.

demand on police protection services provided by LASD. Individual development projects would be reviewed on a project-by-project basis to determine potential impacts to law enforcement services as a result of the proposed development. The City would continue to coordinate with the LASD through their contractual agreement to ensure that adequate personnel and facilities are available to serve the City. Cumulative impacts would be less than significant in this regard.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.12.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in less than significant project and cumulative impacts related to police protection services and facilities during both construction and operation. As such, no significant unavoidable impacts would result from implementation of The Brookside Project.

5.12.7 SOURCES CITED

Los Angeles County Sheriff's Department, xxxxx, title, email correspondence, date.

5.13 TRAFFIC

The purpose of the Traffic Impact Analysis is to evaluate development of the proposed project from a traffic and circulation standpoint. This analysis considers impacts on local intersections and regional transportation facilities. Information in this section is based on information and conclusions contained in the following study:

- *The Brookside Project (Tentative Tract No. 72798) in Walnut Traffic Impact Analysis*, Michael Baker International, November 20, 2015 (included in its entirety as Appendix R).

The traffic analysis provides an evaluation of study area intersections for the following scenarios:

- Existing Conditions
- Existing Plus Ambient Growth (E+A) Conditions;
- Existing Plus Ambient Growth with Project (E+A+P) Conditions
- Existing Plus Ambient Growth Plus Cumulative with Project (E+A+C+P) Conditions

In coordination with City Staff, the following five intersections have been identified for analysis in this traffic study and are shown on *Exhibit 5.13-1*, *Project Study Area:*

1. Lemon Avenue at Amar Road
2. Lemon Avenue at Meadow Pass Road
3. Lemon Avenue at La Puente Road
4. Lemon Avenue at Valley Boulevard
5. Colt Lane – Project Driveway at Meadow Pass Road

5.13.1 REGULATORY SETTING

CALIFORNIA DEPARTMENT OF TRANSPORTATION

Caltrans publishes a document entitled *Guide for the Preparation of Traffic Impact Studies (Guide)*, which provides guidelines and recommended elements of traffic studies for projects that could potentially impact State facilities such as State Route highways and freeway facilities. This is a State-level document that is used by each of the Caltrans District offices.

The *Guide* defines when traffic studies should be conducted to address impacts to state facilities, but does not define quantitative impact standards. The *Guide* states that Measures of Effectiveness (MOEs) are used to evaluate Caltrans facilities, and that the agency strives to maintain a Level of Service (LOS) value of C on its facilities. However, the *Guide* states that the appropriate target LOS varies by facility and congestion level, and is defined differently by Caltrans depending on the analyzed facility.

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY

According to the *2010 Congestion Management Program* (*CMP*) published by Los Angeles County Metropolitan Transportation Authority, those proposed projects which meet the following criteria must be evaluated:

- All CMP arterial monitoring intersections, including monitored freeway on- or off-ramp intersections, where the proposed project will add 50 or more trips during either the AM or PM weekday peak hours (of adjacent street traffic).

- Mainline freeway monitoring locations where the project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.

CITY OF WALNUT

City of Walnut General Plan

The Circulation Element consists of the general location and extent of existing and proposed major thoroughfares, transportation routes, and terminals and facilities, all correlated with the land use, environmental resources and other related elements of this General Plan. Adequate circulation facilities are necessary for the movement of people and goods in and about the planning area as well as -the transit of people and goods through the planning area.

Circulation Element goals and policies that pertain to the proposed project include the following:

The policy of the City of Walnut is to continue its role as a suburban residential community and to preserve its rural character. The adopted goals of the City of Walnut Circulation Element are:

1. Provide a circulation system which is consistent with and will support the desired rural character and which is responsive at both the local, community and regional levels to economic, social, energy conservation, and environmental needs.

2. Provide for local scenic routes developed to preserve and enhance the beauty of Walnut with provision for land controls to regulate development along these routes.

3. Give consideration to convenient and safe paths for pedestrian and bicycle travel as alternative forms of transportation.

5.13.2 ANALYSIS METHODOLOGY

This section describes the intersection analysis, performance criteria, thresholds of significance, and traffic volume forecast methodologies utilized for the traffic analysis.

INTERSECTION ANALYSIS METHODOLOGY

Level of service (LOS) is commonly used as a qualitative description of intersection operation and is based on the capacity of the intersection and the volume of traffic using the intersection. Level of service (LOS) is commonly used as a qualitative description of intersection operation and is based on the capacity of the intersection and the volume of traffic using the intersection. The Intersection Capacity Utilization (ICU) analysis methodology is utilized to determine the operating LOS of the signalized intersections. For unsignalized intersections, the Highway Capacity Manual (HCM) analysis methodology is utilized to determine the operating.

Intersection Capacity Utilization (ICU) Method for Signalized Intersection

The signalized intersections are analyzed using the Intersection Capacity Utilization (ICU) method. The ICU technique estimates the volume-to-capacity (V/C) ratio for an intersection based on the individual V/C ratios for the conflicting traffic movements. The ICU value represents the percent signal green time or capacity of the intersection movements. It should be noted that the ICU method assumes uniform traffic distribution per intersection approach lane and optimal signal timing.

The ICU value translates to a LOS estimate, which is a relative measure of the intersection performance. The grade scales of LOS have been defined with the corresponding ICU value range as shown below. The ICU value is the sum of the critical volume-to-capacity ratios at an intersection; it is not intended to be indicative of the LOS of each of the individual turning movements.

Level of Service	Intersection Capacity Utilization (ICU)	
	Volume/Capacity (V/C)	Description
A	≤ 0.600	Excellent
B	> 0.601 ≤ 0.700	Very Good
C	> 0.700 to ≤ 0.800	Good
D	> 0.800 to ≤ 0.900	Fair
E	> 0.900 to ≤ 1.000	Poor
F	> 1.000	Failure

Highway Capacity Manual (HCM) Method for Unsignalized Intersection

The 2000 HCM analysis methodology describes the operation of an intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding ranges of stopped delay experienced per vehicle for signalized and unsignalized intersections as shown below.

Level of Service	Highway Capacity Manual (HCM)	
	Delay (seconds/vehicle)	Description
A	≤ 10.0	Little or no delay
B	> 10.0 to ≤ 15.0	Short traffic delay
C	> 15.0 to ≤ 25.0	Average traffic delay
D	> 25.0 to ≤ 35.0	Long traffic delay
E	> 35.0 to ≤ 50.0	Very long traffic delay
F	> 50.0	Severe congestion
Source: 2000 Highway Capacity Manual (HCM)		

Level of service is based on the average stopped delay per vehicle for all movements of signalized intersections and all-way stop-controlled intersections; for one-way or two-way stop-controlled intersections, LOS is based on the worst stop-controlled approach.

5.13.3 ENVIRONMENTAL SETTING

EXISTING ROADWAY SYSTEM

Roadway Description

Exhibit 5.13-2, *Existing Intersection Geometry* illustrates the existing intersection controls and lane geometry for the traffic analysis study area. The characteristics of the roadway system in the vicinity of the project site are described below.

Lemon Avenue is a four-lane divided roadway with a raised median trending in a north-south direction. The posted speed limit on Lemon Avenue, within the project vicinity, is 35 miles per hour north and 40 miles per hour south of Meadow Pass Road. On-street parking is prohibited.

Amar Road is a four-lane divided roadway with a raised median trending in an east-west direction. The posted speed limit on Amar Road is 45 miles per hour within the project vicinity. On-street parking is prohibited.

Meadow Pass Road is a two-lane divided roadway with a two way left turn lane (TWLTL) east of Lemon Avenue, trending in an east-west direction. The street changes name to Meadow Pass Heights west of Lemon Avenue and is a two-lane undivided roadway. The posted speed limit on Meadow Pass Road is 30 miles per hour west of Lemon Avenue, within the project vicinity. On-street parking is permitted east of Lemon Avenue.

La Puente Road is a four-lane roadway trending in an east-west direction. The street is undivided west and divided with painted median east of Lemon Avenue. The posted speed limit on La Puente Road, within the project vicinity, is 45 miles per hour west of Lemon Avenue and 40 miles per hour east of Lemon Avenue. On-street parking is prohibited.

Valley Boulevard is a five-lane divided roadway (three-eastbound, two-westbound) with a raised median trending in an east-west direction. The posted speed limit on Valley Boulevard is 50 miles per hour within the project vicinity. On-street parking is prohibited.

EXISTING CONDITIONS TRAFFIC VOLUMES

To determine the existing operation of the study intersections, weekday morning (AM), weekday afternoon (PM) and Sunday Mid-Day (MD) peak hour intersection movement counts were collected in September 2015 when school is session.

Weekday AM peak period intersection counts were collected from 7:00 AM to 9:00 AM, weekday PM peak period intersection counts were collected from 4:00 PM to 6:00 PM, and Sunday Mid-Day peak period intersection counts were collected from 10:00 AM to 12:00 PM.

The counts used in this analysis were taken from the highest hour within the peak period counted. Traffic Impact Analysis Exhibit 5 shows existing conditions weekday AM, weekday PM and Sunday MD peak hour volumes at the study intersections. Traffic count data sheets are included in Appendix R.

EXISTING CONDITIONS PEAK HOUR INTERSECTION LEVEL OF SERVICE

Table 5.13-1, *Existing Conditions Intersection Summary* summarizes the intersection LOS analysis results for existing weekday AM, weekday PM and Sunday Mid-Day peak hour conditions. Appendix Rx includes the existing conditions intersection operations analysis worksheets. As shown in *Table 5.13-1*, all study area intersections are operating at LOS D or better.

Table 5.13-1
Existing Conditions Intersection Summary

Intersection			Existing Conditions					
			AM Peak		PM Peak		MD Peak	
No.	Name	Type	ICU[1]	LOS	ICU[1]	LOS	ICU[1]	LOS
Signalized Intersections								
1	Lemon Ave / Amar Rd	Traffic Signal	0.742	C	0.670	B	0.334	A
2	Lemon Ave / Meadow Pass Rd	Traffic Signal	0.543	A	0.498	A	0.481	A
3	Lemon Ave / La Puente Rd	Traffic Signal	0.844	D	0.709	C	0.464	A
4	Lemon Ave / Valley Blvd	Traffic Signal	0.880	D	0.839	D	0.388	A
Unsignalized Intersections								
5	Colt Ln / Meadow Pass Road	Cross-Street Stop; Southbound Stop	11.3	B	10.4	B	9.8	A

Source: Michael Baker International, November 2015

Notes:
1. Signalized: Intersection Capacity Utilization (ICU) Analysis Method, Volume/Capacity (V/C) Ratio Unsignalized: 2000 Highway Capacity Manual (HCM) Analysis Method, Average Delay in Seconds

5.13.4 SIGNIFICANCE THRESHOLD CRITERIA

TRAFFIC IMPACT SIGNIFICANCE CRITERIA

To determine whether the addition of project-generated trips results in a significant impact at a signalized intersection, and thus requires mitigation, the City of Walnut uses the thresholds of significance established in *Traffic Impact Analysis Report Guidelines (County of Los Angeles, January 1, 1997)*. The table below identifies the City of Walnut thresholds of significance for signalized intersections.

Pre-Project Conditions		Project-Related V/C Increase
LOS	V/C Ratio	
C	0.71 – 0.80	0.04 or more
D	0.81 – 0.90	0.02 or more
E/F	0.91 or more	0.01 or more

Source: *Traffic Impact Analysis Report Guidelines*, County of Los Angeles, January 1, 1997.

PEAK HOUR PERFORMANCE CRITERIA

The City of Walnut General Plan Circulation Element does not identify a target LOS for peak hour intersection operation.

CEQA SIGNIFICANCE CRITERIA

Environmental impact thresholds as indicated in *CEQA Guidelines* Appendix G (Initial Study Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it 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.

- 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; refer to Section 8.0, Effects Found Not To Be Significant.

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

- Result in inadequate emergency access.

- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities; refer to Section 8.0, Effects Found Not To Be Significant.

5.13.5 PROJECT IMPACTS AND MITIGATION MEASURES

PROPOSED PROJECT

The proposed project consists of 28 single-family detached residential dwelling units. The proposed project would replace the non-operational Brookside Equestrian Center, located at 800 Meadows Pass Road. The proposed project would replace most of the existing facilities for the non-operational Brookside Equestrian Center, except for a few historical buildings that would remain. Access to the project site would be realigned to a stop-controlled driveway on Meadow Pass Road located at the easterly project boundary approximately 100 feet east of Colt Lane. The proposed project is anticipated to be completed and operational in 2017.

PROJECT TRIP GENERATION

To calculate trips forecast to be generated by the proposed project, trip generation rates published in the *Institute of Transportation Engineers (ITE) Trip Generation Manual (9th Edition, 2012)* were utilized. *Table 5.13-2*, *Project Traffic Generation* summarizes the forecast project traffic generation

As shown in *Table 5.13-2*, the proposed project is forecasted to generate approximately 267 daily trips with 21 AM peak hour trips and 28 PM peak hour trips during a typical weekday conditions. On Sundays, the proposed project is forecast to generate approximately 24 MD peak hour trips.

Table 5.13-2
Project Traffic Generation

TRIP RATES														
Project				WD	AM Peak			PM Peak			WE	MD Peak		
No.	Land Use	Code[1]	Unit[2]	Daily	Total	In%	Out%	Total	In%	Out%	Daily	Total	In%	Out%
1	Single-Family Detached Housing	ITE 210	DU	9.52	0.75	25%	75%	1.00	63%	27%	8.62	0.86	53%	47%
TRAFFIC GENERATION														
Project				WD	AM Peak			PM Peak			WE	MD Peak		
No.	Land Use	Quantity[2]		Daily	Total	In	Out	Total	In	Out	Daily	TOTAL	IN	OUT
1	Single-Family Detached Housing	28 DU		**267**	**21**	5	16	**28**	10	10	**241**	**24**	13	11

Source: Michael Baker International, November 2015

Notes:
1. Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th Edition*, 2012
2. DU = Dwelling Unit

PROJECT TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

Exhibit 5.13-3, *Project Trip Distribution* shows the forecast trip distribution of the proposed project based on review of existing traffic data, land uses, and the roadway network in the project vicinity.

Traffic Impact Analysis Exhibit 7 shows the corresponding assignment of project-generated weekday AM, weekday PM peak hour and Sunday MD peak hour trips assuming the trip distribution patterns illustrated in *Exhibit 5.13-3*.

OPENING YEAR 2017 WITH PROJECT CONDITIONS

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD CAUSE A SIGNIFICANT INCREASE IN TRAFFIC AT LOCAL STUDY INTERSECTIONS UNDER OPENING YEAR 2017 CONDITIONS WHEN COMPARED TO THE TRAFFIC CAPACITY OF THE STREET SYSTEM.**

Impact Analysis: Near-term future traffic forecasts have been developed to evaluate cumulative conditions for the anticipated project opening year. Project completion is estimated to occur in Year 2017. Opening Year 2017 traffic forecast volumes were developed using the approach described below.

Future Traffic Forecast

Ambient Growth Rate

A background ambient growth rate of 0.5 percent per year is used to account for the growth of existing traffic when the project is anticipated to open in two years in Year 2017. An annual growth rate of 0.5 percent for two years from Year 2015 to 2017 is a total of 1 percent. The annual growth rate is derived from the general traffic volume growth factors published in the *Los Angeles County 2010 Congestion Management Program* for the West Covina area (Regional Statistical Area 26), which includes the City of Walnut. It should be noted this is a conservative assumption since the growth rate is applied to all movements at the study intersections.

Cumulative Development Traffic

A summary of cumulative projects is provided in Section 4.0. The location of each of the cumulative projects relative to the project site is shown on *Exhibit 4-1* in Section 4.0. *Table 5.13-3*, *Cumulative Development Traffic Generation* summarizes the traffic generated by the identified cumulative developments. As shown in *Table 5.13-3*, the cumulative developments are forecasted to generate approximately 1,927 daily trips with 133 AM peak hour trips, 184 PM peak hour trips during a typical weekday. On Sundays, the cumulative developments are forecasted to generate 175 MD peak hour trips.

Existing Plus Ambient Growth Traffic

Traffic Impact Analysis Exhibit 9 shows Existing Plus Ambient Growth (E+A) conditions weekday AM, weekday PM and Sunday Mid-Day (MD) peak hour intersection traffic volumes.

Existing Plus Ambient Growth with Project Traffic

Traffic Impact Analysis Exhibit 10 shows Existing Plus Ambient Growth with Project (E+A+P) conditions weekday AM, weekday PM and Sunday MD peak hour intersection traffic volumes.

Existing Plus Ambient Growth Plus Cumulative with Project Traffic

Traffic Impact Analysis Exhibit 11 shows Existing Plus Ambient Growth Plus Cumulative with Project (E+A+C+P) conditions weekday AM, weekday PM and Sunday MD peak hour intersection traffic volumes.

Table 5.13-3
Cumulative Development Traffic Generation

TRIP RATES

Cumulative Development				WD	AM Peak			PM Peak			WE	MD Peak		
NO.	Land Use	Code[1]	Unit[2]	Daily	Total	In%	Out%	Total	In%	Out%	Daily	Total	In%	Out%
1	Single-Family Detached Housing	ITE 210	DU	9.52	0.75	25%	75%	1.00	63%	27%	8.62	0.86	53%	47%
3	Condominium/ Townhouse	ITE 230	DU	5.81	0.44	17%	83%	0.52	67%	33%	4.84	0.45	49%	51%
5	Senior Adult Housing - Attached	ITE 252	DU	3.44	0.20	34%	66%	0.25	54%	46%	2.84	0.41	49%	51%
13	Shopping Center	ITE 820	TSF	42.70	0.96	62%	38%	3.71	48%	52%	25.24	3.12	49%	51%

TRAFFIC GENERATION

Cumulative Development			WD	AM Peak			PM Peak			WE	MD Peak		
No./Name	Land Use	Quantity[2]	Daily	Total	In	Out	Total	In	Out	Daily	Total	In	Out
1 / TTM 73294	Single-Family Detached Housing	37 DU	**352**	**28**	7	21	**37**	23	14	**319**	**32**	17	15
	Condominium/ Townhouse	61 DU	**354**	**27**	4	23	**31**	21	10	**295**	**27**	13	14
	Subtotal Trips – Cumulative #1		**706**	**55**	11	44	**68**	44	24	**614**	**59**	30	29
2 / Walnut Esplanade SP	Single-Family Detached Housing	13 DU	**124**	**9**	2	7	**13**	8	5	**112**	**11**	6	5
3 / TTM 71977	Single-Family Detached Housing	13 DU	**124**	**9**	2	7	**13**	8	5	**112**	**11**	6	5
4 / TTM 49059	Single-Family Detached Housing	6 DU	**57**	**4**	1	3	**6**	4	2	**52**	**5**	3	2
5 / TTM 52324	Single-Family Detached Housing	10 DU	**95**	**8**	2	6	**10**	6	4	**86**	**9**	5	4
6 / TTM 61974 & 61975	Senior Adult Housing - Attached	86 DU	**296**	**17**	6	11	**22**	12	10	**244**	**35**	17	18
	Shopping Center	3.810 TSF	**163**	**3**	2	1	**14**	7	7	**96**	**12**	6	6
	Subtotal Trips – Cumulative #6		**459**	**20**	8	12	**36**	19	17	**340**	**47**	23	24
7 / TTM 72844	Single-Family Detached Housing	25 DU	**238**	**19**	5	14	**25**	16	9	**216**	**22**	12	10
8 / TTM 53924	Single-Family Detached Housing	6 DU	**57**	**4**	1	3	**6**	4	2	**52**	**5**	3	2
9 / TTM 67960	Single-Family Detached Housing	7 DU	**67**	**5**	1	4	**7**	4	3	**60**	**6**	3	3
TOTAL CUMULATIVE TRIPS			**1,927**	**133**	33	100	**184**	113	71	**1,644**	**175**	91	84

Source: Michael Baker International, November 2015

Notes:
1. Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th Edition*, 2012
2. DU = Dwelling Unit, TSF = Thousand Square Feet

Future Traffic Scenarios Analysis

The intersection operations analysis below is for future traffic scenarios, based on existing and proposed geometry.

