12111 Buaro Street Project
Initial Study/Mitigated Negative Declaration

Lead Agency:
City of Garden Grove
Community Development Department Planning Division
11222 Acacia Parkway
Garden Grove, California 92840
714.741.5312
www.ci.garden-grove.ca.us

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August 2017

TABLE OF CONTENTS

TABLES

FIGURES

FIGURES, CONTINUED

APPENDICES INCLUDED ON ENCLOSED CD-ROM

1. **Appendix 1, Project Plans:**
   a. 12111 Buaro Street Site Plan (March 20, 2017).
   b. Architectural Elevations Exhibits (May 18, 2017).
   c. Concept Grading Plan (May 31, 2017).
   d. General Plan Amendment Exhibit (August 28, 2017).
   e. Tentative Tract Map (May 31, 2017).

2. **Appendix 2, Air Quality:** *12111 Buaro Street Project Air Quality and Global Climate Change Impact Analysis*, prepared by Kunzman Associates, Inc. (March 2, 2017).

3. **Appendix 3, Cultural Resources:**
   a. Local Government Tribal Consultation List Request to Native American Heritage Commission.
   b. Native American Heritage Commission Response Letter and List of Tribes (March 24, 2017).
   c. *Project Notification Pursuant to Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18) Formal Notification for Consultation for the Property Located at 12111 Buaro Street, City of Garden Grove, Orange County, California,* prepared by City of Garden Grove, mailed out to 16 Tribes, as directed by the NAHC (April 12, 2017).

4. **Appendix 4, Geology and Soils:** *Preliminary Geotechnical Investigation Report and Liquefaction Study for the Multi-Family Residential Development Located at 12111 Buaro street in the City of Garden Grove, Orange County, California*, prepared by LGC Geo-Environmental, Inc. (October 14, 2016).

5. **Appendix 5, Hazards and Hazardous Materials:** *Phase I Environmental Site Assessment Report, Page Private School, 12111 Buaro Street, Garden Grove, California, 92840*, prepared by Partner Engineering & Science, Inc. (October 6, 2016).

6. **Appendix 6, Hydrology and Water Quality:**
   a. *Water Quality Management Plan (WQMP), Buaro Street TTM - Pinnacle Homes,* prepared by Proactive Engineering Consultants, Inc. (June 6, 2017).
   b. *Preliminary Drainage Report,* prepared by Proactive Engineering Consultants, Inc. (March 21, 2017).

7. **Appendix 7, Noise:** *12111 Buaro Street Project Nosie Impact Analysis*, prepared by Kunzman Associates, Inc. (February 28, 2017).

8. **Appendix 8, Transportation/Traffic:** *12111 Buaro Street Project Focused Traffic Analysis*, prepared by Kunzman Associates, Inc. (February 21, 2017).

9. **Appendix 9, Utilities and Service Systems:** City of Garden Grove Public Works Water and Sewer Service for Proposed Project at 12111 Buaro Street Letter (June 15, 2017).

Note to Reader: To save natural resources, the appendices are contained on a CD-ROM included with the printed copy of this Initial Study. The appendices are also available on the City of Garden Grove Planning Department website: http://www.ci.garden-grove.ca.us/

A printed copy of the Initial Study is also available as part of the Project file and can be reviewed at the following location:

City of Garden Grove, Planning Department
Community Development Department Planning Division
11222 Acacia Parkway
Garden Grove, California 92840
714.741.5312
Hours: Monday – Thursday, 7:30 a.m. – 5:30 p.m.
Alternating Fridays, 7:30 a.m. – 5:00 p.m.

MITIGATED NEGATIVE DECLARATION

Title of Project: 12111 Buaro Street Project.

Brief Description of Project: The 0.99-acre Project (12111 Buaro Street) is located on the west side of Buaro Street between Jentges Avenue and Hampton Avenue in the City of Garden Grove. Please see the enclosed Project Location Map. The existing land use designation from the City of Garden Grove General Plan is Civic/Institutional (CI) and the zoning classification is Multiple-Family Residential (R-3).

The Project proposes the development of 17 attached 2- and 3-story condominium townhomes in 2 buildings. Each of the units shall have a 2-car garage, for a total of 34 garage parking spaces. In addition, the Project also includes 22 open parking spaces (20 standard parking spaces and 2 handicapped accessible parking spaces).

Implementation of the Project would require a General Plan Amendment (GPA). The Project site currently has a land use designation of Civic Institution (CI). Following approval of the requested GPA, the Project site would have a land use designation of Medium Density Residential (MDR).

Project Location: West side of Buaro Street, south of Chapman Avenue, between Jentges Avenue and Twintree Avenue, City of Garden Grove, County of Orange, (12111 Buaro Street).

Name of the Project Proponent: Pinnacle Residential, 2 Venture, Suite 350, Irvine, CA 92618.

Cortese List: The Project is not located on the Cortese List.

Finding: The Initial Study/Mitigated Negative Declaration (IS/MND) found that the environmental effects associated with the Project would be less than significant following implementation of the mitigation measures listed below.

Mitigation Measures: MM-BIO-1, MM-CUL-1, MM-CUL-2, MM-CUL-3, MM-GEO-1, MM-HAZ-1, MM-HAZ-2, and MM-NOI-1.

MITIGATED NEGATIVE DECLARATION

1. PROJECT TITLE:

12111 Buaro Street Project
General Plan Amendment No. GPA-003-2017;
Site Plan No. SP-041-2017;
Variance No. V-016-2017; and
Tentative Tract Map No. TT-18117-2017.

2. LEAD AGENCY:

City of Garden Grove
11222 Acacia Parkway
P.O. Box 3070
Garden Grove, California 92840

3. CONTACT PERSON AND TELEPHONE NO.:

Erin Webb, Senior Planner
City of Garden Grove Planning Services Division 11222 Acacia Parkway
Garden Grove, California 92840
714.741.5313

4. PROJECT LOCATION:

12111 Buaro Street, Garden Grove, California 92840 Assessor Parcel Number (APN) 231-331-012. Reference **Figure A-1, *Regional Location Map***.

5. PROJECT PROPONENT AND ADDRESS:

Pinnacle Residential
2 Venture, Suite 350, Irvine, CA 92618

6. ENVIRONMENTAL SETTING

The Project site is improved with an unoccupied pre-school. Currently, there are no on-site operations. The Project site consists of a one-story building located on the south side of the property. In addition to the current structure, the Project site is also improved with asphalt-paved parking areas, playgrounds, associated landscaping, drainage features, and one pool. The Project is located within a mixed commercial and residential area of Orange County.