Existing Plus Ambient Growth Intersection Analysis

Table 5.13-4, Existing Pus Ambient Growth With Project Conditions Intersection Analysis Summary summarizes the weekday AM, weekday PM and Sunday Mid-Day (MD) peak hour intersection operations analysis results for Existing Plus Ambient Growth (E+A) conditions, based on existing geometry. Traffic Impact Analysis Appendix D includes the E+A conditions intersection operations analysis worksheets. As shown in *Table 5.13-4*, all study area intersections are projected to operate at LOS D or better.

Existing Plus Ambient Growth with Project Intersection Analysis

Table 5.13-4 summarizes the weekday AM, weekday PM and Sunday Mid-Day (MD) peak hour intersection operations analysis results for Existing Plus Ambient Growth with Project (E+A+P) conditions, based on existing geometry. Traffic Impact Analysis Appendix E includes the E+A+P conditions intersection operations analysis worksheets. As shown in *Table 5.13-4*, all study intersections are projected to operate at LOS D or better.

Table 5.13-4
Existing Pus Ambient Growth With Project Conditions Intersection Analysis Summary

Intersection			Existing Plus Ambient Growth Conditions						Existing Plus Ambient Growth With Project Conditions						Significant Project Impact			
			AM Peak		PM Peak		MD Peak		AM Peak		PM Peak		MD Peak		Increase			Project Impact
No.	Name	Type[1]	ICU / HCM[2]	LOS	ICU / HCM[2]	LOS	ICU / HCM[2]	LOS	ICU / HCM[2]	LOS	ICU / HCM[2]	LOS	ICU / HCM[2]	LOS	AM	PM	MD	
Signalized Intersections																		
1	Lemon Ave / Amar Rd	TS	0.749	C	0.676	B	0.336	A	0.751	C	0.677	B	0.337	A	0.002	0.001	0.001	No
2	Lemon Ave / Meadow Pass Rd	TS	0.548	A	0.502	A	0.485	A	0.557	A	0.514	A	0.500	A	0.009	0.012	0.015	No
3	Lemon Ave / La Puente Rd	TS	0.851	D	0.715	C	0.467	A	0.853	D	0.719	C	0.470	A	0.002	0.004	0.003	No
4	Lemon Ave / Valley Blvd	TS	0.887	D	0.847	D	0.391	A	0.889	D	0.852	D	0.395	A	0.002	0.005	0.004	No
Unsignalized Intersections																		
5	Colt Ln / Meadow Pass Road	CSS: nb/sb	11.4	B	10.4	B	9.8	A	14.3	B	11.3	B	10.8	B	2.9	0.9	1.0	No

Source: Michael Baker International, November 2015

Notes:
1. Intersection Type: TS = Traffic Signal; CS = Cross-Street Stop; nb = Northbound Stop; sb = Southbound Stop
2. Signalized: Intersection Capacity Utilization (ICU) Analysis Method, Volume/Capacity (V/C) Ratio Unsignalized: 2000 Highway Capacity Manual (HCM) Analysis Method, Average Delay in Seconds

Table 5.13-4 shows that the proposed project would result in a significant project impact at the study intersections for Existing Plus Ambient Growth with Project (E+A+P) conditions based on City's threshold criteria. No additional E+A+P off-site roadway improvements are needed for the proposed project.

Existing Plus Ambient Growth Plus Cumulative with Project Intersection Analysis

Table 5.13-5, *Existing Plus Ambient Growth Plus Cumulative With Project Conditions Intersection Analysis Summary*, summarizes the weekday AM, weekday PM and Sunday Mid-Day (MD) peak hour intersection operations analysis results for Existing Plus Ambient Growth Plus Cumulative with Project (E+A+C+P) conditions, based on existing geometry. Traffic Impact Analysis Appendix F includes the E+A+C+P conditions intersection operations analysis worksheets. As shown in *Table 5.13-5*, all study intersections are projected to operate at LOS D or better.

Table 5.13-5 shows that there would not be significant cumulative impacts at the study intersections for Existing Plus Ambient Growth Plus Cumulative With Project (E+A+C+P) conditions based on City's threshold criteria. No additional E+A+C+P off-site roadway improvements are needed.

Table 5.13-5
Existing Plus Ambient Growth Plus Cumulative
With Project Conditions Intersection Analysis Summary

Intersection			Existing Plus Ambient Growth Conditions						Existing Plus Ambient Growth With Project Conditions						Significant Cumulative Impact			
			AM Peak		PM Peak		MD Peak		AM Peak		PM Peak		MD Peak		Increase			Cumulative Impact
No.	Name	Type[1]	ICU / HCM[2]	LOS	ICU / HCM[2]	LOS	ICU / HCM[2]	LOS	ICU / HCM[2]	LOS	ICU / HCM[2]	LOS	ICU / HCM[2]	LOS	AM	PM	MD	
Signalized Intersections																		
1	Lemon Ave / Amar Rd	TS	0.749	C	0.676	B	0.336	A	0.755	C	0.685	B	0.344	A	0.006	0.009	0.008	No
2	Lemon Ave / Meadow Pass Rd	TS	0.548	A	0.502	A	0.485	A	0.563	A	0.521	A	0.508	A	0.015	0.019	0.023	No
3	Lemon Ave / La Puente Rd	TS	0.851	D	0.715	C	0.467	A	0.855	D	0.723	C	0.472	A	0.004	0.008	0.005	No
4	Lemon Ave / Valley Blvd	TS	0.887	D	0.847	D	0.391	A	0.898	D	0.863	D	0.405	A	0.011	0.016	0.014	No
Unsignalized Intersections																		
5	Colt Ln / Meadow Pass Road	CSS: nb/sb	11.4	B	10.4	B	9.8	A	14.5	B	11.4	B	10.9	B	3.1	1.0	1.1	No

Source: Michael Baker International, November 2015

Notes:
1. Intersection Type: TS = Traffic Signal; CS = Cross-Street Stop; nb = Northbound Stop; sb = Southbound Stop
2. Signalized: Intersection Capacity Utilization (ICU) Analysis Method, Volume/Capacity (V/C) Ratio Unsignalized: 2000 Highway Capacity Manual (HCM) Analysis Method, Average Delay in Seconds

Impact Conclusion

The analysis has concluded that the proposed project would result in less than significant impacts to all of the study intersections for the following scenarios;

- Existing Plus Ambient Growth (E+A) Conditions;
- Existing plus Ambient Growth with Project (E+A+P) Conditions
- Existing Plus Ambient Growth Plus Cumulative with Project (E+A+C+P) Conditions.

Access to Other Access Modes

Future residents of the proposed project would have access to other modes of travel (pedestrian, bicycle and transit) to and from the project site.

Pedestrian Circulation

There are crosswalks at the two signalized intersections on Lemon Avenue at Meadow Pass Road and on Lemon Avenue at La Puente Road.

There are existing sidewalks on the east side of Lemon Avenue adjacent to the project site, but no sidewalk exists on the west side of Lemon Avenue. There are sidewalks on both sides of La Puente Road adjacent to the project site. On Meadow Pass Road adjacent to the project site, there are no sidewalks on the south side of the street adjacent to the project site, but there are equestrian trails and pedestrian sidewalks on the opposite (north) side of Meadow Pass Road.

There are adequate pedestrian access features in the vicinity of the project site. The proposed project would provide sidewalks on both sides of the project access road so that there would be continuous path as connecting with the sidewalk on the north side of Meadow Pass Road.

Bicycle Circulation

There are Class II (on-street) bike lanes on Amar Road and La Puente Road. Designated bike lanes do not exist on Lemon Avenue, Meadow Pass Road, or Valley Boulevard. There are some existing unpaved trails that would remain on the east side of Lemon Avenue adjacent to the project site, and the bicycles from the project site may utilize these unpaved trails to connect with the bike lanes on La Puente Road. Otherwise, the bicycles traveling on the project access road from the project site may share the road with motor vehicles on Meadow Pass Road and Lemon Avenue until they reach La Puente Road and Amar Road.

Transit Access

The closest bus stop to the project site is located at the southwest corner of Lemon Avenue and La Puente Road approximately 0.6 miles from the project driveway. Bus routes nearby the project site includes the following:

- La Puente Road – Foothill Transit Bus Route 289
- Amar Road – Foothill Transit Bus Route 486 which is operated by Foothill Transit
- Valley Boulevard – County of Los Angeles Metropolitan Transportation Authority (Metro) Bus Route 190/194

In conclusion, implementation of the proposed project would afford future residents access to other modes of travel (pedestrian, bicycle and transit) to and from the project site. Thus, impacts are considered less than significant.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

CONFLICT WITH APPLICABLE CONGESTION MANAGEMENT PROGRAM

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD RESULT IN A CONFLICT WITH AN APPLICABLE CONGESTION MANAGEMENT PROGRAM.**

Impact Analysis: Projects that meet the following criteria established in the *2010 Congestion Management Program* must be evaluated:

- All CMP arterial monitoring intersections, including monitored freeway on- or off-ramp intersections, where the proposed project will add 50 or more trips during either the AM or PM weekday peak hours (of adjacent street traffic).

- Mainline freeway monitoring locations where the project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.

The proposed project is not forecasted to add 50 or more trips to a CMP arterial monitoring intersection, nor is the proposed project forecasted to add 150 or more trips to a mainline freeway monitoring location during either the AM or PM weekday peak hours; therefore, no CMP traffic impact analysis is required for the proposed project and no impacts would occur in this regard.

Level of Significance Before Mitigation: No Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: No Impact.

SITE ACCESS/TRAFFIC HAZARDS

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD RESULT IN A HAZARDOUS TRAFFIC CONDITION.**

Impact Analysis:

Project Access Control

Vehicular access on the project site would be provided at a northbound stop-controlled full access driveway on Meadow Pass Road located at the easterly project boundary approximately 100 feet east of Colt Lane. Based on the intersection operations analysis shown in *Tables 5.13-4* and *5.13-5*, the project driveway is projected to operate at Level of Service B or better, based

on the proposed intersection control and lane configuration. There is an existing two-way left turn lane (TWLTL) on Meadow Pass Road, and it is recommended that a 100-foot westbound left-turn pocket be provided to facilitate the westbound left-turn movement into the project driveway.

Project Driveway Sight Distance

The corner sight distance has been assessed for the singular project access on Meadow Pass Road which has a posted limit of 30 miles per hour (mph). In accordance with the criteria contained in the *Highway Design Manual, Section 405.1 (May 2012)* published by California Department of Transportation (Caltrans), a minimum corner sight distance of 330 feet should be provided between the exiting vehicle from a driveway and the approaching vehicle on the arterial for a design speed of 30 mph. The purpose of the corner sight distance is to provide adequate time for a vehicle exiting the project driveway to turn left or right without requiring through traffic on Meadow Pass Road to slow down significantly to avoid a collision.

From the perspective of the driver exiting the project driveway looking west toward the eastbound traffic, the 330 feet of corner sight distance occurs at a point in the approaching travel lane slightly west of the existing easterly driveway for the St. Lorenzo Ruiz Catholic Church. An unobstructed line of sight to this point can be achieved by maintaining landscaping low enough to provide a clear line of sight, which may require removal of existing vegetation within the area between the sight line and the curb line. The area to be kept clear of obstructions is defined as the clear sight triangle. Traffic Impact Analysis Exhibit 12 shows the line of sight and the clear sight triangle for the exiting vehicles looking west toward the eastbound traffic.

From the perspective of the driver exiting the proposed project driveway looking east toward the westbound traffic, the 330 feet of corner sight distance occurs at a point on the approaching travel lane near the third property east of the project site. The line of sight to this point is contained within the roadway curb-to-curb; therefore, adequate line of sight would be provided since there is no raised median for potential obstructions.

In conclusion, adequate corner sight distance can be provided for vehicles exiting the project site with some restrictions to the landscaping within the clear sight triangle west of the proposed project driveway with the implementation of Mitigation Measure TRF-1.

Level of Significance Before Mitigation: Potentially Significant Impact.

Mitigation Measures:

TRF-1 The Project Applicant shall remove existing landscaping and/or install new landscaping to create the clear sight triangle west of the project driveway as shown in Traffic Impact Analysis Exhibit 12 prior to xxxxx. The landscaping for the clear site triangle shall be reviewed and approved by the Community Development Department. The Homeowners Association shall be responsible for maintaining the clear site triangle and ensuring the area is free of sight line obstructions.

Level of Significance After Mitigation: Less Than Significant Impact.

5.13.6 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **THE PROPOSED PROJECT ALONG WITH OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS RELATED TO TRAFFIC AND CIRCULATION.**

Impact Analysis: The proposed project, in combination with other development identified in Section 4.0, would contribute to the continued increase of traffic for the City of Walnut, refer to *Exhibit 4-1* for approximate locations of the cumulative projects and *Table 5.13-5* which summarizes the forecast AM peak hour and PM peak hour trip generations of the nine approved/pending projects. The proposed project would not result in a cumulatively considerable traffic and circulation impact in regards to local intersections, consistency with the *Los Angeles County CMP*, traffic hazards due to design features, or create inadequate emergency access. Compliance with the *Municipal Code* and City design standards, along with access requirements stipulated by the Los Angeles County Fire Authority and the Los Angeles County Sheriff Department, cumulative traffic impacts would be reduced to a less than significant level.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

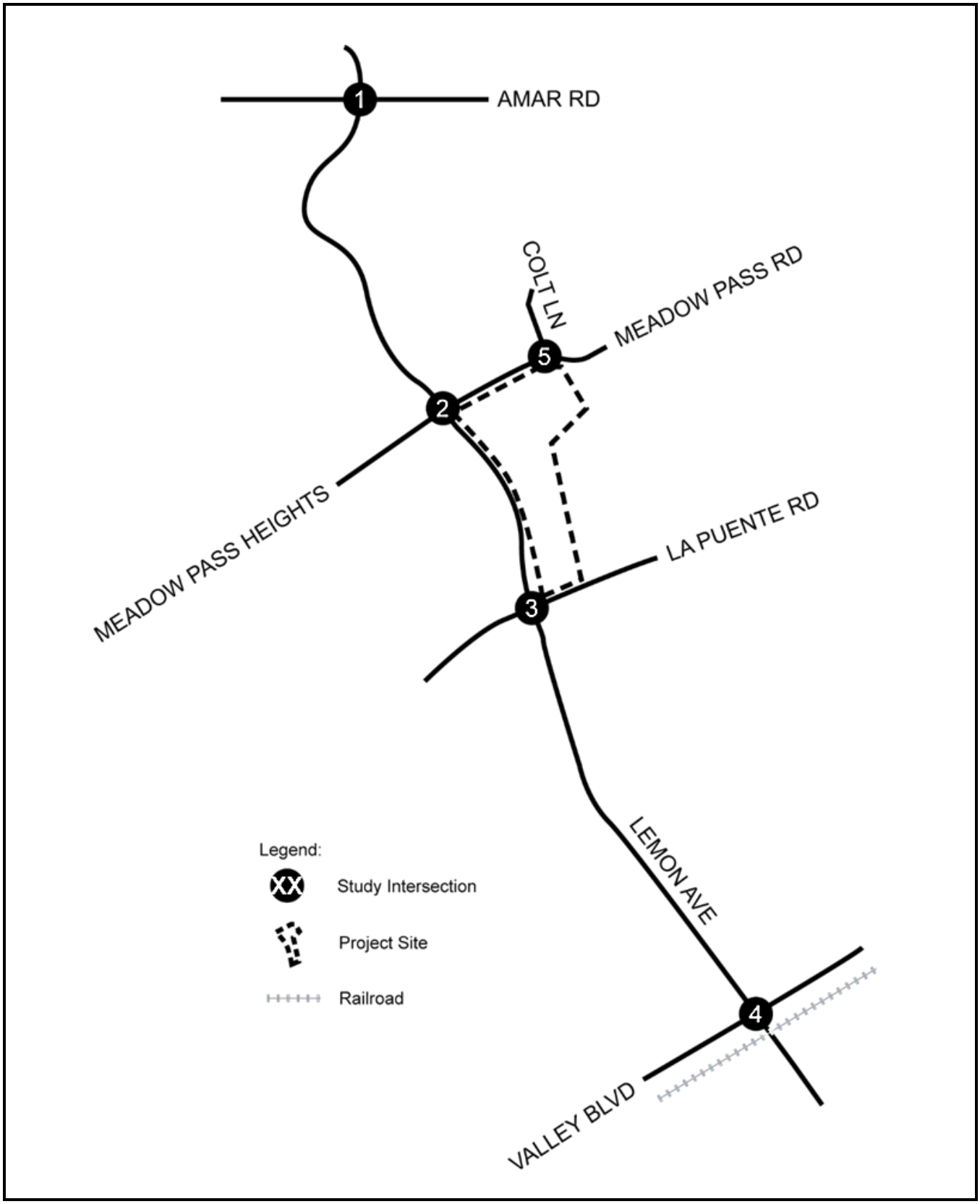
5.13.7 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in less than significant project and cumulative impacts related to traffic or site access/hazardous traffic conditions. As such, no significant unavoidable impacts would result from the implementation of The Brookside Project.

5.13.8 SOURCES CITED

City of Walnut, *City of Walnut General Plan Circulation Element*, July 1978.

The Brookside Project (Tentative Tract No. 72798) in Walnut Traffic Impact Analysis, Michael Baker International, November 20, 2015.

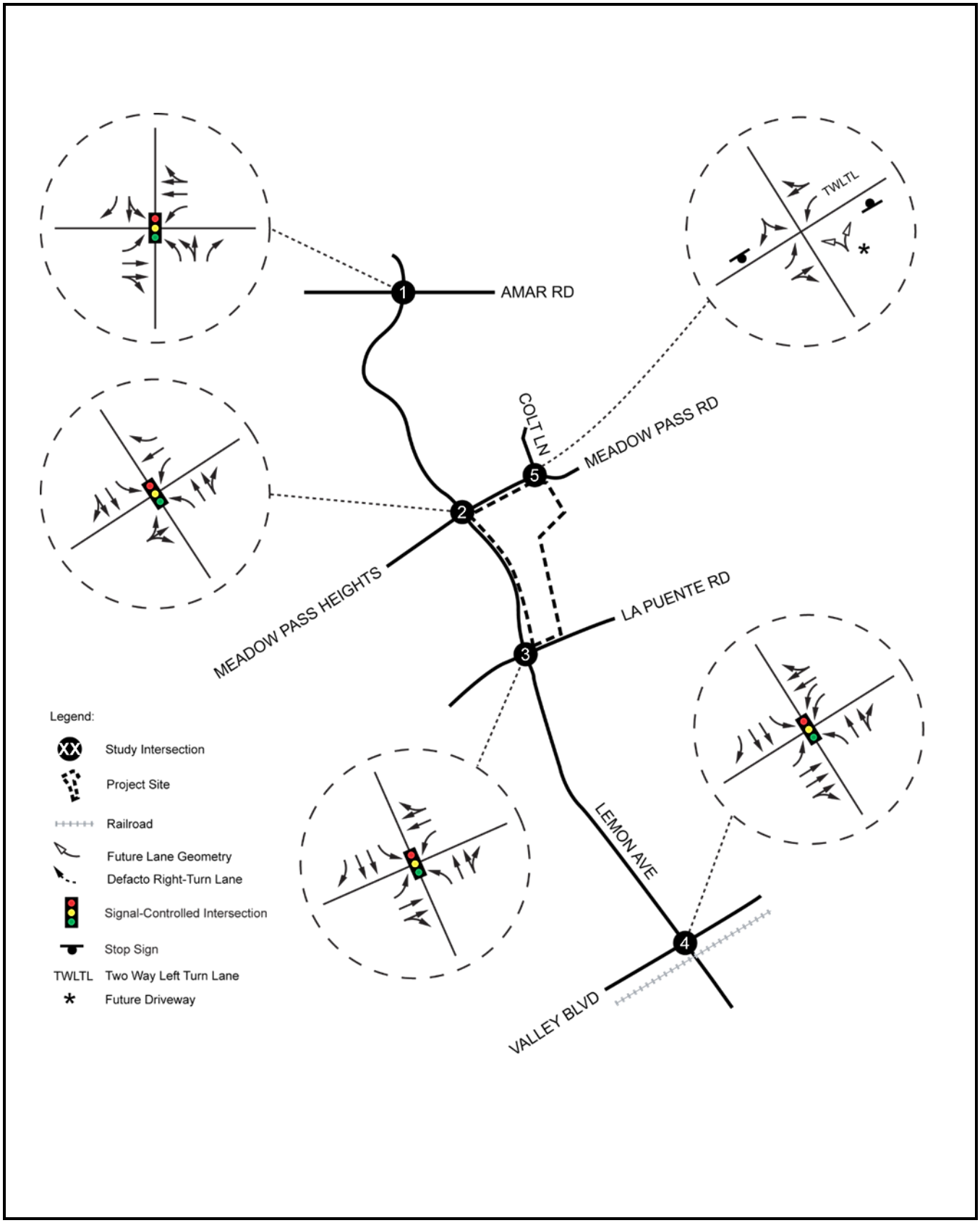


Source: Michael Baker International
November 20, 2015

The Brookside Project
Environmental Impact Report

Exhibit 5.13-1

PROJECT STUDY AREA

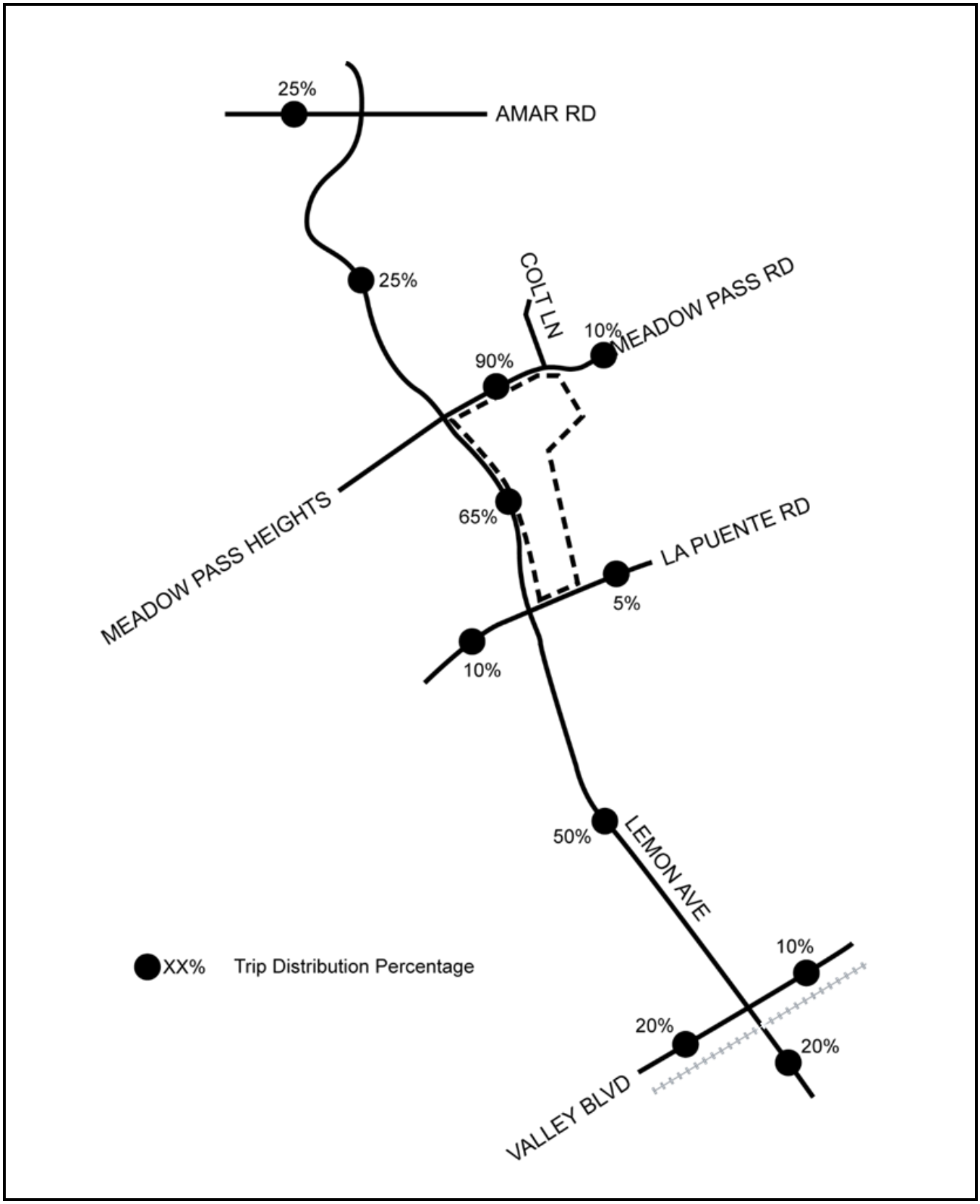


Source: Michael Baker International
November 20, 2015

The Brookside Project
Environmental Impact Report

Exhibit 5.13-2

EXISTING INTERSECTION GEOMETRY



Source: Michael Baker International
November 20, 2015

The Brookside Project
Environmental Impact Report

Exhibit 5.13-3

PROJECT TRIP GENERATION

5.14 WATER

This section analyzes projected impacts to water supplies and distribution systems that may result from the implementation of the proposed project. Information for this section is based on the best available data gathered from the Walnut Valley Water District *2010 Urban Water Management Plan*.

5.14.1 REGULATORY SETTING

FEDERAL

Federal Safe Drinking Water Act of 1974

The Safe Drinking Water Act (SDWA) authorizes the United States Environmental Protection Agency (U.S. EPA) to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. The U.S. EPA, states, and water systems then work together to make sure that these standards are met. Originally, SDWA focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments greatly enhanced the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water. This approach ensures the quality of drinking water by protecting it from source to tap. SDWA applies to every public water system in the United States. There are currently more than 160,000 public water systems providing water to almost all Americans at some time in their lives.

STATE

Urban Water Management Plan Act

The Urban Water Management Plan (UWMP) Act was passed in 1983 and codified as *California Water Code* Sections 10610 through 10657. Since its passage in 1983, the Act has been amended on several occasions. In 2004, the UWMP Act was amended to require additional discussion of transfer and exchange opportunities, non-implemented demand management measures, and planned water supply projects. Most recently, in 2005, the UWMP Act was amended to require water use projections (required by *California Water Code* Section 10631) to include projected water use for single-family and multi-family residential housing needed for lower income households. In addition, *Government Code* Section 65589.7 was amended to require local governments to provide a copy of the adopted housing element to water and sewer providers. The UWMP Act requires “every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, to prepare and adopt, in accordance with prescribed requirements, an urban water management plan.” Urban water suppliers must file these plans with the California Department of Water Resources every five years describing and evaluating reasonable and practical efficient water uses, reclamation, and conservation activities. As required by the Memorandum of Understanding Regarding Urban Water Conservation in California and Assembly Bill 11X (1991), the 2005 UWMP Act, incorporated water conservation initiatives, and a Water Shortage Contingency Plan.

Water Conservation Act of 2009

Senate Bill X7-7, the Water Conservation Act of 2009 (WCA) creates a framework for future planning and actions by urban (and agricultural) water suppliers to reduce California's water use. The law requires urban water suppliers to reduce statewide per capita water consumption by 20 percent by 2020. Additionally, the State is required to make incremental progress towards this goal by reducing per capita water use by at least 10 percent by 2015. Each urban retail water supplier was required to develop water use targets and an interim water use target by July 1, 2011. Each urban retail water supplier was required, by July 2011, to include in their water management plan the baseline daily per capita water use, water use target, interim water use target, and compliance daily per capita water use.

Senate Bill 610

Water Code Sections 10610 to 10656 require water suppliers to prepare an UWMP to promote water demand management and efficient use in their service areas. UWMPs are included with the environmental document for specified projects.

In regards to water supply, the *Water Code* (commonly referred to as SB 610, according to the enacting legislation) requires preparation of a Water Supply Assessment (WSA) for certain projects[1]. The *Water Code* requires that a WSA be prepared for any "project" which would consist of one or more of the following:[2]

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A mixed-use project that includes one or more of the projects specified above; or
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

The project proposes the development of approximately 9.7 acres in Walnut consisting of up to 47 residential dwelling units and up to 2.9 acres of parkland. As a result, the combination of uses proposed by the project does not meet the triggering criterion set forth in *Water Code* Section 10912. Therefore, a WSA does not need to be prepared for the proposed project.

Senate Bill 221

Senate Bill 221 (SB 221)[3] amended state law to improve the link between information on water supply availability and land use at the tentative map preparation phase of a project. SB 610 and SB 221 are companion measures which seek to:

1 Water Code Sections10910-10915.
2 Water Code Section 10910(b).
3 Business and Professions Code Section 11010 and Government Code Section 66473.4.

- Promote more collaborative planning between local water suppliers and cities and counties;

- Require that detailed information regarding water availability be provided to city and county decision-makers prior to approval of specific large development projects;

- Require that this detailed information be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects; and

- Recognize local control and decision making regarding the availability of water for projects and the approval of projects.

SB 221 pertains only to residential projects and establishes the relationship between the WSA prepared for a project and the project approval under the Subdivision Map Act.

Efficiency Standards

California Administrative Code Title 24 contains the *California Building Standards* including the *California Plumbing Code* (Part 5), which promotes water conservation. Title 20 addresses Public Utilities and Energy and includes appliance efficiency standards that promote water conservation. In addition, a number of State laws listed below require water-efficient plumbing fixtures in structures:

- Title 20, *California Administrative Code* Section 1604(g), establishes efficiency standards that give the maximum flow rate of all new showerheads, lavatory faucets, sink faucets, and tub spout diverters.

- Title 20, *California Administrative Code* Section 1606, prohibits the sale of fixtures that do not comply with established efficiency regulations.

- Title 24, *California Administrative Code* Section 25352(i) and (j), address pipe insulation requirements, which can reduce water used before hot water reaches equipment or fixtures. Insulation of water-heating systems is also required.

- *Health and Safety Code* Section 17921.3, requires low-flush toilets and urinals in virtually all buildings.

LOCAL

Walnut Valley Water District - 2010 Urban Water Management Plan

The *2010 Urban Water Management Plan (2010 UWMP)*, prepared by Carollo Engineers for the Walnut Valley Water District (WVWD or District), was adopted in July 2011 and is in compliance with the UWMP Act. The *2010 UWMP* was prepared in accordance with Division 6, Part 2.6, of the *California Water Code*, Section 10608 through 10657 as last amended by Senate Bill No. 7 (SBX7-7), which became law in November 2009.

The Walnut Valley Water District's service area includes all of the City of Diamond Bar together with portions of the Cities of Walnut, Industry, West Covina, and Pomona, and the eastern portion of the unincorporated Rowland Heights area. The District's service area encompasses

17,966 acres, or approximately 28 square miles. The *2010 UWMP* projects the WVWD will have a water demand of 24,242 acre-feet (AF) in 2015 and 24,496 AF in 2035.

City of Walnut City Code

Walnut City Code Chapter 25 Planning and Zoning, Article XVI Supplemental Planning Requirements, Division 1 Water Efficient Landscaping, applies the Water Efficient Landscape Ordinance to new landscape or landscape rehabilitation projects by public agencies, private non-residential developers, and developers or property managers with a landscaped area equal to or greater than 2,500 square feet, as well as new landscape projects by individual homeowners with a total project landscaped area equal to or less than 5,000 square feet.

The *Water Efficient Landscape Ordinance* requires that all landscaping projects subject to the ordinance submit a *Landscape Documentation Package* for review and approval that shall include Maximum Applied Water Allowance, Estimated Applied Water Use, a soil management report or specification, a landscape design plan, an irrigation design plan and a grading design plan.

5.14.2 ENVIRONMENTAL SETTING

URBAN WATER MANAGEMENT PLAN

The project site is located in the City of Walnut, which receives water services from the Walnut Valley Water District (WVWD). The City's individual water demand is not accounted for in the *201 UWMP*. Instead the demand for the entire system is analyzed for impacts to water supply and service capacity. The service area served an estimated population of 133,816 in 2015. The population is expected to reach 122,498 by 2035.

Water Sources

The District has very limited natural water resources and is currently limited to four sources: 1) imported water from Metropolitan Water District of Southern California's (MWDSC); 2) Weymouth Water Treatment Plant, water that has been treated and delivered by Three Valleys Municipal Water District (TVMWD), 3) recycled water from the Los Angeles County Sanitation District (CSDLAC) Pomona Water Reclamation Plant (Pomona WRP), and 4) local groundwater from the Puente and Spadra Basins, which is only used to supplement the recycled water system.

As shown in *Table 5.14-1*, *Walnut Valley Water District Water Supplies (Acre-Feet per Year)*, the District's potable water is provided entirely through wholesale purchases from TVMWD. There are five imported water connections that feed WVWD's potable water transmission and distribution systems: PM-10, PM-12, PM-15, PM-21, and PM-24. These connections deliver water from MWDSC via TVMWD. The Puente Basin is adjudicated, and is governed by the Puente Basin Watermaster. The District's current and projected demands are listed in *Table 5.14-1*. The District has developed these water resources to provide increased water reliability. This approach has included aggressive use of recycled water and some use of groundwater to augment recycled water supplies. The District has optimized these limited water resources to help meet the water demands of the growth of the community.

Table 5.14-1
Walnut Valley Water District Water Supplies (Acre-Feet per Year)

Source	2010	2015	2020	2025	2030	2035
Wholesaler (TVMWD)	25,911	22,242	22,319	23,075	23,806	24,496
Source: Table 3.1, Walnut Valley Water District 2010 UWMP.						
Notes: Supply shown is based on the demands projected in UWMP Chapter 5 incorporating water conservation associated with the Water Conservation Act of 2009 discussed in Chapter 6. The calculations used for the demands are based on a per-capita demand of 163 gpcd and the population projections from UWMP Chapter 2.						

IMPORTED WATER

Imported water is the District's primary water supply and it provides for all potable water demands. The District's imported water supplier is TVMWD, which is one of MWDSC's 26 member agencies. Potable water supplied to the District is processed at MWDSC's Weymouth Treatment Plant (in the City of La Verne), or at TVMWD's Miramar Treatment Plant (in the City of Claremont). The Weymouth treatment plant receives water from the Colorado River Aqueduct (CRA) and State Water Project (SWP), while the Miramar Treatment Plan receives water only from the SWP.

The projected volumes to be imported from TVMWD are provided in *2010 UWMP* Table 3.4. These projections reflect the demand projections provided in *2010 UWMP* Chapter 5. It should be noted these supply projections incorporate water conservation associated with the SB7x7 Water Conservation Act of 2009. The District's potable water demands are anticipated to be supplied entirely through imported water from TVMWD, remaining relatively constant from 25,911 acre-feet per year (afy) in 2010 to 24,496 afy in 2035.

The District maintains connections to the TVMWD system. The capacities of each of these connections are listed in *2010 UWMP* Table 3.5. The District's total instantaneous imported water supply capacity is 119 cubic feet per second (cfs).

RECYCLED WATER

The District's recycled water system receives water from the Pomona Water Reclamation Plant (WRP). The District purchases the treated effluent and conveys the supply through the North Side Line (NSL) transmission pipeline to the District's main pumping station. The District uses recycled water to irrigate schools, parks, landscape maintenance districts, freeway slopes, street medians, a cemetery and gold course, and several business landscape areas.

GROUNDWATER

Groundwater underlying the District's service area is of poor quality and is not currently used for the potable water supply system. However, it is used to augment supplies for the recycled water system. Approximately 30 to 40 percent of the total quantity of recycled water currently used is derived from the local, non-potable groundwater. The District uses four wells to pump water from basins underlying the service area. The Operating Safe Yield (OSY) for the Puente Basin has been established at 1,500 afy.

Normal and Dry Year Supply

Under normal conditions, the WVWD's expects that MWDSC would have sufficient supplies available to accommodate the District's projected demands under average year conditions, as the District would get its proportional share of the increased supplies as one of MWDSC's 26 member agencies. As shown in *2010 UWMP* Table 7.10, the District has sufficient supplies available to meet both potable and recycled water demands through 2035 under average year condition with a supply surplus ranging from 66 to 92 percent of the projected demands.

2010 UWMP Table 7.12 shows that the District has sufficient supplies available to meet both potable and recycled water demands through 2035 under single dry year condition with a supply surplus ranging from 12 to 31 percent of the projected demands.

2010 UWMP Table 7.14 shows the projected demands are just below the projected supply in each year of a 3-year multiple dry year period. Although supply surplus only ranges from 1 to 9 percent, it should be noted that these summaries include two key conservative planning assumptions as discussed in the methodology. These are:

- The projected available supply from MWDSC only includes the existing supply programs and does not include the programs that are currently under development which are estimated to increase the imported water supplies by 17 to 39 percent, depending on the planning year and hydrologic conditions. It should be noted that these planned programs increase the total available imported water supply relatively more during single and multiple dry years than during average years.
- Both potable water and recycled water demands during single and multiple dry are assumed to increase by 9 percent, which represents the maximum per capita demand increase in the period 1990 to 2009.