7. GENERAL PLAN LAND USE DESIGNATION

As illustrated by **Figure A-2, *General Plan Land Use Designations***, the .99-acre parcel is currently designated as Civic/Institutional (CI) on the City's General Plan Land Use Diagram (Exhibit LU-3). General Plan Amendment No. GPA-003-2017 will be required to change the General Plan Land Use Diagram designation to Medium Density Residential (MDR).

8. ZONING

As illustrated by **Figure A-3, *Zoning Designations***, the .99-acre parcel has a zoning designation on the City's Zoning Map of Multi-Family Residential Development (R-3). According to Chapter 9.12 (Multi-Family Residential Development Standards), Section 9.12.020.020.A.2 (Summary of Zones of the City's Municipal Code, "the R-3 zone is intended to provide for a variety of types and densities of multiple-family residential dwellings. This zone is intended to promote housing opportunities in close proximity to employment and commercial centers."

9. DESCRIPTION OF PROJECT

A request to develop .99 acres with 17 attached condominium townhome units. The request includes a General Plan Amendment to change the land use designation from Civic Institution (CI) to Medium Density Residential (MDR), **Figure A-4, *General Plan Amendment***; Tentative Tract Map No. 18117 proposes the subdivision of the site for condominium purposes, **Figure A-5, *TTM No. 18117***; a Site Plan approval to allow the construction of two, two and three-story buildings with 17 attached condominium units, and 1,628 square feet of open space, **Figure A-6, *Site Plan***; and two Variances to setback from drive aisle to living space; required setback is 10-feet, Project proposes 5-feet, and setback from Public Open Space to living space; required setback is 5-feet, Project proposes 3-feet**.**

10. AGENCIES WHOSE APPROVAL IS REQUIRED

City of Garden Grove Planning Commission; and
City of Garden Grove City Council.

1.0 INTRODUCTION

1.1 PURPOSE OF THE INITIAL STUDY

This purpose of this Initial Study/Mitigated Negative Declaration (IS/MND) is to evaluate the potential environmental impacts that would occur as a result of construction and the subsequent operation of the 12111 Buaro Street Project (Project).

The Project is considered a project per California Environmental Quality Act (CEQA). The City of Garden Grove is the Lead Agency for the Project, and as such, is responsible for the Project's environmental review. (Public Resources Code Section 21067.)

As part of the environmental review process for the Project, the City has authorized the preparation of an IS/MND to assess the project's environmental impacts. The primary purpose of this IS/MND is to analyze and disclose the environmental implications of the Project to the City's decision- makers and to the public.

Although this IS/MND has been prepared with the assistance of a consultant, the analysis, conclusions, and findings herein are representative of the City's position, in its capacity as the Lead Agency for the Project. Based on the initial study, the City has determined that with the incorporation of mitigation, the Project will not have a significant effect on the environment.

This IS/MND and an associated Notice of Intent (NOI) will be forwarded to all applicable responsible agencies, trustee agencies, and the public for review and comment for a period of 20 days to allow these entities and other parties to comment on the Project and the findings in the IS/MND.

2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND ENVIRONMENTAL SETTING

Surrounding Land Uses

The Project site is located in the northwest portion of the City on the west side of Buaro Street just south of Jentges Avenue. The Project site is located in an urbanized area, surrounded by multi-family residences to the north and west, a skilled nursing facility to the west across Jentges Avenue, Walton Intermediate School to the south, and single-family homes and a Marriott Suites to the east. Reference **Figure 2-1, *Aerial Photo*.**

Existing Site

As illustrated by **Figure 2-1, *Aerial Photo***, the .99-acre Project site consists of one (1) parcel located at 12111 Buaro Street.

The existing pre-school facility includes a one-story building located on the south side of the property.

In addition to the current structure, the site is also improved with asphalt-paved parking areas, playgrounds, associated landscaping, drainage features, and one pool.

The Project site was formerly agricultural land as early as 1938 to circa 1953; and developed with the current structure in 1956. Tenants on the Project site have included Happyland Pre-School (1958-1972) and Page Private School (1976-June 2016). The Project site building has been vacant since June 2016.

2.2 PROJECT DETAILS

As shown in **Table 2.2-1, *Project Details***, the Project proposes to develop 17 attached 2- and 3-story townhomes within 2 buildings. Each of the units is to have a 2-car garage for a total of 34 garage parking spaces. In addition, the Project includes 22 open parking spaces (20 standard parking spaces and 2 accessible parking spaces).

Landscaping will be provided in the parking areas and there will also be a common open space area.

Table 2.2-1
Project Details

To be Demolished			
Existing Pre-School Building – approximately 8,250 square feet (sq. ft.)			
Proposed Townhome Construction			
Plan 1 (6 units)	New Construction	3 bed / 2.5 baths	1st floor: 649 sq. ft. 2nd floor: 818 sq. ft. 1,467 sq. ft. living area 418 sq. ft. garage
Plan 2 (11 units)	New Construction	3 bed / optional den or 4th bed / 3.5 baths	1st floor: 379 sq. ft. 2nd floor: 662 sq. ft. 3rd floor: 596 sq. ft. 1,627 sq. ft. living area 436 sq. ft. garage 145 sq. ft. deck
Building Height: 35'-0"			
Total Building Area Coverage: 16,360 sq. ft.			
Drive Aisle: 10,153 sq. ft. / Parking Area: 6,623 sq. ft.			
Total Landscape Area: 4,892 sq. ft. • Common Open Space Area: 1,646 sq. ft. • Private Open Space Area: 3,515 sq. ft. • Total Open Space, Recreation, and Leisure Areas; 5,161 sq. ft.			
Total Parking: 56 Spaces • 34 garage spaces • 20 open spaces & 2 Accessible (ADA)			

Source: Project Plans 2017 (**Appendix 1a**)

The Project requires a General Plan Amendment (GPA No. GPA-003-2017) to change the land use designation of the 0.99 acre parcel from CI to MDR. No zone change is required.

Parking and Access. Vehicular access to the Project site would be provided by a new driveway on Buaro Street. Pedestrian access to the Project would be facilitated by proposed sidewalks and walkways.

The Project would provide a total of 56 new parking spaces, 34 of which will be garage spaces for the residents, 20 open parking spaces, and 2 spaces which are accessible per the Americans with Disabilities Act (ADA). The open spaces will be located on the west side of the Project site. In addition, that area will also provide a fire-truck turnaround.

Building Design. The Project proposes two well-designed buildings that incorporate traditional architectural details in an innovative, modern style. The Project will add to the character of the adjacent and surrounding residential development and will provide high-quality buildings. The Project's design includes elements such as siding, balconies with composite wood railings, and awnings. Buildings would include stucco color finish, asphalt shingle tiles, and window trim.

Figure 2-2, *Elevations*, provide exterior elevations for Buildings A and B. Both buildings have three stories and would be constructed to a height of 35 feet (ft.). Building A would provide 9 units and Building B would provide 8 units.