Based on the positive supply surplus and the two conservative planning assumptions listed above, it was concluded that District has sufficient supplies available to meet both potable and recycled water demands through 2035 under average, single dry year, and multiple dry year conditions. *2010 UWMP* Table 7.15 shows there will be sufficient water to meet demands within the District for years 2011 through 2013.

WVWD and MWDSC have implemented and will implement projects to ensure that the total water demands can be met under normal, single-dry year and multiple-dry years.

Water Shortage Contingency Plan

In compliance with the UWMP Act, WVWD has included a Water Shortage Contingency Plan into its *2010 UWMP*.

WVWD has established a ranking and assessment criteria for measuring the severity of water shortages to its systems, and action-planning steps associated with specific levels of water shortage conditions. Listed below are the water shortage supply conditions used by WVWD to determine contingency action measures required to protect water reserves:

- Stage 1: 10 to 15 percent
- Stage 2: 15 to 25 percent
- Stage 3: 25 to 35 percent
- Stage 4: 35 to 50 percent

2010 UWMP Chapter 8 discusses the Water Shortage Contingency Plan. The Plan identifies permanent requirements on water use efficiency, as well as requirements to reduce the overall water demand during Stages 1 through 4 water supply shortages.

Imported Water Supply Reliability

Because of competing needs and uses associated with these water resources, and because of concerns related to the regional water operations, MWDSC has undertaken a number of planning efforts during the past fifteen years to increase supplies. Some of the most recent documents include the *2010 Integrated Water Resources Plan Update*, *Water Surplus and Drought Management Plan*, *Water Supply Allocation Plan*, *Long-Term Conservation Plan*, and most recently the *2010 Regional Urban Water Management Plan* (*2010 Regional UWMP).* These documents were reviewed for the purpose of preparing the WVWD *2010 UWMP*.

About one third of supplies within the MWDSC service area come from local resources, while the remaining are imported from three sources: Colorado River (via the Colorado River Aqueduct), Sacramento-San Joaquin River Delta, and Owens Valley (via the State Water Project), and the City of Los Angeles' Owens Valley supply (via the Los Angeles Aqueducts). Because the imported water supply reliability for the District is directly tied to the reliability of MWDSC's supply, it is appropriate to use the *2010 Regional UWMP* document as a basis for the reliability discussion and assumptions presented in WVWD *2010 UWMP*.

Recycled Water Supply Reliability

The District obtains recycled water from the Pomona WRP to serve slightly less than 10 percent of its customer demands. Although the treatment plant capacity is rated for 15 million gallons per day (mgd), the District is only entitled to one third of this flow, and the actual wastewater flow varies seasonally.

The Pomona WRP recycled water supply is supplemented by groundwater that is pumped from the Puente and Spadra basins. To avoid double counting of supply capacities, the groundwater production amount is stated as zero in subsequent tables, as the total recycled water supply capacity includes the use of the District's four wells.

As the groundwater wells are only used to supplement the system during peak demand conditions, it is assumed that under average day demand conditions, the available wastewater flows are sufficient to meet the recycled water demands. With the ability to provide additional supply from groundwater wells and potable supplements, the recycled water system has a supply reliability of close to 100 percent.

Future Water Supply Projects

Since the District purchases most of its water from MWDSC, the projects implemented by MWDSC to secure their water supplies have a direct impact on the District.

Projects Planned by MWDSC

As described in its *2010 Regional UWMP*, MWDSC plans to meet its supply reliability goal through the following activities.

- Surface water storage programs related to the SWP and Colorado River

- Colorado River Water Management Programs
- SWP Management Programs
- Central Valley/SWP Storage and Transfer Programs
- Water Conservation
- Development of Local Supplies
- Water Recycling Projects
- Ocean Desalination programs
- Groundwater banking programs in Southern California Region

The implementation approach and the achievements to-date for each of these programs are discussed in detail in the *2010 Regional UWMP* Chapter 3. The projected increase in supply availability due to these programs under average year conditions is summarized in WVWD *2010 UWMP* Table 7.1, which shows that the planned programs are estimated to increase MWDSC's supply in 2035 from 3.8 million acre-feet (MAF) to 4.9 MAF, which equates to a 28 percent increase in supply capacity.

As the majority of the new supplies are related to surface water or groundwater storage programs, these planned programs greatly enhance MWDSC's ability to capture excess supplies during wet years and thereby increase supply reliability during single and multiple dry year periods. These programs combined with water conservation are estimated to increase MWDSC's potential supply surplus in 2035 during average year conditions from 1.71 MAF to 2.76 MAF, which equates to a 61 percent increase in surplus supplies.

WATER FACILITIES

The City receives its water from the WVWD. The WVWD facilities serving the City consist of water pipelines, fire hydrants, domestic and fire services, valves, reservoirs, booster pumps, and service connections with MWDSC.

5.14.3 SIGNIFICANCE THRESHOLD CRITERIA

Environmental impact thresholds as indicated in *CEQA Guidelines* Appendix G (Environmental Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it would:

- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; and/or

- Have sufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements.

Based on these significant thresholds and criteria, the proposed project's effects have been categorized as either "no impact," a "less than significant impact, or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation measures, it is categorized as a significant unavoidable impact.

5.14.4 PROJECT IMPACTS AND MITIGATION MEASURES

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD REQUIRE OR RESULT IN INCREASED DEMAND FOR WATER SUPPLIES, THE CONSTRUCTION OF NEW WATER FACILITIES OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.**

Impact Analysis: [Note to City Staff – can applicant provide us with information on current water usage?] For purposes of this analysis, no reduction in water use is taken for the previous Brookside Equestrian Center, as the center has closed. Thus, implementation of the proposed project would result in increased water demand when compared to existing conditions. The proposed project includes 28 single-family residential lots and 10 open space lots. These uses would increase the demand for water in the City of Walnut and the Walnut Valley Water District's (WVWD) service area.

Table 5.14-2, *Estimated Project Water Demand*, quantifies the proposed project's estimated water demand of 19,992 gallons per day.

Table 5.14-2
Estimated Project Water Demand

Land Use	Gallons Per Capita per Day	Population (Capita)	New Water Use (Gallons/Day)
Single-Family Residential	204[1]	98[2]	19,992
Open Space (?)			xxx
Total New Water Use	-		19,992

Source:
1. Table 6.2, Walnut Valley Water District 2010 UWMP.
2 3.48 Persons Per Household. California Department of Finance, *Table 2, E-5 City/County Population and Housing Estimates*, January 1, 2015.

Currently, the existing water supply for the City of Walnut is sufficient to meet projected 2015 water demands. It is anticipated that the proposed project would be adequately served by the WVWD, assuming source and supply capacities remain consistent with current conditions, as well as future projections. Exacerbated drought conditions, climate conditions, or impacts to regional water conveyance infrastructure could quickly change these conclusions. It is anticipated that WVWD's facilities currently serving the District, including the City of Walnut, are adequate to meet anticipated service demands associated with the implementation of the proposed project.

It is not anticipated that the addition of 28 single-family residential lots and 10 open space lots would adversely impact pipelines or water supply or demand within the WVWD. The *2010 UWMP* assumes population projections through the year 2035. The proposed project at buildout would only require about 0.0914 percent of the 2035 water supply. The increase in water consumption associated with new development in the proposed project, is therefore, consistent with assumptions within the WVWD's *2010 UWMP*. Therefore, potential impacts to water demand, water supplies, and infrastructure within the City of Walnut would be reduced to a less than significant level with compliance with *City Code* Chapter 25 Planning and Zoning, Article XVI Supplemental Planning Requirements, Division 1 Water Efficient Landscaping. In addition,

Mitigation Measure WAT-1 has been recommended to ensure that any potential impacts to water demand, supply, and infrastructure are further reduced to a less than significant level.

Level of Significance Before Mitigation: Potentially Significant Impact.

Mitigation Measures:

WAT-1 Prior to the issuance of building permits, the Applicant shall submit construction drawings to the Walnut Valley Water District, and, as necessary, shall pay all applicable connection fees and comply with Walnut Valley Water District permitting and fee requirements.

Level of Significance: Less Than Significant Impact with Mitigation Incorporated.

5.14.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **THE PROPOSED PROJECT ALONG WITH OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS TO WATER SUPPLIES AND FACILITIES.**

Impact Analysis: Increased water demand associated with the proposed project and other related cumulative projects could result in significant cumulative impacts to water supplies and facilities.

Implementation of the proposed project would likely require new water facilities to serve the proposed development. Mitigation has been identified that would reduce these impacts to a less than significant level. The proposed project and cumulative projects would be reviewed on a project-by-project basis to determine if adequate facilities are available within the area to serve the proposed development. Individual development projects would be required to make necessary improvements or make a fair share contribution toward the improvements prior to development. Therefore, cumulative impacts to water facilities would be less than significant in this regard.

Development of the proposed project could result in impacts to fire flow and water storage. Mitigation has been identified that would reduce these impacts to a less than significant level. The proposed project and cumulative projects served by the Los Angeles County Fire Department would be reviewed on a project-by-project basis to determine the fire flow and storage capacity requirements of the proposed development. Individual development projects would be required to make necessary improvements or make a fair share contribution toward the improvements prior to development. Therefore, cumulative impacts to fire flow and storage capacity would be less than significant in this regard.

Walnut Valley Water District's *2010 UWMP* provides a long-range assessment of water supply for all of the City of Diamond Bar together with portions of the Cities of Walnut, Industry, West Covina, and Pomona, and the eastern portion of the unincorporated Rowland Heights area, which includes its own 2035 service area population projection derived from housing projections, SCAG projections, and persons per household data. The *2010 UWMP* assesses water supply to forecast year 2035 taking into consideration groundwater, imported, and surface water supplies. The water supply needs for WVWD's service area required 22,2429 AF for 2015 and is projected to increase to 24,496 in 2035. The estimated annual demand of the proposed

project is 19,492 gallons per day (gpd) or 22.39 afy, which represents approximately 0.0914 percent of this total growth.

Future development projects in Walnut and the surrounding cities would be evaluated by the applicable City, WVWD, or other applicable water districts on a project-by-project basis to determine impacts to water supplies and infrastructure. The continued assessment of individual projects for impacts to the water supply system would assure projects would only be approved if adequate water supplies exist at the time of their implementation. New development would be required to pay its share of the costs of infrastructure improvements necessary to accommodate the project. WVWD would need to ensure their water reclamation facilities and pipeline infrastructure are planned and installed according to their UWMP projections. Additionally, coordination between the cities, WVWD, or other applicable water districts would be essential as further development is planned. Therefore, implementation of the proposed project would not result in cumulatively considerable water supply impacts.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.14.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in less than significant project and cumulative impacts related to water demand and facilities with adherence to the identified mitigation measure and compliance with the Walnut City Code. As such, no significant unavoidable impacts would result from implementation of The Brookside Project.

5.14.7 SOURCES CITED

California Administrative Code Title 24.

California Business and Professions Code Section 11010.

California Government Code Section 66473.4.

California Water Code Sections10910-10915.

California Water Code Section 10910(b).

California Department of Finance, *Table 2, E-5 City/County Population and Housing Estimates*, January 1, 2015.

City of Walnut, *Walnut City Code,* Title IV Planning and Zoning, Chapter 25 Zoning, Article XVI Supplemental Planning Requirements, Article XVI Supplemental Planning Requirements, Division 1 Water Efficient Landscaping.

Walnut Valley Water District, *2010 Urban Water Management Plan*, July 2011.

5.15 WASTEWATER

This section evaluates impacts of the proposed project on wastewater facilities within the City of Walnut.

5.15.1 REGULATORY SETTING

FEDERAL

National Pollutant Discharge Elimination System

As authorized by the Clean Water Act (CWA), the National Pollutant Discharge Elimination System (NPDES) Permit Program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches. Industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. In California, the State Water Resources Control Board (SWRCB) administers the NPDES permitting program and is responsible for developing NPDES permitting requirements. The SWRCB works in coordination with the Regional Water Quality Control Boards (RWQCB) to preserve, protect, enhance, and restore water quality. The City is within the jurisdiction of the Los Angeles RWQCB (LARWQCB).

The Municipal Storm Water Permitting Program regulates storm water discharges from municipal separate storm sewer (drain) systems (MS4s). Most of these permits are issued to a group of co-permittees encompassing an entire metropolitan area. The Los Angeles County Flood Control District, the County of Los Angeles, and the City of Walnut along with 83 other incorporated cities therein (Permittees) discharge pollutants from their MS4s. Storm water and non-storm water enter and are conveyed through the MS4 and discharged to surface water bodies of the Los Angeles Region. These discharges are regulated under countywide waste discharge requirements contained in Order No. R4-2012-0175 (NPDES Permit No. CAS004001, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges Within the Coastal Watersheds of Los Angeles County, Except Discharges Originating from the City of Long Beach MS4), which was adopted November 8, 2012. The MS4 Permit Order provides the revised waste discharge requirements for MS4 discharges within the Los Angeles County watersheds, which includes the City of Walnut. The MS4 Permit Order became effective December 28, 2012.

Water reclamation plants (WRP) must comply with their current NPDES Permit, which regulates its discharges. The LARWQCB adopted the Waste Discharge Requirements for the Joint Outfall System, San Jose Creek Water Reclamation Plant (Order No. R4-2009-0078 and NPDES No. CA0053911) and the Waste Discharge Requirements for the Joint Outfall System Whittier Narrows Water Reclamation Plan (Order No. R4-2009-0077 and NPDES No. CA0053716) on June 4, 2009.

Clean Air Act

In 1990, the Clean Air Act (CAA) was dramatically revised and expanded to give the United States Environmental Protection Agency (U.S. EPA) even broader authority to implement and enforce regulations reducing air pollutant emissions. The CAA also gives the U.S. EPA authority to limit emissions of air pollutants coming from sources such as utilities, among others.

Wastewater originating from the project site is treated at the County Sanitation Districts of Los Angeles County's (Districts) San Jose Creek Water Reclamation Plant (WRP), which has a design capacity of 100 million gallons per day (mgd). In order for the Districts to conform to CAA requirements, the design capacities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG); refer to Section 7.1, Growth-Inducing Impacts. Specific SCAG regional growth forecast policies are incorporated into the Clean Air Plans prepared by Air Quality Management Districts. The project site is located within jurisdiction of the South Coast Air Quality Management District (SCAQMD), which prepared the 2012 Air Quality Management Plan (2012 AQMP) to improve air quality in the South Coast Air Basin. Any expansion of the Districts' facilities must be sized and service phased in a manner that will be consistent with SCAG's regional growth forecast for the County of Los Angeles, among the others. The available capacity of the Districts' treatment facility is, therefore, limited to levels associated with the approved growth identified by SCAG.

REGIONAL

County Sanitation Districts of Los Angeles County

The County Sanitation Districts of Los Angeles County (Districts) are authorized by the *California Health and Safety Code* to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' sewerage system or increasing the strength or quantity of wastewater attributable to a particular parcel or operation already connected. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the sewerage system to accommodate a proposed project. Payment of a connection fee is required before a permit to connect to the sewer is issued.

In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CAA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG.

LOCAL

City of Walnut City Code

The *Walnut City Code,* Title V Public Works, Chapter 21 Sewers and Sewage Disposal shall apply to the design and construction of all sewer systems within the City. Article I, Section 21-1 adopts as a sanitary sewer and industrial waste ordinance of the city, except as it is hereinafter amended, Division 2 of Title 20 of the Los Angeles County Code as contained in Ordinance No. 90-0067, as amended, and in full force and effect on May 24, 1990, known as the "Sanitary Sewer and Industrial Waste Ordinance."

5.15.2 ENVIRONMENTAL SETTING

WASTERWATER FACILITIES AND TREATMENT SYSTEM

County Sanitation Districts of Los Angeles County[1]

The project site is located within the jurisdictional boundaries of District No. 21 of the County Sanitation Districts of Los Angeles County. (Districts).

Wastewater flow originating from the project site discharges to local sewers before it is conveyed to the Districts' trunk sewers. The trunk sewer that serves the project area includes the Lemon Avenue Trunk Sewer, located in Lemon Avenue at Valley Boulevard. The Districts' 18-inch diameter trunk sewer has a capacity of 7.8 million gallons per day (mgd) and conveyed a peak flow of 1.8 mgd when last measured in 2010.

Wastewater originating from the project site is treated at the Districts' San Jose Creek WRP, located at 1965 Workman Mill Road in unincorporated Los Angeles County (adjacent to the City of Industry), provides primary, secondary, and tertiary treatment for 100 mgd of wastewater. Currently, the San Jose Creek WRP processes an average flow of 66.3 mgd. Currently, the Whittier Narrows WRP processes an average flow of 8.0 mgd. All biosolids and wastewater flows that exceed the capacity of the San Jose Creek WRP are diverted to and treated at the Joint Water Pollution Control Plant in the City of Carson.

City of Walnut and County of Los Angeles Department of Public Works Consolidated Sewer Maintenance District

Local sewer lines are owned by the City. The County of Los Angeles Department of Public Works (LACDPW) Consolidated Sewer Maintenance District is responsible for the operation and maintenance of the local sewers within the City of Walnut.

The following sewer lines are adjacent to or within the project site, and are accepting flows:

- An 8-inch clay pipe sewer occurs to the north along Meadow Pass Road, traverses southwest through the project site toward Lemon Avenue and then south along Lemon Avenue down to La Puente Road.

[1] Adriana Raza, Customer Service Specialist, Facilities Planning Department, County Sanitation Districts of Los Angeles County, May 24, 2016.

5.15.3 SIGNIFICANCE THRESHOLD CRITERIA

Environmental impact thresholds as indicated in *CEQA Guidelines* Appendix G (Environmental Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it would:

- Exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board.

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

- Result in a determination by the wastewater treatment provider that 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.

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.15.4 PROJECT IMPACTS AND MITIGATION MEASURES

● **IMPLEMENTATION OF THE PROPOSED PROJECT COULD GENERATE WASTEWATER THAT EXCEEDS THE CAPACITY OF CONVEYANCE AND TREATMENT FACILITIES SERVING THE PROJECT AREA.**

Impact Analysis: Implementation of the proposed project would result in increased wastewater generation requiring conveyance and treatment. *Table 5.15-1*, *Estimated Project Wastewater Generation*, quantifies the project's estimated wastewater generation using generation factors provided by the County Sanitation Districts of Los Angeles County *EIR*.

Table 5.15-1
Estimated Project Wastewater Generation

Land Use	Units	Flow Factor (gpd)	Average Flow (gpd)
Single-Family Residential[1]	28	260	7,280
Total	**28**	**-**	**7,280**

Source: County Sanitation Districts of Los Angeles County, Table 1, Loadings for Each Class of Land Use
gpd = gallons per day

As indicated in *Table 5.15-1*, the proposed project is estimated to generate 7,280 gpd of wastewater. To determine peak rates, a conservative value of 2.5 was multiplied to the 7,280 gpd of wastewater for a result of 18,200 gpd or 12.6 gallons per minute (gpm).

Sanitary Sewer Procedural Manual and the Standard Plans

Wastewater Conveyance

The proposed project would utilize existing on-site sewer infrastructure, and install sewer infrastructure for the proposed 28 single-family homes. Sewer generated by the proposed project would be transferred to existing on-site and off-site sewer pipelines that surround the project site. The existing on-site sewer lines currently connect to the off-site local and regional lines Meadow Pass Road, Lemon Avenue, and La Puente Road.