Landscaping. Figure A-6 denotes a total of 4,892 s.f. of landscaping would be installed. The Project proposes ample landscaping around the site, in setback areas, along walkways, and in the active recreation area. The plantings are a mix of trees, shrubs, and groundcovers, reference **Figure 2-3, *Landscape Plan*.** All landscaping for the Project would be required to comply with Section 9.12.040.070 of the City's Municipal Code's Landscaping design standards.

Lighting. According to the City's Municipal Code Section 9.12.040.210, Parking Dimensions and Design Lay-Outs, lighting in the parking area shall be directed, positioned, or shielded in such a manner so as not to unreasonably illuminate the window area of nearby residences.

Sustainability Features. The Project would incorporate a number of design features that would reduce impacts to greenhouse gas (GHG) emissions, water use, waste generation, and energy demands. These features are listed below:

Project Design Feature GCC-1: To ensure that the Project complies with and would not conflict with or impede the implementation of reduction goals identified in the City of Garden Grove (City) General Plan, Assembly Bill (AB) 32, Senate Bill (SB) 375, the Governor's Executive Order (EO) S-3-05, and other strategies to help reduce greenhouse gases (GHGs) to the level proposed by the Governor, the project shall implement a variety of measures that would further reduce its GHG emissions. To the extent feasible, and to the satisfaction of the City, the following measures shall be incorporated into the design and construction of the Project:

- **Construction and Building Materials.**
  - Divert at least 50 percent of the demolished and/or grubbed construction materials from landfills for reuse or recycling (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).
  - Use of low-VOC interior paint and paperless drywall in bathrooms.
  - CRI Green Label low-VOC carpeting, underlayment, and low-VOC adhesives.
  - Indoor air quality management plan and verification testing during construction.

- **Energy Efficiency Measures.** Design all project buildings to meet or exceed the latest (2013) California Building Code's (CBC) Title 24 energy standard, such as installing energy-efficient (ENERGY STAR) heating and cooling systems, appliances and equipment, tankless water heaters, and control systems.

- **Water Conservation and Efficiency Measures.**
  - Create water-efficient landscapes within the development.
  - Flow reducers in kitchen and bathroom faucets.
  - Water efficient low-flow toilets.
  - Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.
  - Restrict watering methods (e.g., prohibit systems that apply water to nonvegetated surfaces) and control runoff.

Water Quality. To meet the requirements of the City of Garden Grove's Urban Water Management Plan (UWMP) and the Garden Grove Municipal Code (GGMC), the Project would include installation of an underground infiltration basin. Runoff would be pretreated by this infiltration basin to offset any increase in stormwater runoff that would result from the increased impervious surface area. This BMP and all other BMPs are described in complete detail within the *Water Quality Management Plan* (*WQMP*) for the Project, which was prepared for the Project by Glenn A. Budd, dated November 18, 2016.

Because the Project would disturb greater than approximately 1 acre of soil (with the inclusion of disturbances/improvements in the right-of-way), the Project is subject to the requirements of the State Water Resources Control Board National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002) (Construction General Permit), or subsequent permit. Prior to construction, the Project would obtain coverage under the Construction General Permit. The Waste Discharge Identification Number (WDID) would be provided to the City to demonstrate proof of coverage under the Construction General Permit.

Implementation/Phasing. The Project is planned for development in a single phase, with construction expected to be begin no earlier than September 2017 and be completed in approximately August 2018. The Project would begin with the demolition of approximately 8,250 square feet of existing building. Thereafter, Project construction would continue with grading, site preparation, construction, and landscaping. All construction equipment, including construction worker vehicles, would be staged on site.

Discretionary Actions. Development of the Project would require discretionary approvals by the City as the Lead Agency, and Responsible Agencies. The City's discretionary actions include the following:

- **General Plan Amendment Approval.** A General Plan Amendment would be required to change the land use designation for the 0.99 acre parcel from CI to MDR.

- **Site Plan Review and Approval.** Site Plan Review allows multiple departments in the City to analyze the utilities, building, safety, streets, parking, landscape, fire access, land use compatibility, and overall site design to allow the construction of 17 townhomes, and make recommendations based on staff review.

- **Setback Variance Approval.** Approval of two variances to allow the Project to provide setback from drive aisle to living space - required setback is 10-feet, Project proposes 5-feet, and setback from Public Open Space to living space - required setback is 5-feet, Project proposes 3-feet.

- **Tentative Tract Map Approval.** A Tentative Tract Map (TTM 18117) to allow the subdivision of the site for condominium purposes.

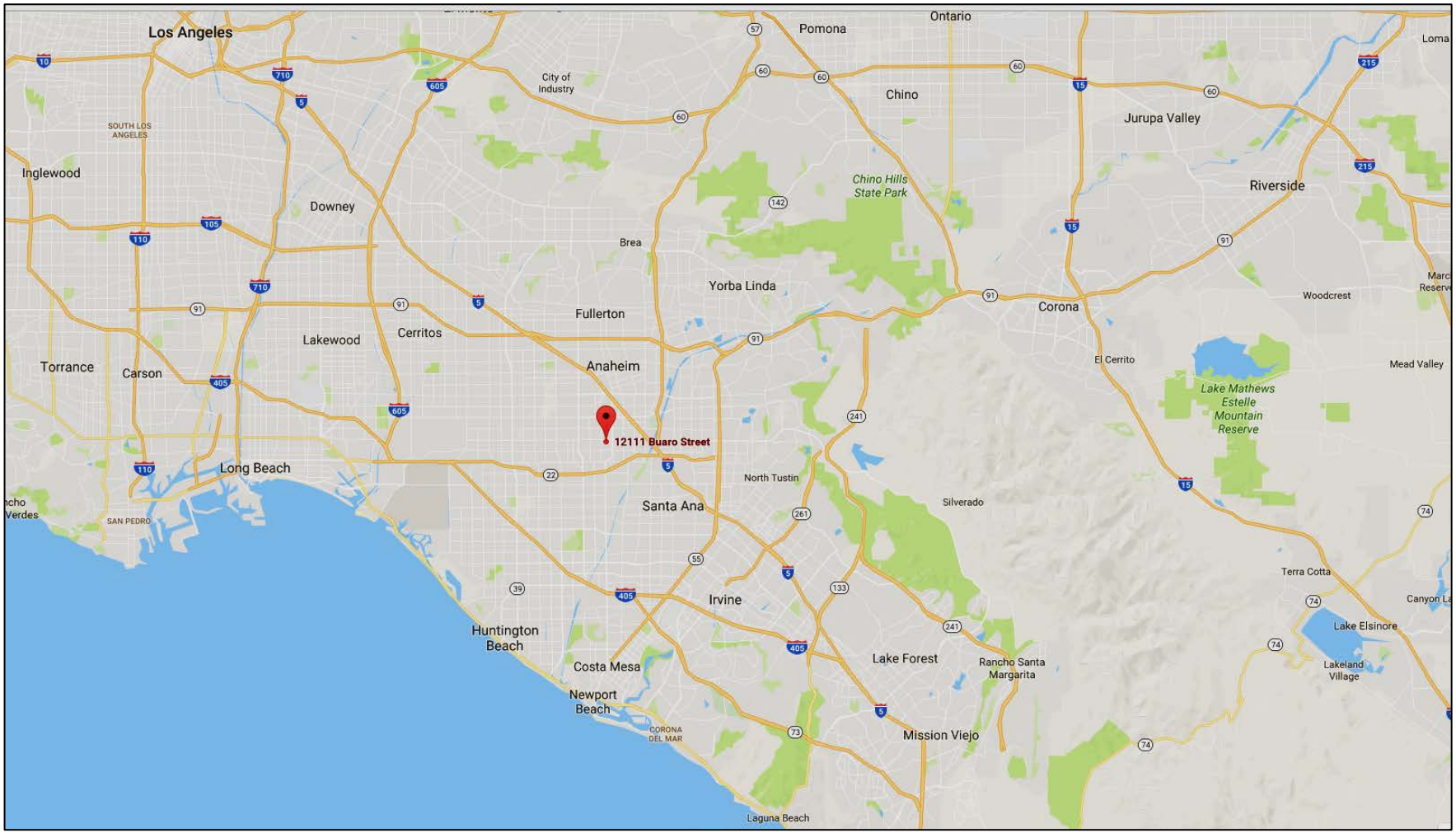
- **Development Agreement.** A Development Agreement would be required for Development Impact Fees and when they are required to be paid.