Construction of any new sewers would be required to comply with the LACDPW *Sanitary Sewer Procedural Manual* and *Standard Plans* prior to acceptance into the Consolidated Sewer Maintenance District (refer to Mitigation Measure WW-1).

The City charges new developments a fee to upgrade or extend local sewer lines which would be necessary to accommodate new developments. Additionally, the LACDPW reviews new developments and assesses fees based on the maintenance of local sewer lines, which would also be necessary to accommodate new development.

The Districts are authorized by the *California Health and Safety Code* to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' sewerage system or increasing the strength or quantity of wastewater attributable to a particular parcel or operation already connected. The connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the sewerage system to accommodate the proposed project. Individual development projects would be required to pay the connection fee before a permit to connect to the sewer is issued.

Therefore, implementation of Mitigation Measures WW-1 through WW-3 would reduce impacts to a less than significant level.

Wastewater Treatment

Development associated with the implementation of the proposed project would generate increased wastewater flows, placing greater demands on wastewater treatment facilities. The wastewater generated by the proposed project would be collected by the Districts and conveyed for treatment to the Districts' San Jose Creek WRP. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the Los Angeles County, among others.

The available capacity of the Districts' treatment facilities would, therefore, be limited to levels associated with the approved growth identified by SCAG. The Districts have expressed their intent to provide service up to the levels that are legally permitted. As indicated in Section 7.1, Growth-Inducing Impacts, although the proposed project would contribute to the growth anticipated by SCAG, project implementation would not cause SCAG's 2035 household and population forecasts for the City to be exceeded. Thus, the proposed project would not conflict with SCAG's population and household forecasts for the City. As previously noted, the Districts would review development projects on a project-by-project basis, in order to determine if adequate capacity exists within the Districts' wastewater treatment facilities to serve the

development and if Districts' facilities would be impacted. Therefore, project implementation would result in a less than significant impact regarding wastewater treatment facilities.

Assuming the peaking rate of 18,200 gallons per day, the proposed project represents 0.018 percent of the total 100 mgd capacity of the San Jose WRP. Thus, there is capacity in the treatments plant to accept wastewater from the proposed project. The increase in wastewater flow from the proposed project would not significantly impact the Districts' treatment plant as it represents a minimal percent of the flow directed to the treatment plant.

In conclusion, the proposed project would result in less than significant impacts with implementation of Mitigation Measures WW-1 through WW-3.

Level of Significance Before Mitigation: Potentially Significant Impact.

Mitigation Measures:

WW-1 The Applicant shall design and construct on-site and off-site sewer lines in compliance with the Los Angeles County Public Works Department and County Sanitation Districts of Los Angeles County standards.

WW-2 Prior to issuance of grading permit, a sewer plan shall be submitted for approval by the City Engineer. Unused sewer laterals connecting existing buildings at this property shall be plugged at the property line.

WW-3 Prior to certificate of occupancy, the Applicant shall pay sewer connection fees to the City of Walnut, Los Angeles County Department of Public Works, and County Sanitation Districts of Los Angeles County.

Level of Significance: Less Than Significant Impact with Mitigation Incorporated.

5.15.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **THE PROPOSED PROJECT ALONG WITH OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS TO WASTEWATER CONVEYANCE AND TREATMENT FACILITIES.**

Impact Analysis: Increased demand for wastewater conveyance and treatment resulting from development of the proposed project and other related cumulative projects could result in significant cumulative impacts. The degree of significance would depend upon the scale and location of the project, and the timing of connection to the sewer system. All future residential and non-residential development within the City would be reviewed on a project-by-project basis by the City, LACPWD, and the Districts to determine the availability of adequate treatment capacity along with the continuous assessment of capacity flows. Individual development projects would be required to verify that existing capacity exists to convey and treat the potential wastewater generated with the new development. Development projects would be subject to payment of fees prior to connecting to the LACPWD's and Districts' facilities. Similarly, future cumulative development served by LACPWD and the Districts would be reviewed to ensure adequate conveyance and treatment capacity exists to serve a proposed development. Review through the City's, LACPWD's, and the Districts' development review process would reduce potential cumulative impacts to wastewater facilities to a less than significant level. It is also notes that implementation of the proposed project would not cause SCAG's 2035 household

and population forecasts for the City to be exceeded. Thus, the proposed project would not conflict with SCAG's household and population forecasts for the City. The proposed project would not result in a significant cumulative impact to wastewater conveyance and treatment facilities. Impacts would be less that significant in this regard.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.15.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in less than significant project and cumulative impacts related to wastewater conveyance and treatment with adherence to the identified mitigation measures. As such, no significant unavoidable impacts would result from implementation of The Brookside Project.

5.15.7 SOURCES CITED

County Sanitation Districts of Los Angeles County, Adriana Raza, Customer Service Specialist, Facilities Planning Department, written correspondence, May 24, 2016.

County Sanitation Districts of Los Angeles County, Table 1, Loading for Each Class of Land Use, http://lacsd.org/civicax/filebank/blobdload.aspx?blobid=3531, accessed July 8, 2016.

5.16 SOLID WASTE

This section analyzes the solid waste impacts of the project and recommends mitigation measures to reduce the amount of solid waste going into landfills. Specifically, this section compares the solid waste generation of the proposed project with the capacity of the existing landfills that accept waste from municipalities and unincorporated areas within Los Angeles County.

5.16.1 REGULATORY SETTING

STATE PLANS AND POLICES FOR WASTE DISPOSAL

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (AB 939) requires every city and county in the state to prepare a Source Reduction and Recycling Element (SRRE) to its Solid Waste Management Plan, that identifies how each jurisdiction will meet the mandatory state waste diversion goal of 50 percent by and after the year 2000. The purpose of AB 939 is to *"reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible."*

The term "integrated waste management" refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment.

Per Capita Disposal Measurement Act

With the passage of Senate Bill 1016 (the Per Capita Disposal Measurement System), per capita disposal rates are measured by California's Department of Resources Recycling and Recovery (CalRecycle). The new per capita disposal and goal measurement system moves the emphasis from an estimated diversion measurement number to using an actual disposal measurement number as a factor, along with evaluating program implementation efforts. These two factors will help determine each jurisdiction's progress toward achieving its AB 939 diversion goals. The 50 percent diversion requirement will now be measured in terms of per-capita disposal expressed as pounds per person per day. The focus will be on program implementation, actual recycling, and other diversion programs instead of estimated numbers.

Mandatory Commercial Recycling

With the passage of Assembly Bill 341, businesses and public entities that generate four cubic yards or more of waste per week and multifamily units of five or more are required to recycle. The purpose of this law is to reduce greenhouse gas emissions by diverting commercial solid waste from landfills and expand opportunities for recycling in California. Businesses and public entities producing four cubic yards or more of solid waste per week or multifamily residents producing five cubic yards or more of solid waste must arrange for recycling services. Each jurisdiction is required to implement a commercial solid waste recycling program that consists of education, outreach, and monitoring of businesses that is designed to divert commercial solid waste from businesses. CalRecycle will review each jurisdictions program as part of its AB 939 review conducted every two to four years. Beginning in August 2013, each jurisdiction is required to submit a report on the progress of implementing its commercial recycling program.

CITY OF WALNUT PLANS AND POLICIES FOR SOLID WASTE DISPOSAL

Walnut City Code

Walnut City Code Title IV Planning and Zoning, Chapter 25 Zoning, Article XVI Supplemental Planning Requirements, Division 4 Recycling Locations for Development Projects, Section 25-177 et seq. regulates solid waste management within the City. Section 25-177 Purpose states:

> *"Cities and counties must divert fifty percent of all solid waste by January 1, 2000, through source reduction, recycling and composting activities.*
>
> *Diverting fifty percent of all solid waste requires the participation of the residential, commercial, industrial and public sectors.*
>
> *The lack of adequate areas for collecting and loading recyclable materials that are compatible with surrounding land uses is a significant impediment to diverting solid waste and constitutes an urgent need for state and local agencies to address access to solid waste for source reduction, recycling and composting activities. The ordinance codified in this division has been developed to meet that need. (Ord. No. 556, § 4)"*

Section 25-177.2 provides general requirements and Section 25-177.3 provides guidelines for all development projects.

5.16.2 ENVIRONMENTAL SETTING

EXISTING WASTE COLLECTION AND DISPOSAL

According to the Jurisdictional Profile for Walnut,[1] the City disposed of approximately 17,449 tons of solid waste in 2015. Landfills used by the City in 2015 included the following:

- Antelope Valley Public Landfill
- Azusa Land Reclamation Co. Landfill
- Chiquita Canyon Sanitary Landfill
- El Sobrante Landfill
- Frank R. Bowerman Sanitary Landfill
- Olinda Alpha Sanitary Landfill
- San Timoteo Sanitary Landfill
- Sunshine Canyon City/County Landfill

In addition, the Commerce Refuse-To-Energy Facility, Mid-Valley Sanitary Landfill (Green Materials), and Simi Valley Landfill and Recycling Center (Transfer Station) were also used.

According to the Solid Waste Information System (SWIS), landfills used in 2015 by the City of Walnut currently have additional available capacity for solid waste, based on latest available data,[2] as shown in *Table 5-15.1*, *Landfill Capacity*.

[1] 2015 Solid Waste Jurisdictional Profile for Walnut, California Department of Resources Recycling and Recovery (CalRecycle), Disposal Reporting System (DRS), Jurisdiction Disposal By Facility, accessed at www.calrecycle.ca.gov/ on July 7, 2016.

[2] All landfill capacity data is from 2016, and can be found online at http://www.calrecycle.ca.gov/SWFacilities/Directory/Search.aspx, accessed July 7, 2016.

Table 5.16-1
Landfill Capacity

Landfill	Permitted Capacity (cubic yards)	Remaining Capacity (cubic yards)	Anticipated Closure Date
Antelope Valley Public Landfill	--	20,400,000	1/1/2042
Azusa Land Reclamation Co. Landfill	80,571,760	51,512,201	1/1/2045
Chiquita Canyon Sanitary Landfill	63,900,000	22,400,000	11/24/2019
El Sobrante Landfill	184,930,000	145,530,000	1/1/2045
Frank R. Bowerman Sanitary Landfill	266,000,000	205,000,000	12/31/2053
Olinda Alpha Sanitary Landfill	148,800,000	36,589,707	12/31/2021
San Timoteo Sanitary Landfill	20,400,000	136.05,488	1/1/2043
Sunshine Canyon City/County Landfill	140,900,000	96,800,000	12/31/2037

Source: All Landfill capacity data is from 2016, and can be found online at http://www.calrecycle.ca.gov/SWFacilities/Directory/search.aspx, accessed July 7, 2016.

It should also be noted that at the end of 2014, the City of Walnut had 33 diversion programs in place; it's annual per capital disposal rate per resident was 3.3 and it's annual per capital disposal rate per employee was 10.9. Both annual capita rates decreased from 2013.

Residential trash collection services are provided by Valley Vista Services.

5.16.3 SIGNIFICANCE THRESHOLD CRITERIA

Environmental impact thresholds as indicated in CEQA Guidelines Appendix G (Environmental Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it would:

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

- Comply with federal, state, and local statutes and regulations related to solid waste.

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.16.4 PROJECT IMPACTS AND MITIGATION MEASURES

SOLID WASTE GENERATED DURING PROJECT CONSTRUCTION

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD POTENTIALLY RESULT IN INCREASED SOLID WASTE GENERATION IN EXCEEDANCE OF LANDFILL CAPACITY DURING CONSTRUCTION.**

Impact Analysis. Buildout of the proposed project involves the addition of 16.29 acres of residential uses. Site preparation (vegetation removal and grading activities) and construction activities would generate typical construction debris, including wood, paper, glass, metals, cardboard, and green wastes. Construction activities could also generate hazardous waste products. The National Association of Homebuilders' (NAHB) *Residential Construction Waste Management: A Builder's Field Guide* estimates that construction and demolition (C&D) wastes average four pounds per square foot of floor area.

Recycling of construction and demolition (C&D) wastes at construction sites is typically undertaken either directly by each builder or under contract to other parties. If no effort is made to either promote the recycling of construction wastes, such as through job site segregation of C&D wastes into distinct categories, a greater tonnage and volume of wastes would require off-site disposal. Such actions would be inconsistent with the State legislation and would, therefore, produce a potentially significant environmental effect.

The proposed project would be required to comply with standard Conditions of Approval imposed by the City, as well as all other reviewing agencies. Non-salvaged construction and demolition waste would result in an incremental and intermittent increase in solid waste disposal at landfills and other waste disposal facilities utilized by the City. Construction-related solid waste could further impact landfills with insufficient capacity and result in an exceedance of this significant threshold criterion. However, as shown in *Table 5.16-1*, all landfills utilized by the City have sufficient capacity to support a temporary increase in solid waste during construction of the proposed project. With Mitigation Measures SW-1 and SW-2 in place prior to and during construction, it can be anticipated that regional landfill impacts associated with project construction would be mitigated to a less than significant level.

Level of Significance Before Mitigation: Potentially Significant Impact.

Mitigation Measures:

SW-1 Prior to the issuance of a demolition or grading permit, the Applicant shall prepare and submit a construction debris reduction/recycling plan designed to minimize the volume of construction debris requiring landfill disposal and incorporating measures for the separation and short-term on-site storage of construction waste materials in a manner conducive to collection and recycling/diversion efforts. The plan shall include a fire component so that reclamation activities are conducted in a fire safe manner.

SW-2 Comply with all applicable City, County, State, and Federal regulations and procedures for the use, collection, and disposal of solid and hazardous wastes.

Level of Significance After Mitigation: Less Than Significant Impact with Mitigation Incorporated.

SOLID WASTE GENERATED DURING PROJECT OPERATION

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD POTENTIALLY RESULT IN INCREASED SOLID WASTE GENERATION IN EXCEEDANCE OF LANDFILL CAPACITY DURING OPERATION.**

Impact Analysis. Buildout of the proposed project would generate approximately 51.1 tons of solid waste per year, which represents a 0.29 percent increase to the amount of solid waste generated by the City in 2015. *Table 5.16-2, Solid Waste Generation by Project*, shows the estimated net increase in solid waste generation associated with proposed future development.

Table 5.16-2
Solid Waste Generation Generated by Project

Land Use	Proposed Development	Generation Rate*	Solid Waste Generation (pounds/day)/(tons/year)
Residential	28 DU	10 LBS/DU/DAY	280/51.1
DU = dwelling units; LBS = pounds.			
Source: 1. Estimated Solid Waste Generation and Disposal Rates, CalRecycle, http://www.calrecycle.ca.gov/wastechar/wastegenrates, accessed July 7, 2016			

This quantity represents the solid waste generated for buildout conditions of the proposed project under a worst-case scenario without any recycling activities in place. However, the proposed project would be required to comply with the *City Code*, which requires providing adequate areas for collecting and loading recyclable materials in concert with countywide efforts and programs to reduce the volume of solid waste entering landfills.

In addition, the location of recycling/separation areas is required to comply with all applicable Federal, public health, State, or local laws relating to fire, building, access, transportation, circulation, or safety. The City operates a three-bin residential curbside refuse, recyclable collection, and residential green waste collection program, whereby all property owners or occupants generating garbage, waste, refuse, trash or recyclable materials are required to pay to the City or its designated agent or contractor a fee for the collection of garbage, waste, refuse, trash and recyclable materials.

Compliance with all applicable State and Los Angeles County regulations for the use, collection, and disposal of solid and hazardous wastes is also mandated. It can be assumed that the proposed project would include adequate, accessible and convenient areas for collecting recyclable materials. Therefore, it is anticipated that operational solid waste impacts would be reduced to a less than significant level.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.16.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **THE PROPOSED PROJECT ALONG WITH OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS RELATED TO SOLID WASTE DISPOSAL SERVICES AND LANDFILL DISPOSAL CAPACITY.**

Impact Analysis. As shown in *Table 5.16-1*, the regional landfills have sufficient capacity to serve the City's anticipated waste disposal needs. Similar to the proposed project, related projects would be required to evaluate their solid waste impacts (including hazardous waste) prior to the start of any construction activities and mitigate significant impacts when possible. During operation, related projects would be required to comply with state diversion rates and all Federal, State, and local solid waste legislation to support the City's and County's efforts and programs to reduce the volume of solid waste entering landfills.

While solid waste impacts would be evaluated on a project-by-project basis, the County of Los Angeles (County) has identified strategies for maintaining adequate disposal capacity through 2027. In addition, the County continues to ensure that current diversion rates are met (while continuing to increase the County-wide diversion rate), to guarantee that adequate disposal capacity is available in future years. Implementation of each jurisdiction's SRRE measures would be required on a project-by-project basis. Implementation of recycling measures and the development of additional Materials Recovery Facilities (MRF) would increase the amount of diverted solid waste through recovery and consolidation.

The proposed project and cumulative projects would be required to comply with the applicable City's City/Municipal Code, which requires providing adequate areas for collecting and loading recyclable materials in concert with countywide efforts and programs to reduce the volume solid waste entering landfills. In addition, the location of recycling/separation areas are required to comply with all applicable federal, public health, state, or local laws relating to fire, building, access, transportation, circulation, or safety. Compliance with all applicable State and Los Angeles County regulations for the use, collection, and disposal of solid and hazardous wastes is also mandated. Thus, impacts would be less than significant in this regard.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.16.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in less than significant project and cumulative impacts related to solid waste with adherence to the identified mitigation measures and compliance with the Walnut City Code. As such, no significant unavoidable impacts would result from implementation of The Brookside Project.

5.16.7 SOURCES CITED

CalRecycle, 2015 Solid Waste Jurisdictional Profile for Walnut, California Department of Resources Recycling and Recovery (CalRecycle), Disposal Reporting System (DRS), Jurisdiction Disposal By Facility, accessed at www.calrecycle.ca.gov/ on July 7, 2016.

CalRecycle, http://www.calrecycle.ca.gov/SWFacilities/Directory/Search.aspx, accessed July 7, 2016.

City of Walnut, *Francesca Mixed-Use Project Specific Plan 01-2004 Initial Study/Mitigated Negative Declaration*, January 2008.

City of Walnut, *Walnut City Code,* Title IV Planning and Zoning, Chapter 25 Zoning, Article XVI Supplemental Planning Requirements, Division 4 Recycling Locations for Development Projects, Section 25-177 et seq.

5.17 ELECTRICITY AND NATURAL GAS

This section addresses the potential impacts of the proposed project with regard to electricity and natural gas consumption. The analysis identifies the utilities that provide electricity and natural gas services to the City of Walnut, describes the existing consumption of electricity and natural gas, indicates the nature and location of related infrastructure in the local area, and estimates the electricity demands of the proposed project.

5.17.1 REGULATORY SETTING

ELECTRICITY

State and Federal governments extensively regulate corporate utilities.

Federal

The Federal government has limited power to regulate municipal utilities. Municipal utilities are parties to certain contracts that must be filed with the Federal Energy Regulatory Commission (FERC).