- **Adoption of the Mitigated Negative Declaration.** The City Planning Commission will consider the MND and make a recommendation to the City Council on adoption of the MND in conjunction with approval of the Project.

Other Ministerial City Actions. Ministerial permits/approvals (e.g., demolition and grading permits, building permits) would be issued by the City to allow demolition of the existing structures on-site, site preparation, curb cuts, and connections to the utility infrastructure.

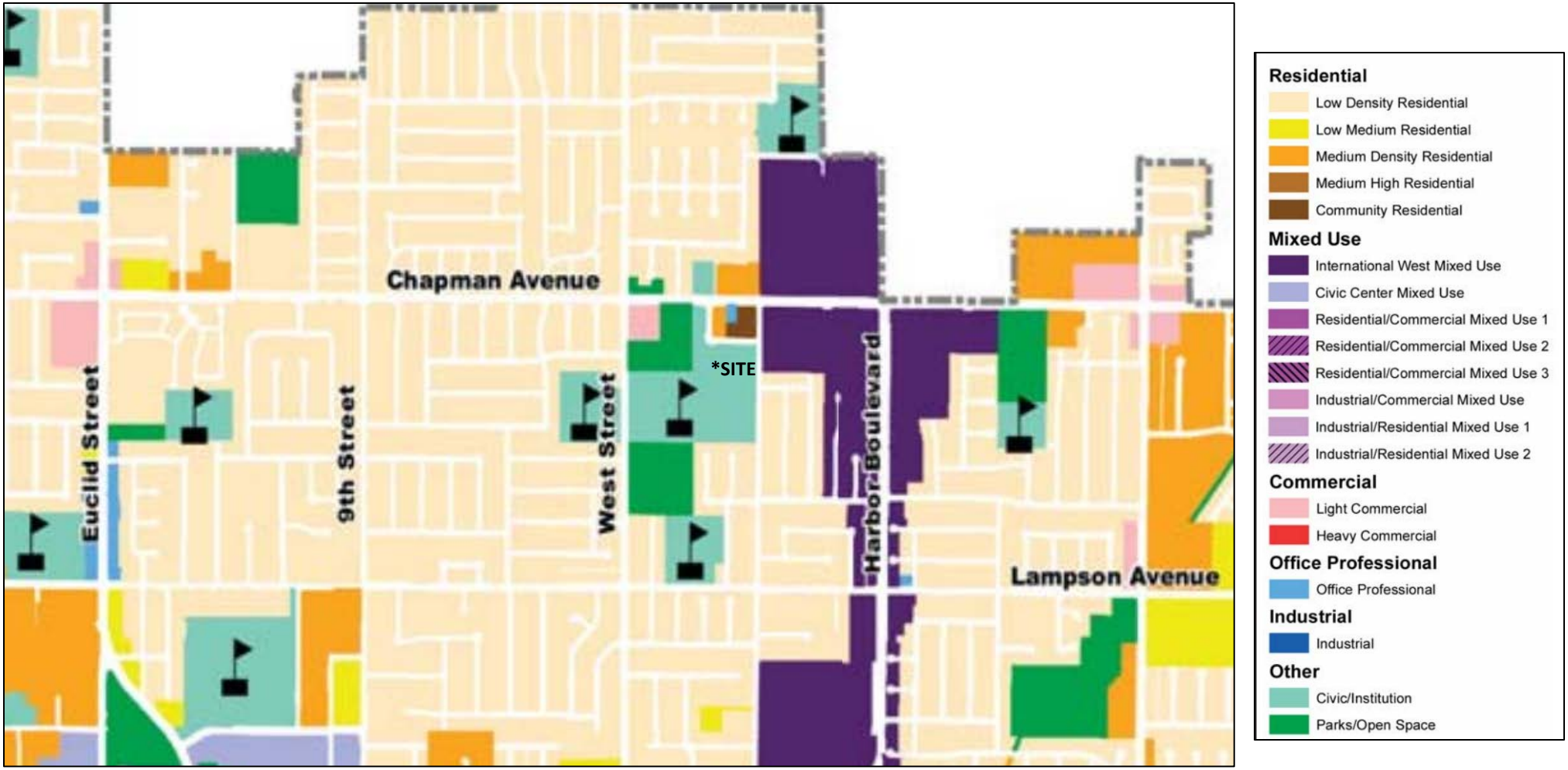
Probable Future Actions by Responsible Agencies. N/A.