State

The California Public Utilities Commission (CPUC) regulates privately owned, electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies in the State of California. Assembly Bill 1890, enacted in 1996, deregulated the power generation industry, allowing customers to purchase electricity on the open market. Under deregulation, the production and distribution of power that was under the control of investor-owned utilities (e.g., Southern California Edison) was decoupled. Deregulation allowed other providers the ability to supply electricity to consumers.

The California Energy Commission is California's primary energy policy and planning agency. The Energy Commission is required to create and periodically update *Building Energy Efficiency Standards* for the State. The Standards address newly constructed buildings and additions and alterations to existing buildings. The *2013 Building Energy Efficiency Standards for Residential and Nonresidential Buildings* went into effect January 1, 2014. Under the most recent (2013) standards, it is projected that energy savings for single family development will be 25 percent better than current standards and energy savings for multi-family development will be 14 percent better than current standards. Updated standards for nonresidential development will result in 30 percent more energy efficiency compared to current standards, with a projected savings of 372 GWh/year.[1] The energy building regulations are contained in Title 2, Part 6 of the *California Code of Regulations*.

The *Green Building Standards Code* first published in July 2008 and updated for publication in 2010, codifies voluntary "reach" standards for energy efficiency, as compared with the mandatory Standards for newly constructed residential and nonresidential buildings. The *Green Building Standards Code* established tiered energy performance levels of 15 percent and 30 percent more stringent than the mandatory 2008 Standards. Local jurisdictions may adopt the *Green Building Standards Code* as mandatory at the local level.

[1] Staff Presentation from the May 21, 2012 Title 24 Standards Adoption hearing.

CALIFORNIA PUBLIC UTILITIES COMMISSION

The California Public Utilities Commission (CPUC) regulates investor-owned electric and natural gas utilities operating in California. Through its oversight over utilities, the CPUC has played a key role in making California a national and international leader on a number of energy-related initiatives designed to benefit consumers, the environment, and the economy.

Electricity

The energy work responsibilities of the CPUC are derived from the *California State Constitution*, specifically Article XII, Section 3 and other sections more generally, numerous state legislative enactments and various federal statutory and administrative requirements which the Staff on behalf of the CPUC either carries out as an adjunct to federal authority or represents the Commission and the people of the State of California in federal legislative, regulatory or judicial matters.

The various mandates are represented among the following program areas:

- Electric Costs
- Electric Power Procurement and Generation
- Infrastructure
- Customer Energy Resources
- Energy Efficiency
- Energy Advice Letter and Tariff Information

Natural Gas[2]

The California Public Utilities Commission (CPUC) regulates natural gas utility service for approximately 10.8 million customers that receive natural gas from Pacific Gas and Electric Company (PG&E), Southern California Gas Company (SCGC), San Diego Gas & Electric Company (SDG&E), Southwest Gas, and several smaller natural gas utilities. The CPUC regulates the California utilities' natural gas rates and natural gas services, including in-state transportation over the utilities' transmission and distribution pipeline systems, storage, procurement, metering and billing.

The majority of California's natural gas customers are residential and small commercial customers referred to as "core" customers, who accounted for approximately 32 percent of the natural gas delivered to California utilities in 2012. Large consumers, like electric generators and industrial customers, referred to as "noncore" customers, accounted for approximately 68 percent of the natural gas delivered by California utilities in 2012.

Much of the natural gas used in California comes from out-of-state natural gas basins. In 2012, California customers received 35 percent of their natural gas supply from basins located in the Southwest, 16 percent from Canada, 40 percent from the Rocky Mountains, and 9 percent from basins located within California.

Natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas

[2] *Natural Gas and California,* California Public Utilities Commission website, www.cpuc.ca.gov/puc/energy/gas, accessed on July 7, 2016.

to California consumers are the Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, the Ruby Pipeline, Questar Southern Trails Pipeline, and Mojave Pipeline. Another pipeline, the North Baja-Baja Norte Pipeline, takes gas off the El Paso Pipeline at the California/Arizona border, and delivers that gas through California into Mexico. While the Federal Energy Regulatory Commission (FERC) regulates the transportation of natural gas on the interstate pipelines, the CPUC often participates in FERC regulatory proceedings to represent the interests of California natural gas consumers.

Most of the natural gas transported via the interstate pipelines, as well as some of the California-produced natural gas, is delivered into the PG&E and SCGC intrastate natural gas transmission pipeline systems (commonly referred to as California's "backbone" natural gas pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered into the local transmission and distribution pipeline systems, or to natural gas storage fields. Some large noncore customers take natural gas directly off the high-pressure backbone pipeline systems, while core customers and other noncore customers take natural gas off the utilities' distribution pipeline systems. The CPUC has regulatory jurisdiction over 150,000 miles of utility-owned natural gas pipelines, which transported 82 percent of the total amount of natural gas delivered to California's gas consumers in 2012.

SDG&E and Southwest Gas' southern division are wholesale customers of SCGC, and currently receive all of their natural gas from the SCGC system (Southwest Gas also provides natural gas distribution service in the Lake Tahoe area). Some other municipal wholesale customers are the cities of Palo Alto, Long Beach, and Vernon, which are not regulated by the CPUC.

Some of the natural gas delivered to California customers may be delivered directly to them without being transported over the regulated utility systems. For example, the Kern River/Mojave pipeline system can deliver natural gas directly to some large customers, "bypassing" the utilities' systems. Much of California-produced natural gas is also delivered directly to consumers.

PG&E and SCGC own and operate several natural gas storage fields that are located in northern and southern California. These storage fields, and two independently owned storage utilities – Lodi Gas Storage and Wild Goose Storage – help meet peak seasonal natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently.

California's regulated utilities do not own any natural gas production facilities. All of the natural gas sold by these utilities must be purchased from suppliers and/or marketers. The price of natural gas sold by suppliers and marketers was deregulated by the FERC in the mid-1980s and is determined by "market forces." However, the CPUC decides whether California's utilities have taken reasonable steps in order to minimize the cost of natural gas purchased on behalf of their core customers.

Although most of California's core customers purchase natural gas directly from the regulated utilities, core customers have the option to purchase natural gas from independent natural gas marketers. Most of California's noncore customers, on the other hand, make natural gas supply arrangements directly with producers or purchase natural gas from marketers.

Prior to the late 1980s, California's regulated utilities provided virtually all natural gas services to natural gas customers. Since then, the CPUC has gradually restructured the natural gas industry in order to give customers more options while assuring regulatory protections for those

customers that wish to continue receiving utility-provided services. The option to purchase natural gas from independent suppliers, as noted above, is one of the results of this restructuring process.

Another option resulting from the natural gas industry's restructuring process occurred in 1993, when the CPUC removed the utilities' storage service responsibility for non-core customers, along with the cost of this storage service from non-core customers' rates. In 1993, the CPUC also adopted specific storage reservation levels for the utilities' core customers.

In a 1997 decision, the CPUC adopted PG&E's "Gas Accord," which unbundled backbone transmission costs from noncore transportation rates, and gave customers and marketers the opportunity to obtain pipeline capacity rights on PG&E's backbone pipeline system. The Gas Accord also required PG&E to set aside a certain amount of pipeline capacity in order to deliver natural gas to its core customers. Subsequent PUC decisions modified and extended the initial terms of the Gas Accord. The "Gas Accord" framework is still in place today for PG&E's backbone and storage rates and services.

In a December 2006 decision, the CPUC adopted a similar gas transmission framework for southern California, called the "firm access rights" system. SCGC and SDG&E implemented the firm access rights (FAR) system in October 2008. Under the FAR system, customers may obtain firm receipt point capacity rights for delivery on the integrated SCGC/SDG&E gas transmission system.

5.17.2 ENVIRONMENTAL SETTING

ELECTRICITY

Southern California Edison (SCE), a division of Edison International, currently provides electricity service in the City of Walnut, including the project site. Edison facilities include a hydropower and nuclear power facilities and one coal-powered facility: the Big Creek Hydroelectric Plant, the San Onofre Nuclear Generating Station, and the Mojave Generating Station. The San Onofre nuclear plant has been permanently retired, requiring SCE to increase the ability to import power as well as stabilize and protect the existing grid. SCE maintains and operates transmission and distribution infrastructure to provide purchased power to end users throughout its service area.

According to Forms 1.1a and 1.2 of the California Energy Demand Forecast for 2012-2022, prepared by the California Energy Commission (CEC), it is projected that the demand for energy consumption during 2014 will be 102,578 gigawatt-hours (GWh) and SCE will provide a net energy for load of 102,957 gigawatt-hours (GWh) to its customers.[3] By 2022, demand will be 112,535 GWh and net energy for load is forecasted to increase to 112,384 GWh.[4]

It should also be noted that in 2015, SCE delivered 87 billion kWh of electricity and powered a total of:

- 15 million+ people
- 180 cities

[3] California Energy Commission, *California Energy Demand 2012-2022 Final Forecast*. Staff Final Report. Publication Number CEC-200-2012-001-CMF, June 2012.

[4] *Ibid*.

- 15 counties
- 50,000 square miles of service area
- 5,000 large businesses
- 280,000 small businesses[5]

NATURAL GAS

The Southern California Gas Company (SCGC) provides natural gas service to the project site. According to the California Energy Commission (as shown in Form 1.1 of the SCGC Planning Area) SCGC customers will demand roughly 779.5 billion cubic feet (bcf) of natural gas during 2014, and by 2022, it is anticipated that annual natural gas demand to SCGC customers are expected to increase to 815.3 bcf per year.[6] It is anticipated that SCGC will meet this demand.

5.17.3 SIGNIFICANCE THRESHOLD CRITERIA

Environmental impact thresholds as indicated in *CEQA Guidelines* Appendix G (Environmental Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it would:

- Create demands on electricity or natural gas supple and/or infrastructure which exceed the capacity of the utility serving the project area.

Based on these significant thresholds and criteria, the proposed project's effects have been categorized as either "no impact," a "less than significant impact," or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through application of mitigation measures, it is categorized as a significant unavoidable impact.

5.17.4 PROJECT IMPACTS AND MITIGATION MEASURES

ELECTRICITY

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD INCREASE THE DEMAND FOR ELECTRICAL SERVICE OR COULD REQUIRE THE EXPANSION OF EXISTING SERVICES.**

Impact Analysis: The project site contains the former Brookside Equestrian Center, which has been closed for several years. Limited electrical service is used for security lighting purposes, and for purposes of this analysis, the assumption is that no demand is currently being generated.

The proposed project involves the development of 28 single-family residential units. Based upon a consumption factor of 5,626.5 kilowatt-hours (kWh) per single-family dwelling unit, buildout of the proposed project would create a demand of approximately 157,542 kWh (157.5 MWh) per year of electricity.[7]

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5 SCE Website, located online at www.sce.com/wps/portal/home/about-us/who-we-are, accessed July 7, 2016.

6 California Energy Commission, *California Energy Demand 2012-2022 Final Forecast,* Staff Final Report. Publication Number CEC-200-2012-001-CMF, June 2012.

7 Consumption factors from South Coast Air Quality Management District *CEQA Air Quality Handbook* (April1993), Table A9-117.

It is anticipated that by 2022, electricity demand for the SCE Planning Area would be 112,535 gigawatt hours (GWh) and SCE is forecasted to provide a net energy load of 112,384 GWh to its customers.[8]

However, the 157,542 KWh (0.158 GWh) electricity demand associated with the proposed project represents 0.0001404 percent of the quantity of energy that SCE is estimated to supply in 2022. Thus, sufficient supplies are anticipated to be available to serve development associated with the proposed project.

Although the project site is primarily urbanized and currently served by infrastructure providing electricity to existing uses, the location of SCE facilities may create the need for transmission and/or service infrastructure to be relocated prior to site excavation and project construction. SCE would update existing facilities or add new facilities in the City based upon specific requests for service from end users. Financial responsibility for any updates or additional facilities would be in accordance with SCE's rules and tariffs. All new development that requires new electricity lines to be installed would be required to pay applicable fees assessed by SCE to extend electricity lines to serve the specific project site. SCE would not provide service to new development if there were not adequate electricity supplies and infrastructure to maintain existing service levels and meet the anticipated electricity demands of the specific development requesting service. The Applicant would be required to coordinate with SCE to ensure conflicts are reduced and that service interruptions would be minimized. Impacts would be less than significant in this regard.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

NATURAL GAS

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD INCREASE THE DEMAND FOR NATURAL GAS OR COULD REQUIRE THE EXPANSION OF EXISTING FACILITIES.**

Impact Analysis: The project site contains the former Brookside Equestrian Center, which has been closed for several years. Limited natural gas service is needed for unused school buildings, and for purposes of this analysis, the assumption is that no demand is currently being generated.

Based upon a consumption factor of 6,665 cubic feet per single-family dwelling unit per month (cf/du/month), buildout of the proposed project would demand approximately 2,239.44 thousand cubic feet (kcf) per year (186,620 cf/month x 12 months) of natural gas, 0.01603 percent of the projected natural gas in 2022 (2,239.44 kcf out of 1392.6 bcf).

SCGC has gas facilities in the area of the proposed project. Thus, gas service to the proposed project can be provided from existing gas mains in several locations, and the service will be in

[8] California Energy Commission, *California Energy Demand 2012-2022 Final Forecast,* Staff Final Report. Publication Number CEC-200-2012-001-CMF, June 2012.

accordance with the SCGC's policies and extension rules on file with the California Public Utilities Commission when contractual agreements are made.

Although the proposed project would create additional demands on natural gas supplies and distribution infrastructure, these demands are well within the service capabilities of SCGC. Thus, the proposed project would not create additional demands on natural gas supplies and infrastructure that exceed the capacity of the utilities serving the site. Therefore, impacts would be less than significant in this regard.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.17.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **THE PROPOSED PROJECT ALONG WITH OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS RELATED TO ELECTRICAL AND/OR NATURAL GAS SERVICES AND FACILITIES.**

Impact Analysis:

Electricity

Electrical loads of the proposed project and related cumulative projects would increase the demand for electricity service beyond existing conditions. Although the proposed project and related cumulative projects would create additional demands on electricity supplies and distribution infrastructure, these demands are within the parameters of projected load growth and the service capabilities of SCE. Thus, cumulative impacts would be less than significant.

Natural Gas

Implementation of the proposed project and cumulative projects would result in increased natural gas demand beyond existing conditions. Although the proposed project and related cumulative projects would create additional demands of natural gas, these demands are within the parameters of projected load growth and the service capabilities of SCGS. Furthermore, SCGS has gas facilities in the area of the proposed project providing service in accordance with the SCGC's policies and extension rules on file with the California Public Utilities Commission when contractual agreements are made. Thus, cumulative impacts would be less than significant.

Level of Significance Before Mitigation: Less Than Significant Impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.17.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in less than significant project and cumulative impacts related to electricity and natural gas supply and facilities. As such, no significant unavoidable impacts would result from implementation of The Brookside Project.

5.17.7 SOURCES CITED

California Energy Commission, *California Energy Demand 2012-2022 Final Forecast*. Staff Final Report, Publication Number CEC-200-2012-001-CMF, June 2012.

Natural Gas and California. California Public Utilities Commission website, www.cpuc.ca.gov/puc/energy/gas/natgasandca.htm, accessed on July 7, 2016.

Staff Presentation from the May 21, 2012 Title 24 Standards Adoption hearing.

SCE Website, www.sce.com/wps/portal/home/about-us/who-we-are, accessed on July 7, 2016.

South Coast Air Quality Management District, *Table A9-117, Consumption factors from CEQA Air Quality Handbook,* April1993.

6.0 ALTERNATIVES

6.1 INTRODUCTION

CEQA requires that an EIR include an analysis of a range of project alternatives that could feasibly attain most of the basic project objectives, while avoiding or substantially lessening any of the significant effects identified for the proposed project. The Lead Agency must disclose its reasoning for selecting each alternative. The Lead Agency must also identify any alternatives that were considered, but rejected as infeasible during the scoping process, and disclose the reasons for the exclusion. The range of alternatives is governed by a "rule of reason, which requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. Specifically, *CEQA Guidelines* Section 15126.6(a) requires that:

> *"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. 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. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selection of a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason."*

CEQA Guidelines Section 15126.6(f)(1) provides the following information regarding the "feasibility" of a project alternative:

> *"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). No one of these factors establishes a fixed limit on the scope of reasonable alternatives."*

Within every EIR, the *CEQA Guidelines* require that a "No Project" Alternative is analyzed. The "No Project" Alternative allows decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. In addition, the identification of an "Environmentally Superior" Alternative is required. The "No Project" Alternative may be the "Environmentally Superior" Alternative to the proposed project based on the minimization or avoidance of physical environmental impacts. However, the "No Project" Alternative must also achieve most of the basic objectives of the projects in order to be considered the "Environmentally Superior" Alternative. Thus, the *CEQA Guidelines* require that if the "Environmentally Superior" Alternative is the "No Project" Alternative, the EIR shall identify a superior alternative from the remaining alternatives analyzed.

In order to provide background regarding the selection or rejection of a project alternative, the discussion below provides a summary of project objectives, in addition to a description of the significant and unavoidable impacts found to occur upon project implementation.

Throughout the following analysis, impacts of the alternatives are analyzed for each of the issue areas examined in Section 5.0 of this EIR. In this manner, each alternative can be compared to the proposed action on an issue-by-issue basis.

6.2 ALTERNATIVES TO BE ANALYZED

This analysis focuses on alternatives capable of eliminating significant adverse environmental effects or reducing them to less than significant levels, even if these alternatives would impede, to some degree, the attainment of the proposed project objectives. The alternatives to the proposed project under consideration within this EIR consist of:

- Alternative One: Existing Zoning Alternative
- Alternative Two: Preservation of Mature Trees

6.3 SUMMARY OF PROJECT OBJECTIVES

As stated above, an EIR must only discuss in detail an alternative that is capable of feasibly attaining most of the basic objectives associated with the action, while at the same time avoiding or substantially lessening any of the significant effects associated with the proposed project. Thus, a summary of the objectives as provided within Section 3.0, Project Description, is restated below.

1. Create a residential neighborhood of appropriate density and scale that respects the existing topography and natural backdrop of the project site and adjacent residential neighborhoods.

2. Create a residential neighborhood that is compatible with and complementary to other existing adjacent neighborhoods in the area.

3. Enhance open space systems through sensitive landscaping throughout the neighborhood and adjacent to a sensitive riparian habitat.

4. Ensure that the proposed project adequately addresses the City of Walnut's General Plan requirements for the provision of public facilities and services.

5. Provide areas of natural scenic beauty, vistas, and other environmental features through integrated land planning, design, and unified control of physical development patterns.

6. Ensure that the type and form of development is compatible with the surrounding residential development, the community as a whole, and meets the requirements of the Walnut City Code.

7. Encourage development that is attractive and aesthetically pleasing as seen from adjacent properties and public rights-of-way.

8. Protect water quality through implementation of Best Management Practices on-site.

9. Retain and incorporate existing walnut, oak, and other mature trees within the proposed plan, where feasible.

10. Minimize impacts to the existing Lemon Creek floodway.

6.4 SUMMARY OF SIGNIFICANT UNAVOIDABLE IMPACTS

Pursuant to *CEQA Guidelines* Section 15126.6(a), an EIR shall describe a range of reasonable alternatives to 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. Only those impacts found significant and unavoidable are relevant in making the final determination of whether an alternative is environmentally superior or inferior to the proposed project.