FIGURE A-1, *Regional Location Map*



Source: Google Maps 2017

FIGURE A-2, *General Plan Land Use Designations*

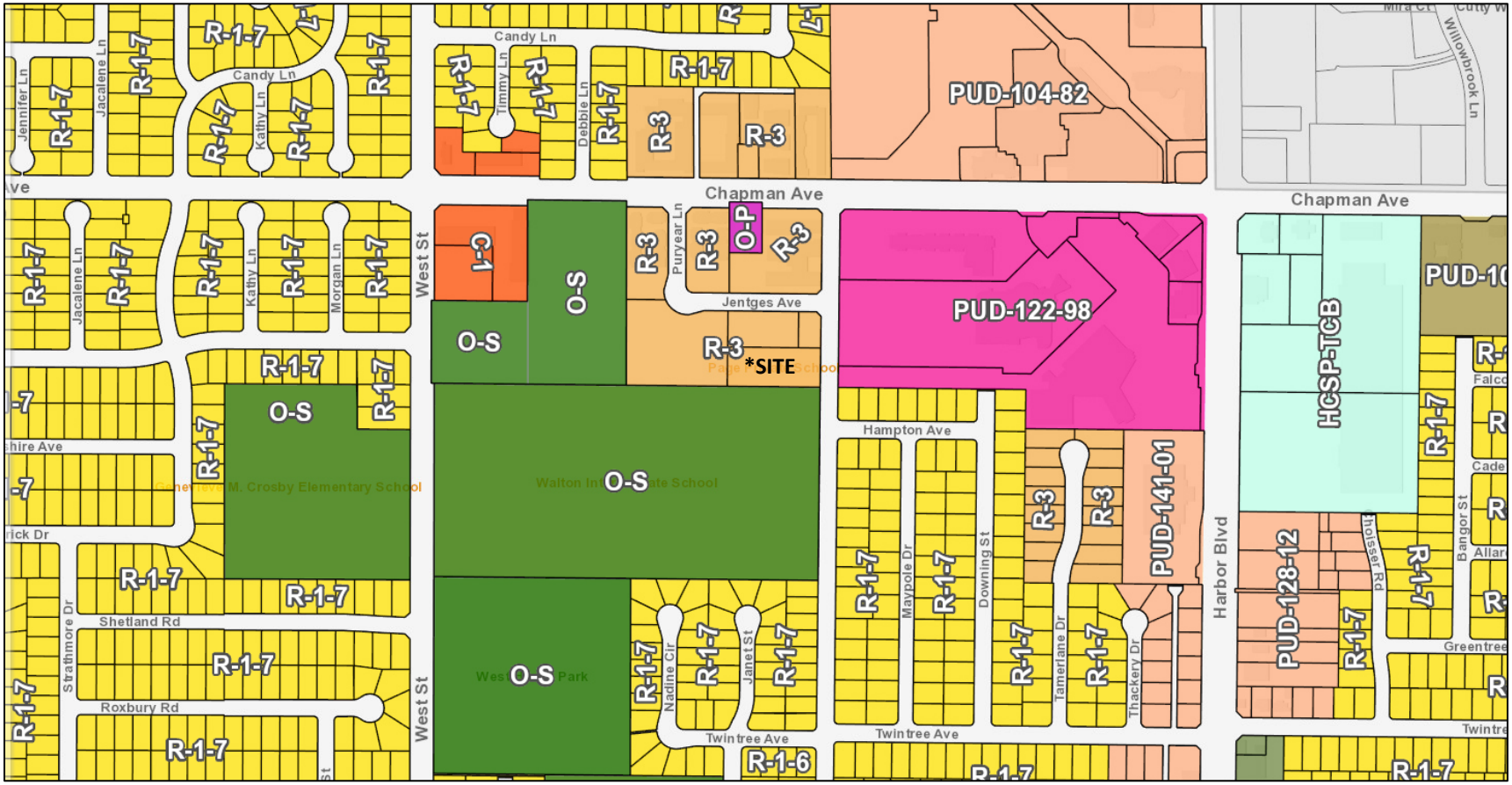


Source: City of Garden Grove General Plan Land Use Map

EXISTING GP LAND USE: Civic/Institution (CI).

PROPOSED GP LAND USE: Medium Density Residential (MDR).

FIGURE A-3, *Zoning Designations*

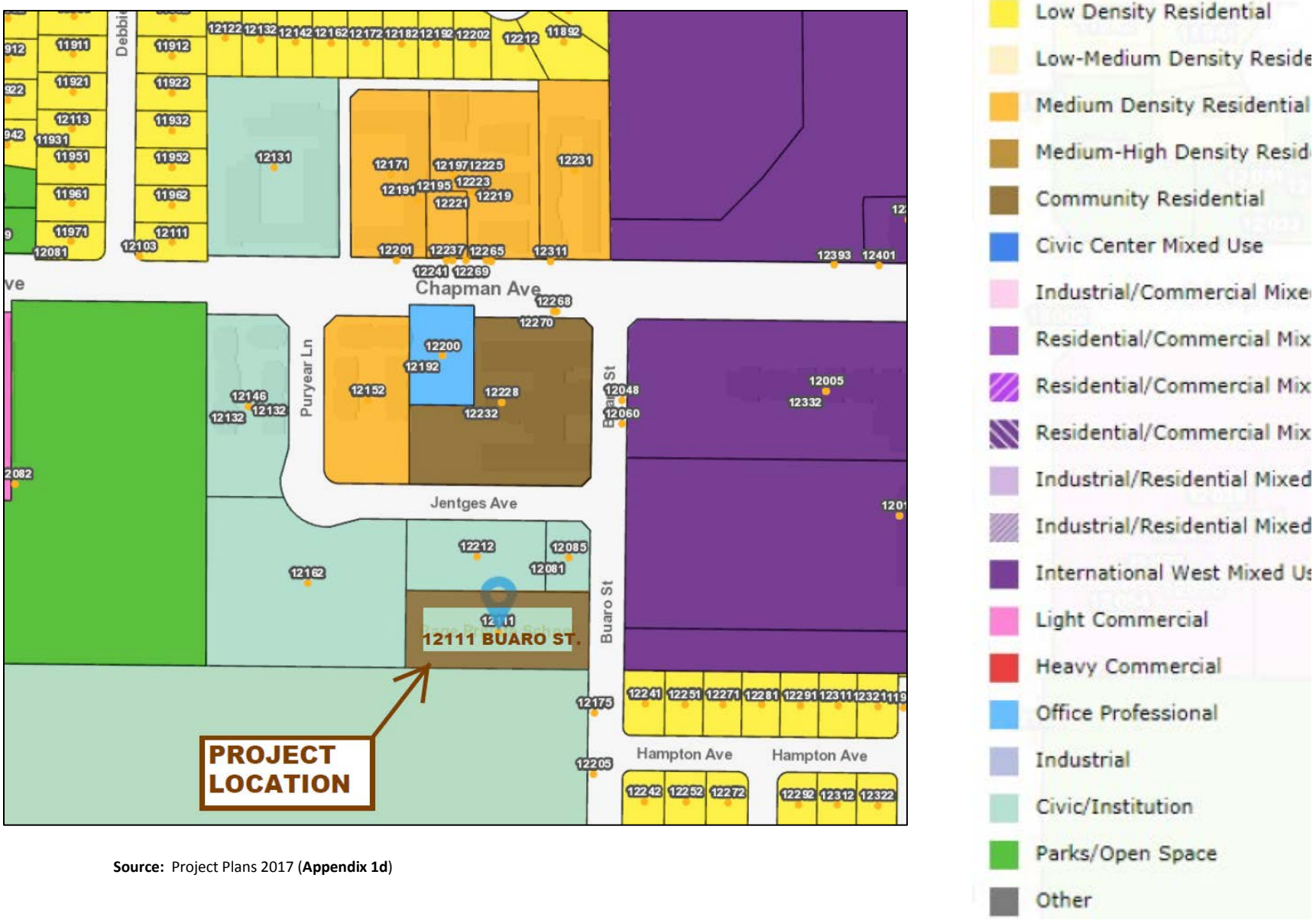


Source: City of Garden Grove Zoning Map

EXISTING ZONING: Multiple-Family Residential (R-3).

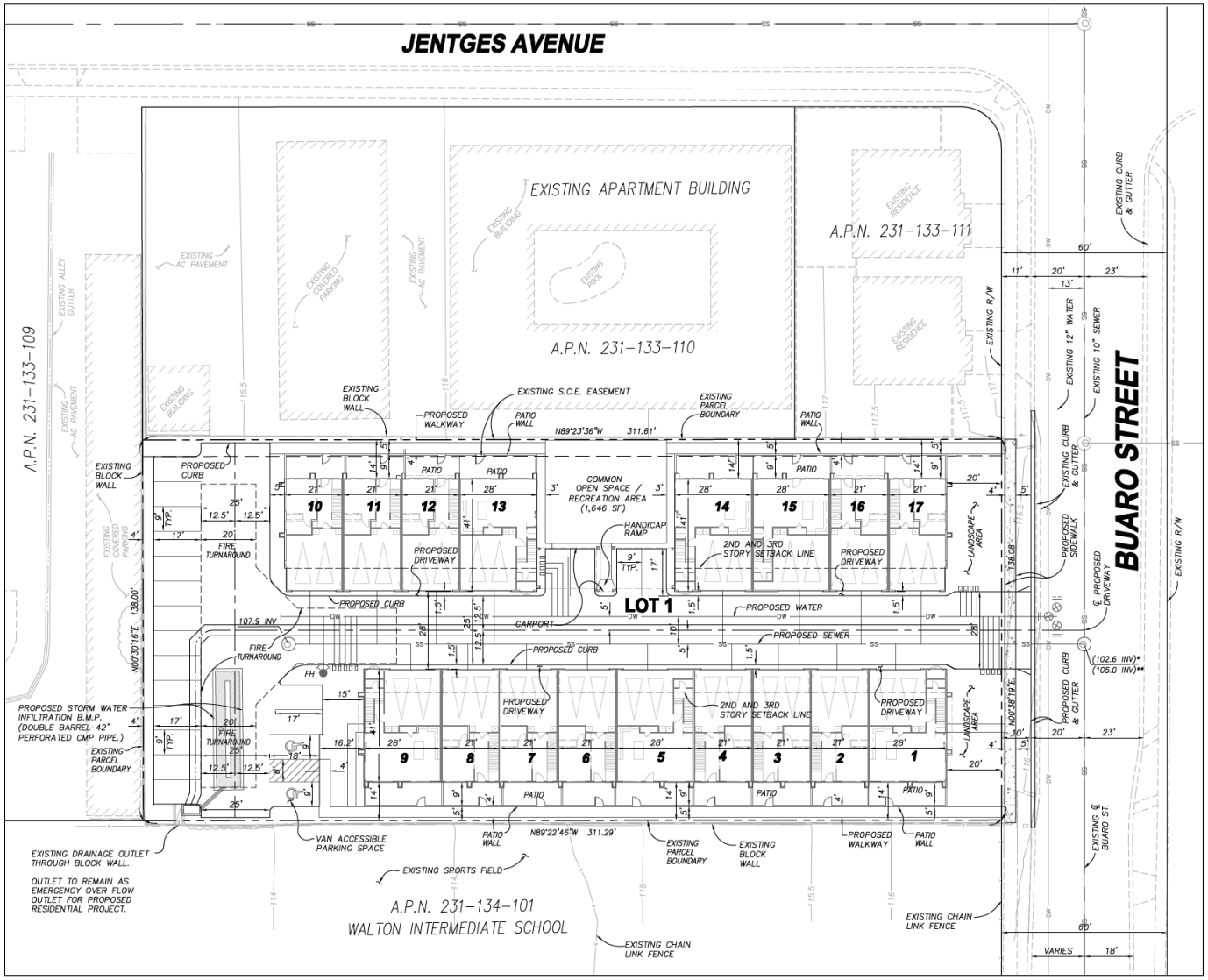
PROPOSED ZONING: Multiple-Family Residential (R-3).