Based on the analysis provided within Section 5.0, Environmental Analysis of this EIR, the proposed project would result in significant unavoidable impacts in one environmental issue area:

Aesthetics

- Long-term visual character/quality project impacts on adjacent existing residential uses

6.5 ALTERNATIVE ONE: EXISTING ZONING ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

Pursuant to *CEQA Guidelines* Section 15126.6(e)(2), a No Project Alternative must be analyzed within the EIR. The No Project Alternative should discuss what would be reasonably expected to occur in the foreseeable future if the proposed project were not approved, based on current plans and consistent with available infrastructure and community services. In the context of this EIR, the Existing Zoning Alternative is the No Project Alternative in compliance with *CEQA Guidelines* Section 15126.6(e)(2).

The zoning for the project site is RPD – 28,500 – 1.3 DU, which assumes a minimum lot size of 28,500 square feet with a maximum density of 1.3 dwelling units per acre. The Existing Zoning Alternative would provide 25 dwelling units on 16.49 acres and 9.55 acres of open space. This Alternatives also assumes that two of the Winnett Farm's San Vicente Ranch and Brookside Equestrian Center structures will be retained: Main Barn and Stables and Minor Barn.

IMPACT COMPARISON TO THE PROPOSED PROJECT

Aesthetics

The Existing Zoning Alternative would involve new development on the project site, and therefore would alter the existing visual character/quality of the site. Aesthetic improvements, such as development consistent with the *Walnut City Code* development regulations would occur. The Existing Zoning Alternative would introduce new landscaping and visual improvements associated with new development. This Alternative would involve short-term impacts associated with construction activities, and would introduce new sources of light and glare to the area. However, while three fewer residential units would be constructed, this Alternative would result in similar significant unavoidable visual character/quality impacts to existing residential uses as the proposed project given that the mature on-site trees would not be preserved. All other aesthetic impacts for this Alternative are similar to those of the proposed

project. Since this Alternative would not eliminate the significant unavoidable long-term visual character/quality impacts, the Existing Zoning Alternative is considered neither environmentally superior nor inferior to the proposed project in this regard.

Air Quality

Short-term construction and long-term operational (stationary source) impacts would be similar to the proposed project under this Alternative, given that existing uses would be removed and new residential uses would be developed. Long-term operational (mobile source) impacts would be slightly less given that this Alternative includes three fewer residential lots as compared to the proposed project. All air quality impacts were identified as less than significant or less than significant with the imposition of mitigation measures for the proposed project. This Alternative would result in slightly less or similar air quality impacts as the proposed project. Therefore, the Existing Zoning Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Biological Resources

Analysis within Section 5.3 concluded that proposed project's effects on special-status plant/animal species, oak or walnut trees, and jurisdictional waters impacts would be less than significant upon implementation of recommended mitigation measures. Thus, all biological resources impacts were identified as less than significant or less than significant with the imposition of mitigation measures for the proposed project. This Alternative would result in similar biological resources impacts as the proposed project. Therefore, the Existing Zoning Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Cultural Resources

Analysis within Section 5.4 concluded that The Brookside Equestrian Center property is not eligible for listing in the National Register, California Register, or as a significant local historic property. Thus implementation of the proposed project would result in less than significant impacts to historical resources. In addition, the proposed project would result in less than significant impacts with mitigation to archaeological or paleontological resources and human remains. As with the proposed project, this Alternative would preserve the Main Barn and Stables and Minor Barn. Thus, this Alternative would result in similar cultural resources impacts as the proposed project. Therefore, the Existing Zoning Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Geology and Soils

Geology, seismic hazards, and soils impacts would be similar to the proposed project under this Alternative, given that existing uses would be removed and new residential uses would be developed. The mitigation measures imposed for the proposed project would also be applicable to this Alternative thereby reducing any potential impacts to a less than significant level. In addition, development under either the proposed project or the Existing Zoning Alternative must comply with the City's Building Code and the *California Building Code*. Therefore, the Existing Zoning Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Greenhouse Gas Emissions

Greenhouse gas emissions from construction and operational activities would occur with the Existing Zoning Alternative, and are anticipated to be similar to the proposed project as three fewer residential units would be constructed. This Alternative's combined construction and operational greenhouse gas emissions would also result in less than significant impacts from a cumulative perspective, similar to the proposed project. Therefore, the Existing Zoning Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Hazards and Hazardous Materials

Hazards and hazardous materials impacts would be similar to the proposed project under this Alternative, given that all existing uses would be removed and the entire area would be developed with new uses. The mitigation measures imposed for the proposed project would also be applicable to this Alternative thereby reducing any potential impacts to a less than significant level. Therefore, the Existing Zoning Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Hydrology, Drainage, and Water Quality

This Alternative would result in similar amounts of impervious surface area on-site. As such, impacts regarding drainage, hydrology, floodplains, and water quality are anticipated to be comparable to the proposed project. Therefore, hydrology and drainage impacts would remain less than significant, as under the proposed project, while mitigation measures would still be required to reduce water quality impacts to a less than significant level, in compliance with NPDES permit requirements. Thus, the Existing Zoning Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Land Use

The Existing Zoning Alternative would involve new development on the project site, but would not require a Conditional Use Permit, which is required of the proposed project. Under this Alternative, 25 single-family residential lots/units would be developed at a minimum lot size of 28,500 square feet as compared to 28 residential lots/units at a minimum lot size of 15,000 square feet. Under the Existing Zoning Alternative, the density is 1.0 dwelling unit per acre as compared to 1.03 dwelling units per acre for the proposed project. Thus, this Alternative is consistent with the existing General Plan and Zoning designations, and does not require a conditional use permit. Therefore, the Existing Zoning Alternative is considered environmentally superior to the proposed project in this regard.

Noise

Short-term construction and long-term operational (stationary source) impacts would be similar to the proposed project under this Alternative, given that existing uses would be removed and new residential uses would be developed. Long-term operational (mobile source) impacts would be slightly less given that this Alternative includes three fewer residential lots as compared to the proposed project. All noise impacts were identified as less than significant or less than significant with the imposition of mitigation measures for the proposed project. This Alternative would result in slightly less or similar noise impacts as the proposed project. Therefore, the

Existing Zoning Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Traffic

Under this Alternative, a total of 238 weekday daily trips would be generated as compared to 267 weekday daily trips for the proposed project, The Existing Residential Alternative would result in three fewer residential units, which equates to 29 fewer weekday daily trips or 11 percent fewer weekday daily trips than the proposed project. All traffic impacts were identified as less than significant or less than significant with the imposition of mitigation measures for the proposed project. This Alternative would result in slightly less or similar traffic impacts as the proposed project. Therefore, the Existing Zoning Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Public Services and Utilities

Relative to the proposed project, this Alternative would result in a similar demand for fire and police protection services, water and wastewater facilities, electricity and natural gas, and the amount of solid waste requiring disposal at local and regional landfills. As is the case with the proposed project, all public service and utility impacts would be less than significant with implementation of applicable mitigation measures, including payment of fees to affected agencies. Therefore, the Existing Zoning Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

ABILITY TO MEET PROJECT OBJECTIVES

1. *Create a residential neighborhood of appropriate density and scale that respects the existing topography and natural backdrop of the project site and adjacent residential neighborhoods.*
2. *Create a residential neighborhood that is compatible with and complementary to other existing adjacent neighborhoods in the area.*
3. *Enhance open space systems through sensitive landscaping throughout the neighborhood and adjacent to a sensitive riparian habitat.*
4. *Ensure that the proposed project adequately addresses the City of Walnut's General Plan requirements for the provision of public facilities and services.*
5. *Provide areas of natural scenic beauty, vistas, and other environmental features through integrated land planning, design, and unified control of physical development patterns.*
6. *Ensure that the type and form of development is compatible with the surrounding residential development, the community as a whole, and meets the requirements of the Walnut City Code.*
7. *Encourage development that is attractive and aesthetically pleasing as seen from adjacent properties and public rights-of-way.*
8. *Protect water quality through implementation of Best Management Practices on-site.*
9. *Retain and incorporate existing walnut, oak, and other mature trees within the proposed plan, where feasible.*
10. *Minimize impacts to the existing Lemon Creek floodway.*

The Existing Zoning Alternative meets all but one of project objectives stated above – number 7. This Alternative does not include the preservation of mature on-site trees. Thus, future development would not be screened by mature landscaping and the views would not be aesthetically pleasing to adjacent properties or from public rights-of-way.

6.6 ALTERNATIVE TWO: PRESERVATION OF MATURE TREES ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

Alternative Two assumes buildout consistent with existing zoning. Thus, this Alternative would provide 25 dwelling units on 16.49 acres and 9.55 acres of open space. This Alternative also assumes that two of the Winnett Farm's San Vicente Ranch and Brookside Equestrian Center structures will be retained: Main Barn and Stables and Minor Barn. In addition, this Alternative will preserve mature on-site trees.

IMPACT COMPARISON TO THE PROPOSED PROJECT

Aesthetics

Alternative Two would involve new development on the project site, and therefore would alter the existing visual character/quality of the site. Aesthetic improvements, such as development consistent with the *Walnut City Code* development regulations would occur. Alternative Two would introduce new landscaping and visual improvements associated with new development. This Alternative would involve short-term impacts associated with construction activities, and would introduce new sources of light and glare to the area. However, this Alternative would result in less than significant visual character/quality impacts to existing residential uses as compared to the significant unavoidable impacts of the proposed project given that the mature on-site trees would be preserved. All other aesthetic impacts for this Alternative are similar to those of the proposed project. Since this Alternative would eliminate the significant unavoidable long-term visual character/quality impacts, Alternative Two is considered environmentally superior to the proposed project in this regard.

Air Quality

Short-term construction and long-term operational (stationary source) impacts would be similar to the proposed project under this Alternative, given that existing uses would be removed and new residential uses would be developed. Long-term operational (mobile source) impacts would be slightly less given that this Alternative includes three fewer residential lots as compared to the proposed project. All air quality impacts were identified as less than significant or less than significant with the imposition of mitigation measures for the proposed project. This Alternative would result in slightly less or similar air quality impacts as the proposed project. Therefore, Alternative Two would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Biological Resources

Analysis within Section 5.3 concluded that proposed project's effects on special-status plant/animal species, oak or walnut trees, and jurisdictional waters impacts would be less than significant upon implementation of recommended mitigation measures. Thus, all biological resources impacts were identified as less than significant or less than significant with the imposition of mitigation measures for the proposed project. This Alternative would result in similar biological resources impacts as the proposed project. Therefore, Alternative Two would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Cultural Resources

Analysis within Section 5.4 concluded that The Brookside Equestrian Center property is not eligible for listing in the National Register, California Register, or as a significant local historic property. Thus implementation of the proposed project would result in less than significant impacts to historical resources. In addition, the proposed project would result in less than significant impacts with mitigation to archaeological or paleontological resources and human remains. As with the proposed project, this Alternative would preserve the Main Barn and Stables and Minor Barn. Thus, this Alternative would result in similar cultural resources impacts as the proposed project. Therefore, Alternative Two would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Geology and Soils

Geology, seismic hazards, and soils impacts would be similar to the proposed project under this Alternative, given that existing uses would be removed and new residential uses would be developed. The mitigation measures imposed for the proposed project would also be applicable to this Alternative thereby reducing any potential impacts to a less than significant level. In addition, development under either the proposed project or Alternative Two must comply with the City's Building Code and the *California Building Code*. Therefore, Alternative Two would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Greenhouse Gas Emissions

Greenhouse gas emissions from construction and operational activities would occur with Alternative Two, and are anticipated to be similar to the proposed project as three fewer residential units would be constructed. This Alternative's combined construction and operational greenhouse gas emissions would also result in less than significant impacts from a cumulative perspective, similar to the proposed project. Therefore, Alternative Two would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Hazards and Hazardous Materials

Hazards and hazardous materials impacts would be similar to the proposed project under this Alternative, given that all existing uses would be removed and the entire area would be developed with new uses. The mitigation measures imposed for the proposed project would also be applicable to this Alternative thereby reducing any potential impacts to a less than significant level. Therefore, Alternative Two would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Hydrology, Drainage, and Water Quality

This Alternative would result in similar amounts of impervious surface area on-site. As such, impacts regarding drainage, hydrology, floodplains, and water quality are anticipated to be comparable to the proposed project. Therefore, hydrology and drainage impacts would remain less than significant, as under the proposed project, while mitigation measures would still be required to reduce water quality impacts to a less than significant level, in compliance with NPDES permit requirements. Thus, Alternative Two would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Land Use

Alternative Two would involve new development on the project site, but would not require a Conditional Use Permit, which is required of the proposed project. Under this Alternative, 25 single-family residential lots/units would be developed at a minimum lot size of 28,500 square feet as compared to 28 residential lots/units at a minimum lot size of 15,000 square feet. Under Alternative Two, the density is 1.0 dwelling unit per acre as compared to 1.03 dwelling units per acre for the proposed project. Thus, this Alternative is consistent with the existing General Plan and Zoning designations, and does not require a conditional use permit. Therefore, Alternative Two is considered environmentally superior to the proposed project in this regard.

Noise

Short-term construction and long-term operational (stationary source) impacts would be similar to the proposed project under this Alternative, given that existing uses would be removed and new residential uses would be developed. Long-term operational (mobile source) impacts would be slightly less given that this Alternative includes three fewer residential lots as compared to the proposed project. All noise impacts were identified as less than significant or less than significant with the imposition of mitigation measures for the proposed project. This Alternative would result in slightly less or similar noise impacts as the proposed project. Therefore, Alternative Two would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Traffic

Under this Alternative, a total of 238 weekday daily trips would be generated as compared to 267 weekday daily trips for the proposed project, The Existing Residential Alternative would result in three fewer residential units, which equates to 29 fewer weekday daily trips or 11 percent fewer weekday daily trips than the proposed project. All traffic impacts were identified as less than significant or less than significant with the imposition of mitigation measures for the proposed project. This Alternative would result in slightly less or similar traffic impacts as the proposed project. Therefore, Alternative Two would be considered neither environmentally superior nor inferior to the proposed project in this regard.

Public Services and Utilities

Relative to the proposed project, this Alternative would result in a similar demand for fire and police protection services, water and wastewater facilities, electricity and natural gas, and the amount of solid waste requiring disposal at local and regional landfills. As is the case with the proposed project, all public service and utility impacts would be less than significant with implementation of applicable mitigation measures, including payment of fees to affected agencies. Therefore, Alternative Two would be considered neither environmentally superior nor inferior to the proposed project in this regard.

ABILITY TO MEET PROJECT OBJECTIVES

1. *Create a residential neighborhood of appropriate density and scale that respects the existing topography and natural backdrop of the project site and adjacent residential neighborhoods.*
2. *Create a residential neighborhood that is compatible with and complementary to other existing adjacent neighborhoods in the area.*

3. *Enhance open space systems through sensitive landscaping throughout the neighborhood and adjacent to a sensitive riparian habitat.*
4. *Ensure that the proposed project adequately addresses the City of Walnut's General Plan requirements for the provision of public facilities and services.*
5. *Provide areas of natural scenic beauty, vistas, and other environmental features through integrated land planning, design, and unified control of physical development patterns.*
6. *Ensure that the type and form of development is compatible with the surrounding residential development, the community as a whole, and meets the requirements of the Walnut City Code.*
7. *Encourage development that is attractive and aesthetically pleasing as seen from adjacent properties and public rights-of-way.*
8. *Protect water quality through implementation of Best Management Practices on-site.*
9. *Retain and incorporate existing walnut, oak, and other mature trees within the proposed plan, where feasible.*
10. *Minimize impacts to the existing Lemon Creek floodway.*

Alternative Two meets all of the project objectives stated above.

6.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6 requires that an EIR must identify an "environmentally superior" alternative and where the No Project Alternative is identified as environmentally superior, the EIR is then required to identify as environmentally superior an alternative from among the others evaluated.

As noted above, the determination of an environmentally superior alternative is based on the consideration of how the alternative fulfills the project objectives and how the alternative either reduces significant, unavoidable impacts or substantially reduces the impacts to the surrounding environment.

6.7.1 ALTERNATIVE ONE: EXISTING ZONING ALTERNATIVE

In comparison to the proposed project, the Existing Zoning Alternative results in fewer impacts relative to land use. Similar impacts are anticipated for aesthetics; air quality; biological resources; cultural resources; geology and soils; greenhouse gas emissions; hazards and hazardous materials; hydrology, drainage, and water quality; noise; traffic; and public services and utilities. The significant unavoidable impacts related to long-term visual character/quality would not be eliminated with this Alternative.

6.7.2 ALTERNATIVE TWO: PRESERVATION OF MATURE TREES ALTERNATIVE

In comparison to the proposed project, Alternative Two results in fewer impacts relative to land use and aesthetics relative to long-term visual quality/character. Similar impacts are anticipated for aesthetics (visual quality/character during construction, light and glare); air quality; biological resources; cultural resources; geology and soils; greenhouse gas emissions; hazards and hazardous materials; hydrology, drainage, and water quality; noise; traffic; and public services and utilities. The significant unavoidable impacts related to long-term visual character/quality would be eliminated with this Alternative.

6.7.3 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As noted above, the determination of an environmentally superior alternative is based on the consideration of how the alternative fulfills the project objectives and how the alternative either reduces significant, unavoidable impacts or substantially reduces the impacts to the surrounding environment. In consideration of these factors, Alternative Two: Preservation of Mature Trees Alternative is selected as the Environmentally Superior Alternative to the proposed project.

Table 6-1, *Comparison of Alternatives*, provides an overview of the alternatives analyzed and a comparison of each alternative's impact in relation to the proposed project.

Table 6-1
Comparison of Alternatives

Impact Area	Alterative One: Existing Zoning Alternative	Alternative Two: Preservation of Mature Trees Alternative
Aesthetics	=	◆
Reduces Significant Unavoidable Impact?	No	Yes
Eliminates Significant Unavoidable Impact?	No	Yes
Air Quality	=	=
Biological Resources	=	=
Cultural Resources	=	=
Geology and Soils	=	=
Greenhouse Gas Emissions	=	=
Hazards and Hazardous Materials	=	=
Hydrology, Drainage, and Water Quality	=	=
Land Use	◆	◆
Noise	=	=
Traffic	=	=
Public Services and Utilities	=	=
Meets Project Objectives	Yes, Objectives 1-6 and 8-10 No, Objective 7	Yes, Objectives 1-10

= Indicates an impact that is equal to the proposed project (neither environmentally superior nor inferior).
○ Indicates an impact that is greater than the proposed project (environmentally inferior).
◆ Indicates an impact that is less than the proposed project (environmentally superior).

7.0 OTHER CEQA CONSIDERATIONS

7.1 GROWTH-INDUCING IMPACTS

CEQA Guidelines Section 15126(d) requires that an EIR *"discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment."* The *CEQA Guidelines* also indicate that it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment. This section analyzes potential growth-inducing impacts, based on the criteria outlined below, as suggested in the *CEQA Guidelines*. In general terms, a project may foster spatial, economic, or population growth in a geographic area, if it meets any one of the following criteria:

- Removal of an impediment to growth (e.g., establishment of an essential public service and provision of new access to an area);
- Fostering of economic expansion or growth (e.g., changes in revenue base and employment expansion);
- Fostering of population growth (e.g., construction of additional housing or employment-generating land uses), either directly or indirectly;
- Establishment of a precedent-setting action (e.g., an innovation, a change in zoning and general plan amendment approval); or
- Development of or encroachment on an isolated or adjacent area of open space (being distinct from an in-fill project).