FIGURE A-4, General *Plan Amendment*



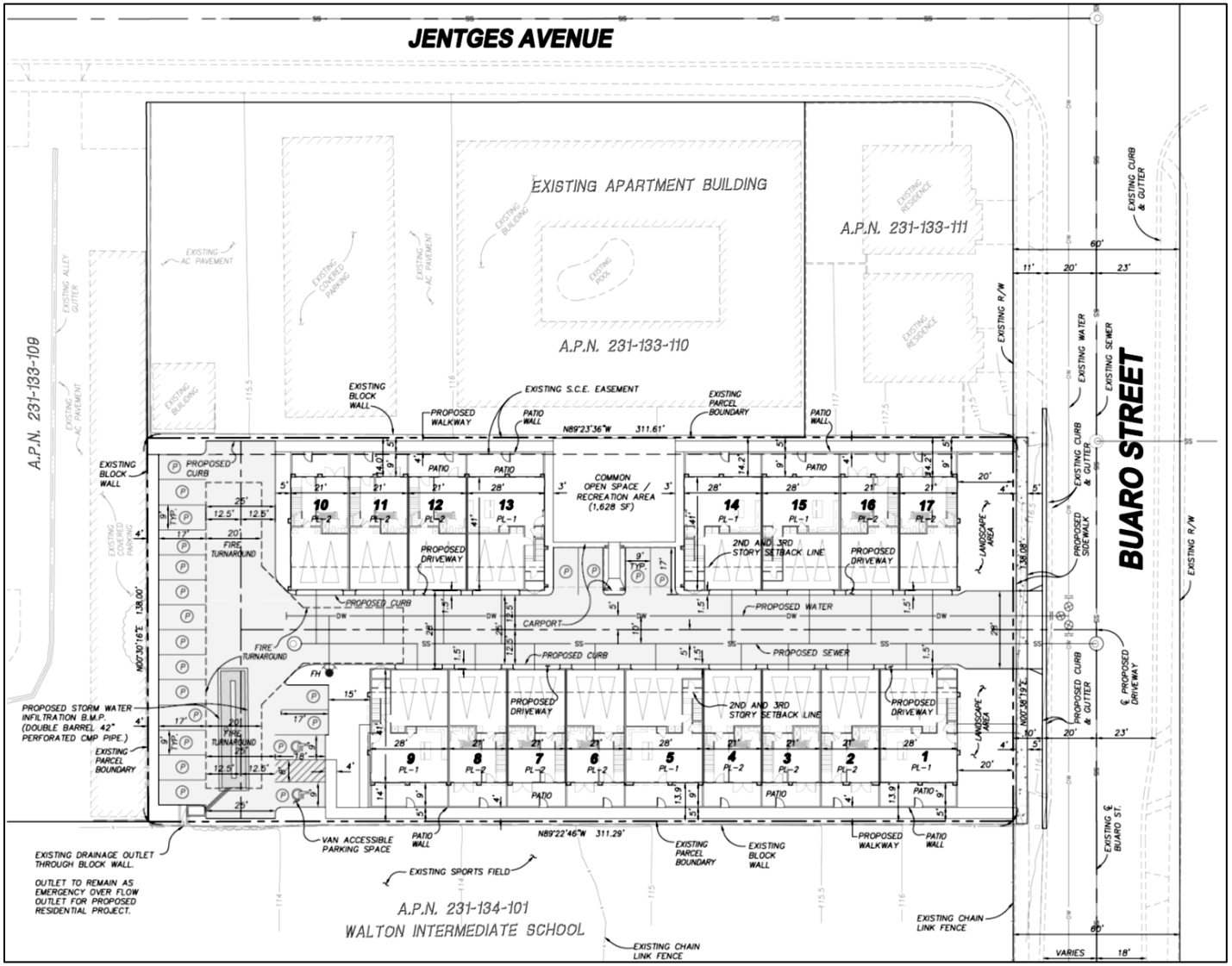
Source: Project Plans 2017 (**Appendix 1d**)

FIGURE A-5, *TTM No. 18117*



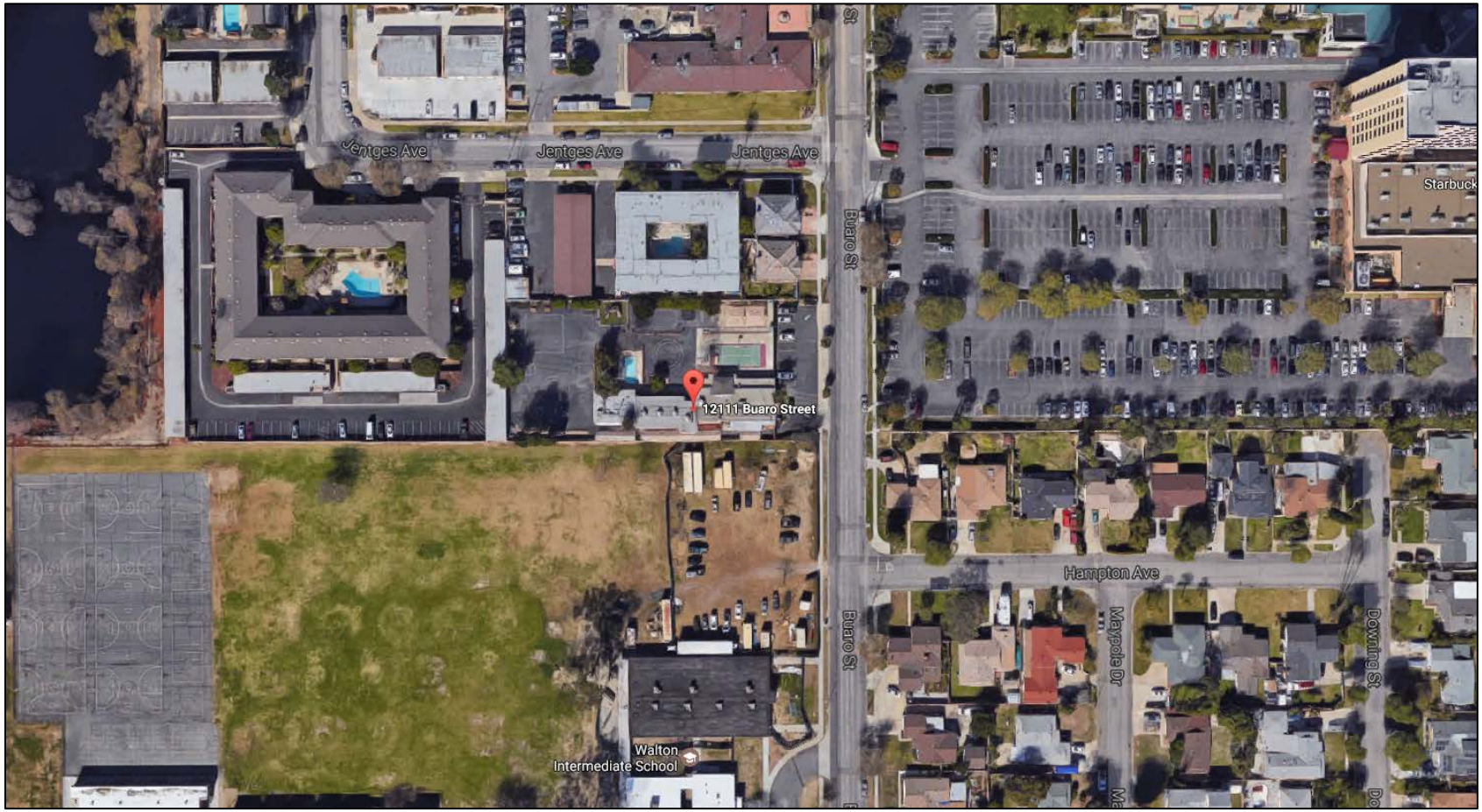
Source: Project Plans 2017 (**Appendix 1e**)

FIGURE A-6, *Site Plan*



Source: Project Plans 2017 (**Appendix 1a**)

FIGURE 2-1, *Aerial Photo*



Source: Google Maps 2017

FIGURE 2-2, *Elevations*

REAR PERSPECTIVE

FRONT PERSPECTIVE

Source: Project Plans 2017: 9 Unit Building (**Appendix 1b**)

FIGURE 2-2, *Elevations, continued*

REAR PERSPECTIVE

FRONT PERSPECTIVE

Source: Project Plans 2017: 8 Unit Building (**Appendix 1b**)