Should a project meet any one of the above-listed criteria, it may be considered growth inducing. The proposed project's potential growth-inducing impacts are evaluated below against these criteria.

It is noted that the *CEQA Guidelines* require an EIR to *"discuss the ways*" a project could be growth-inducing and to *"discuss the characteristics of some projects that may encourage…activities that could significantly affect the environment."* However, the *CEQA Guidelines* do not require that an EIR predict (or speculate) specifically where such growth would occur, in what form it would occur, or when it would occur. The answers to such questions require speculation, which CEQA discourages; refer to *CEQA Guidelines* Section 15145, Speculation.

IMPACT ANALYSIS

The proposed project includes a request for approval of a Tentative Tract Map, which would include the development of 28 single-family residential lots and 10 open space lots on the 25.84-acre site. The proposed project also involves a Conditional Use Permit; refer to Section 3.6, Project Characteristics. The potential growth-inducing impacts resulting from implementation of the proposed project are evaluated below.

Removal of an Impediment to Growth. The new land uses anticipated by the proposed project would occur as infill development on an improved property. The proposed project does not involve development that would establish a new essential public service or utility/service system. The project site is already served by essential public services (i.e., fire and police protection, parks and recreational facilities, schools, and solid waste disposal); an extensive network of utility/service systems (i.e., water, wastewater, electricity, and natural gas); and other infrastructure necessary to accommodate or allow the existing conditions and planned growth. The existing public services and utility/service systems can be readily upgraded and/or extended onto the project site. The increased demands for public services and utility/service systems would not reduce or impair any existing or future levels of services, either locally or regionally, as concluded in Sections 5.11 and 5.12 and Sections 5.14 through 5.17. Implementation of the proposed project would not require substantial development of unplanned or unforeseen public services and utility/service systems. Therefore, implementation of the proposed project would not remove an impediment to growth/foster spatial growth through establishment of an essential public service or expansion to a new area.

Although, implementation of the proposed project would facilitate the installation and construction of transportation improvements necessary to carry out the proposed project, as discussed in Section 3.6, Project Characteristics, these improvements would not provide new access to an area. A singular vehicular ingress and egress to the project site would be provided via Meadow Pass Road. On-site circulation would be provided by a public and private street system. The public streets include Street A in the northern portion of the site and San Vicente Road in the southern portion. One private street, Street B, will connect with Street A, and run north-south through the site. Therefore, implementation of the proposed project would not remove an impediment to growth/foster spatial growth through the provision of new access to an area.

Economic Expansion/Growth. The proposed project could increase the City's existing population by approximately 0.3 percent or 98 persons. The projected population growth is anticipated to increase sales taxes, with resultant increases in the City's revenue base. However, the anticipated population growth associated with the proposed project would be minimal and would not be considered growth inducing with respect to economic expansion.

Population Growth. A project could induce population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). The proposed project's residential development would result in direct population growth within the City. Project implementation could increase the City's population by approximately 98 persons, or approximately 0.3 percent over existing conditions. This potential population growth is considered less than significant in a local context, since this growth would not cause the City's buildout population forecast to be exceeded. In addition, as concluded above, the substantial development of unplanned or unforeseen public services and utility/service systems would not be required. Therefore, the proposed project would not result in substantial population growth in the City.

Precedent-Setting Action. As previously noted, the proposed project would require approval of a Tentative Tract Map and Conditional Use Permit in order to allow project implementation. Given The proposed project would be subject to development regulations in the *Walnut City Code*; thus, the proposed project would not be considered growth inducing with respect to a precedent-setting action.

Development or Encroachment of Open Space. The proposed project is considered an infill development, as the site has been previously disturbed and is surrounded by urbanized uses. In addition, the proposed project would maintain 10 open space lots totaling 9.55 acres throughout the site and adjacent to Lemon Creek. Therefore, the proposed project would not be growth-inducing with respect to development or encroachment into an isolated or adjacent area of open space.

Overall, implementation of the proposed project would not be considered growth inducing, inasmuch as it would not foster significant unanticipated economic expansion and growth opportunities. The project would not remove an existing impediment to growth and would not develop or encroach into an isolated or adjacent area of open space. The proposed project would not foster significant unanticipated population growth in the project area, as described above. Development within the project site would not require substantial development of unplanned and unforeseen support uses and services.

7.2 ENERGY CONSERVATION

Public Resources Code Section 21100(b)(3) and *CEQA Guidelines* Appendix F require a description, where relevant, of the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, the California State Legislature adopted Assembly Bill 1575 (AB 1575) in response to the oil crisis of the 1970s. *CEQA Guidelines* Appendix F provides guidance for assessing potential impacts that a project could have on energy supplies, focusing on the goal of conserving energy by ensuring that projects use energy wisely and efficiently. Because Appendix F does not include specific significance criteria, this threshold is based on the goal of Appendix F. Therefore, an energy impact is considered significant if the proposed project would:

> *Develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy or construct new or retrofitted buildings that would have excessive energy requirements for daily operation.*

7.2.1 PROJECT ENERGY CONSUMPTION

SHORT-TERM CONSTRUCTION

There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or State. Mitigation Measures AQ-1 would implement dust control techniques and limitations on construction hours. In addition, the proposed project would be required to adhere to SCAQMD Rules 402 and 403, which require watering of inactive and perimeter areas, track out requirements, etc. Additionally, all diesel fueled construction vehicles would be required to meet the latest emissions standards. Therefore, it is expected that construction fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

LONG-TERM OPERATIONS

The proposed project would involve operations typical of residential and open space uses, requiring passenger vehicle trips for residents. However, the proposed project would not result in any unusual characteristics that would result in excessive long-term operational fuel consumption. Additionally, the proximity of the project site to existing transit stops would result

in reduced fuel consumption. Fuel consumption associated with vehicle trips generated by the proposed project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar residential developments in the region.

Building Energy Demand

The proposed project would be expected to demand 157.5 megawatt hours (MWh) of electricity per year of electricity and 2,239.44 thousand cubic feet (kcf) per year of natural gas. As concluded in Section 5.17, Electricity and Natural Gas, Southern California Edison (SCE) is currently able to supply enough electricity to accommodate the needs of the region. Any land use that would demand enormous amounts of electricity could have significant impacts on the electrical network. The proposed project would not demand a significant amount of electricity. Therefore, it is anticipated that SCE could adequately supply the proposed project.

The proposed project would involve operations typical of a residential subdivision and open space, requiring electricity and natural gas for typical lighting, climate control, and day-to-day activities. Additionally, as stated in Section 5.6, Greenhouse Gas Emissions, the proposed project would incorporate several water conservation project design features. Therefore, the proposed project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar residential subdivisions within the region.

Energy Efficiency Measures

Title 24, California's Energy Efficiency Standards for Residential and Non-residential Buildings, was established by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption, and provide energy efficiency standards for residential and non-residential buildings. In 2010, the CEC updated *Title 24* standards with more stringent requirements. The 2010 Standards are expected to substantially reduce the growth in electricity and natural gas use. Additional savings result from the application of the Standards on building alterations. For example, requirements for cool roofs, lighting, and air distribution ducts are expected to save about additional of electricity. These savings are cumulative, doubling as years go by.

The proposed project would adhere to all Federal, State, and local requirements for energy efficiency. The proposed project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

7.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES THAT WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

According to *CEQA Guidelines* Sections 15126(c) and 15126.2(c), an EIR is required to address any significant irreversible environmental changes that would occur should the proposed project be implemented. As stated in *CEQA Guidelines* Section 15126.2(c):

> *"[uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter likely, primary impacts and, particularly, secondary impacts [such as highway improvement which provides access to a previously inaccessible area] generally commit future generations to similar uses. Also, irreversible damage can result*

from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified."

The proposed project would consume limited, slowly renewable and non-renewable resources. This consumption would occur during the proposed project's construction phase and would continue throughout its operational lifetime. Future development associated with implementation of the proposed project would require a commitment of resources that would include: 1) building materials, 2) fuel and operational materials/resources, and 3) the transportation of goods and people to and from the project site. Future construction associated with implementation of the proposed project would require the consumption of resources that are not replenishable or which may renew so slowly as to be considered non-renewable. These resources would include the following construction supplies: lumber and other forest products; aggregate materials used in concrete and asphalt; metals; and water. Fossil fuels such as gasoline and oil would also be consumed to power construction vehicles and equipment.

The resources that would be committed during full operation of the proposed project would be similar to those currently consumed within the City of Walnut. These would include energy resources such as electricity and natural gas, petroleum-based fuels required for vehicle-trips, fossil fuels, and water. Fossil fuels would represent the primary energy source associated with both construction and ongoing operation of the project, and the existing, finite supplies of these natural resources would be incrementally reduced. Full operation of the proposed project would occur in accordance with *Title 24*, Part 6 of the *California Code of Regulations*, which sets forth conservation practices that would limit the amount of energy consumed by the project. However, the proposed project's energy requirements would, nonetheless, represent a long-term commitment of essentially non-renewable resources.

Limited use of potentially hazardous materials typical of commercial and office uses, including vehicle maintenance materials, could be used and stored on the project site. The use of these materials would be in small quantities and used, handled, stored, and disposed of in accordance with the manufacturer's instructions and applicable government regulations and standards. Compliance with these regulations and standards would serve to protect against significant and irreversible environmental change resulting from the accidental release of hazardous materials. In addition, demolition activities would comply with regulatory requirements to ensure that asbestos and lead-based paints are not released into the environment. Compliance with such regulations would serve to protect against a significant and irreversible environmental change resulting from the accidental release of hazardous materials.

In summary, development associated with implementation of the proposed project, both construction and operation, would result in the irretrievable commitment of limited, slowly renewable, and nonrenewable resources, which would limit the availability of these particular resource quantities for future generations or for other uses during the life of the project. However, continued use of such resources would be on a relatively small scale in a regional context. As such, although irreversible environmental changes would result from project implementation, such changes would not be considered significant.

8.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

The City of Walnut conducted an Initial Study in May 2016 to determine significant effects of the proposed project. In the course of this evaluation, certain impacts of the project were found to be less than significant due to the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type. The effects determined not to be significant are not required to be included in primary analysis sections of the Draft EIR. In accordance with *CEQA Guidelines* Section 15128, the following section identifies those impacts determined to be less than significant in the Initial Study. A copy of the Initial Study and the explanation for the less than significant conclusions of the following environmental issue areas are included in Appendix A, Initial Study/Notice of Preparation. This section also summarizes which impacts were found to be less than significant in the EIR, both with and without the imposition of mitigation measures.

8.1 INITIAL STUDY CONCLUSIONS

AESTHETICS

- 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.

AGRICULTURAL AND FORESTRY RESOURCES

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
- Conflict with existing zoning for agricultural use, or a Williamson Act contract.
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).
- Result in the loss of forest land or conversion of forest land to non-forest use.
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

BIOLOGICAL RESOURCES

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

CULTURAL RESOURCES

- Disturb any human remains, including those interred outside of formal cemeteries.

GEOLOGY AND SOILS

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
  - Strong seismic ground shaking.
- Result in substantial soil erosion or the loss of topsoil.
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

HAZARDS AND HAZARDOUS MATERIALS

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area.
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

HYDROLOGY AND WATER QUALITY

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

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

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

- Inundation by seiche, tsunami, or mudflow.

LAND USE AND PLANNING

- Physically divide an established community.

- Conflict with any applicable habitat conservation plan or natural community conservation plan.

MINERAL RESOURCES

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

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

NOISE

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

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

POPULATION AND HOUSING

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

- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

PUBLIC SERVICES

- Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable services:

  - Schools

  - Parks

  - Other Public Facilities

RECREATION

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

- Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

TRANSPORTATION/TRAFFIC

- 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.

- 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.

8.2 EIR CONCLUSIONS

8.2.1 NO IMPACTS OR LESS THAN SIGNIFICANT IMPACTS

AESTHETICS

- Development associated with implementation of the proposed project and other related cumulative projects could result in cumulatively considerable aesthetics impacts.

AIR QUALITY

- Implementation of the proposed project could create objectionable odors.

CULTURAL RESOURCES

- Implementation of the proposed project could impact historical resources.

GEOLOGY AND SOILS

- Implementation of the proposed project could expose people or structures to potential substantial adverse effects from ground failure, including settlement, collapse, ground lurching, liquefaction, or lateral spreading.

- Implementation of the proposed project could expose people or structures to potential substantial adverse effects from landslides.

- The proposed project along with other related cumulative projects could result in cumulatively considerable impacts related to geologic soils and seismic hazards.

GREENHOUSE GAS EMISSIONS

- Implementation of the proposed project could generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

- Implementation of the proposed project could conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

- Greenhouse gas emissions generated by the proposed project along with other related cumulative projects could have a significant impact on global climate change.

HYDROLOGY, DRAINAGE, AND WATER QUALITY

- Implementation of the proposed project could result in significant impacts related to increased run-off amounts and degraded water quality.

- Implementation of the proposed project could deplete groundwater supplies or interfere with groundwater recharge.

LAND USE

- Implementation of the proposed project could conflict with a Walnut General Plan Land Use Plan or Policy.

- Implementation of the proposed project could conflict with the Walnut City Code standards and regulations.

- Development associated with implementation of the proposed project and other related cumulative projects could conflict with applicable land use plans, policies, or regulations.

NOISE

- Implementation of the proposed project could result in significant vibration impacts to nearby sensitive receptors.

- The proposed project along with other related cumulative projects could result in significant short-term noise impacts to nearby noise sensitive receivers.

- The proposed project along with other related cumulative projects could result in cumulatively considerable long-term noise impacts.

FIRE PROTECTION

- Development associated with implementation of the proposed project and other related cumulative projects could result in cumulatively considerable impacts to fire services.

POLICE PROTECTION

- Implementation of the proposed project could result in impacts to police services.

- Development associated with implementation of the proposed project and other related cumulative projects could result in cumulatively considerable impacts to police services.

TRAFFIC

- Implementation of the proposed project could cause a significant increase in traffic at local study intersections under opening year 2017 conditions when compared to the traffic capacity of the street system.

- Implementation of the proposed project could result in a conflict with an applicable congestion management program.

- The proposed project along with other related cumulative projects could result in cumulatively considerable impacts related to traffic and circulation.

WATER

- The proposed project along with other related cumulative projects could result in cumulatively considerable impacts to water supplies and facilities.

WASTEWATER

- The proposed project along with other related cumulative projects could result in cumulatively considerable impacts to wastewater conveyance and treatment facilities.

SOLID WASTE

- Implementation of the proposed project could potentially result in increased solid waste generation in exceedance of landfill capacity during operation.

- The proposed project along with other related cumulative projects could result in cumulatively considerable impacts related to solid waste disposal services and landfill disposal capacity.

ELECTRICITY AND NATURAL GAS

- Implementation of the proposed project could increase the demand for electrical service or could require the expansion of existing services.

- Implementation of the proposed project could increase the demand for natural gas or could require the expansion of existing facilities.

- The proposed project along with other related cumulative projects could result in cumulatively considerable impacts related to electrical and/or natural gas services and facilities.

8.2.2 LESS THAN SIGNIFICANT IMPACTS WITH MITIGATION INCORPORATED

AESTHETICS

- Construction activities associated with implementation of the proposed project could result in significant impacts related to temporary degradation of the visual character/quality of the site and its surroundings.

- Implementation of the proposed project could create a new source of light and/or glare, which could affect daytime and/or nighttime views in the area.

AIR QUALITY

- Implementation of the proposed project could violate air quality standards during construction and operation.

- Implementation of the proposed project could expose sensitive receptors to substantial pollutant concentrations.

- The proposed project along with other related cumulative projects could result in a cumulatively considerable net increase of criteria pollutants.

BIOLOGICAL RESOURCES

- The proposed project could result in impacts to special-status plant or animal species known to occur within the project site vicinity.

- The jurisdictional waters of the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Game could be adversely affected by the proposed project.

- Implementation of the proposed project could conflict with the City's oak/walnut tree preservation ordinance.

- The proposed project along with other related cumulative projects could result in cumulatively considerable impacts related to biological resources.

CULTURAL RESOURCES

- Implementation of the proposed project could impact archaeological resources.

- Implementation of the proposed project could directly or indirectly impact a unique paleontological resource or site.

- Implementation of the proposed project could impact unmarked burial sites.

- The proposed project along with other related cumulative projects could result in cumulatively considerable impacts related to cultural, paleontological, or historic resources.

GEOLOGY AND SOILS

- Implementation of the proposed project could be located on unstable or expansive soils creating potential risk to life or property.

HAZARDS AND HAZARDOUS MATERIALS

- Construction and operational activities associated with implementation of the proposed project could create a significant hazard to the public or environment through accidental conditions involving the release of hazardous materials.

- The proposed project along with other related cumulative projects could increase the exposure of hazardous substances to the public or the environment.

HYDROLOGY, DRAINAGE, AND WATER QUALITY

- Grading, excavation, and construction activities associated with the proposed project could impact water quality.

- The proposed project along with other related cumulative projects could result in cumulatively considerable impacts related to increased run-off amounts and degraded water quality.

NOISE

- Grading and construction associated with implementation of the proposed project could result in significant temporary noise impacts to nearby noise sensitive receivers.

- Traffic generated by the proposed project could significantly contribute to existing traffic noise in the area or exceed the city's established standards or could result in a significant increase in long-term stationary ambient noise levels.

FIRE PROTECTION

- Implementation of the proposed project could result in impacts to fire services.

TRAFFIC

- Implementation of the proposed project could result in a hazardous traffic condition.

WATER

- Implementation of the proposed project could require or result in increased demand for water supplies, the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

WASTEWATER

- Implementation of the proposed project could generate wastewater that exceeds the capacity of conveyance and treatment facilities serving the project area**.**

SOLID WASTE

- Implementation of the proposed project could potentially result in increased solid waste generation in exceedance of landfill capacity during construction.

9.0 SIGNIFICANT UNAVOIDABLE EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED ACTION IS IMPLEMENTED

The *California Environmental Quality Act* (*CEQA*) *Guidelines* Section 15126(b) requires an Environmental Impact Report (EIR) to "describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications, and the reasons why the project is being proposed, notwithstanding their effect, should be described."

Section 5.0 of this EIR provides a description of the potential environmental impacts of the proposed project and recommends mitigation measures to reduce impacts to a less than significant level, where possible. After implementation of mitigation measures, most of the potentially significant impacts associated with the proposed project would be reduced to less than significant levels. However, the impacts listed below could not be feasibly mitigated and would result in a significant unavoidable impact associated with approval of the proposed Brookside Project.

AESTHETICS

- Long-term visual character/quality project impacts on adjacent existing residential uses

10.0 REFERENCES

10.1 LEAD AGENCY AND EIR PREPARER

LEAD AGENCY

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