FIGURE 2-3, *Landscape Plan*

Source: Project Landscape Plan 2017

3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

DETERMINATION. On the basis of this initial evaluation:

1. I find that the project **could not** have a significant effect on the environment, and a **NEGATIVE DECLARATION** would be prepared. ☐
2. I find that although the Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared. ☒
3. I find the Project **may have a significant effect** on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required. ☐
4. I find that the Project **may have a "potentially significant impact" or "potentially significant unless mitigated impact"** on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed. ☐
5. I find that although the Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or Negative Declaration pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, including revisions or mitigation measures that are imposed upon the Project, nothing further is required. ☐

Erin Webb
Project Planner

August 28, 2017
Date

Planning Manager

8·28·17
Date

EVALUATION OF ENVIRONMENTAL IMPACTS

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

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

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

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

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (c) (3) (D). In this case, a brief discussion should identity the following:

    a. Earlier Analysis Used. Identify and state where they are available for review.
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. Mitigation Measures. For effects that are "Less Than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

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

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

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

9. The explanation of each issue should identify:

   a. The significance criteria or threshold, if any, used to evaluate each question; and
   b. The mitigation measure identified, if any, to reduce the impact to less than significant.

3.1 AESTHETICS.

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

Source(s): Garden Grove General Plan (General Plan); The California Department of Transportation's (Caltrans) Landscape Architecture Program, Scenic Highway Program, Streets and Highways Code Sections 260–263; and **Figure 2-1, *Aerial Photo***.

Findings of Fact:

(a) Would the Project have a substantial adverse effect on a scenic vista?

No Impact

The Project site is located within an urbanized area of the City of Garden Grove (City). The Site is developed with a preschool, associated structures, and parking lot. There are no aesthetic or visual resources located on the Project, site or in the surrounding vicinity that have been designated by the City's General Plan. The Project site is not located on a "Corridor," at an "Entry," nor does it contain a "Landmark," as depicted on Exhibit CD-1, *Corridor, Entries and Landmarks*, of the General Plan. The Project site is not located within a defined "District" as depicted on Exhibit CD-2, *Districts*, of the General Plan. Lastly, the Project site is not within or adjacent to any designated scenic vista, as there are no officially designated scenic vistas in the City. Therefore, the Project would not impact scenic vistas. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(b) Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a state scenic highway?

No Impact

The California Department of Transportation's (Caltrans) Landscape Architecture Program administers the Scenic Highway Program, contained in Streets and Highways Code Sections 260–263. State Highways are classified as either Officially Listed or Eligible. State Route 22 (SR-22), located approximately 1.14 miles south of the Project site, is not identified as an eligible or State-designated Scenic Highway. Therefore, the Project does not have the potential to damage resources within a State-designated scenic highway.

In addition, there are no existing aesthetic or visual resources located on the Project site or in the surrounding vicinity that have been designated in the City's General Plan (reference discussion in Section 3.1.a, above). There are no existing scenic rock outcroppings located within the Project limits. No impacts related to scenic resources would occur. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

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

Less Than Significant Impact

The Project site is located in a fully developed urban environment. The Project site is located in an urbanized area, surrounded by multi-family residences to the north and west, a skilled nursing facility to the west across Jentges Avenue, Walton Intermediate School to the south, and single-family homes and a Marriott Suites to the east. There are varied architectural styles adjacent to the Project and its immediate vicinity. The Project will be of similar scale, will utilize high quality construction materials, and will be complimentary to the existing urban fabric. The Project will improve a site with an abandoned pre-school by adding two well-designed buildings with an innovative architectural style that uses traditional details in a modern way. Buildings in the Project area are 2- to 3-stories in height and utilize similar colors and materials (stucco, wood).

Therefore, implementation of the Project will not substantially degrade the existing visual character or quality of the site and its surroundings. Any impacts are considered less than significant. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

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

Less Than Significant Impact

Spill light occurs when light fixtures such as streetlights, parking lot lighting, exterior building lighting, and landscape lighting are not properly aimed or shielded to direct light to the desired location and light escapes and partially illuminates a surrounding location. Glare is the result of improperly aimed or blocked lighting sources that are visible against a dark background such as the night sky. Glare generally does not result in illumination of off-site locations, but results in a visible source of light viewable from a distance.

Currently, there are no light sources at the Project site. New lighting sources will be created from light and glare associated with construction activities. These additional artificial light sources are typically associated with security lighting since all exterior construction activities are limited to daylight hours in the City. In addition, workers, either arriving to the site before dawn, or leaving the site after dusk, will generate additional construction light sources. The amount and intensity of light anticipated from these construction sources would generally be similar to the lighting of adjacent developed residential areas.

Additionally, these impacts will be temporary, of short-duration, and will cease when Project construction is completed.

All on-site lighting shall be stationary and directed away from adjoining properties and public rights-of-way and exterior lighting would be directed, positioned, or shielded in such a manner as to not "unreasonably illuminate the window area of nearby residences." As such, building exterior lights would be surface-mounted and directed away from or screened from adjacent residential uses. The Project site would be illuminated from sunset to sunrise (generally 6:00 p.m. to 6:00 a.m., depending on the time of year).

The Project would be located within a developed area of the City, which currently emits lighting that is typical for an urban area (residential, commercial, and institutional uses). Impacts related to glare from on-site lighting would not occur because light sources would be directed and shielded to prevent impacts to adjoining properties. In addition, on-site lighting levels would not be of a magnitude that has the potential to produce substantial amounts of glare in relation to glare produced by surrounding urban uses. Finally, as part of the site plan review process, lighting plans are subject to City review and approval. Therefore, lighting impacts would be less than significant. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

3.2 AGRICULTURE AND FOREST RESOURCES.

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non- agricultural use?				X
(b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
(c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
(d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
(e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X

Source(s): Farmland Mapping and Monitoring Program of the California Resources Agency; and **Figure 2-1, *Aerial Photo***.

Findings of Fact:

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

No Impact

The Project site is not used for agricultural production and is not designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. The Project site is located in an urbanized area, surrounded by multi-family residences to the north and west, a skilled nursing facility to the west across Jentges Avenue, Walton Intermediate School to the south, and single-family homes and a Marriott Suites to the east.

Since the Project site is not involved in any current agricultural use(s), and does not have any agricultural General Plan Land Use Plan designation, implementation of the Project will not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. No impacts are anticipated. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(b) Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact

The Project site is not used for agricultural production, not zoned for agricultural use, and is not protected by, or eligible for, a Williamson Act contract. No impacts would occur. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

MONITORING: No mitigation monitoring is required.

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

No Impact

The Project site is located within a developed area of the City. The Project site is not used for timberland production, not zoned as forest land or timberland, and does not contain forest land or timberland. No impacts would occur. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(d) Would the Project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact

The Project site is located within a developed area of the City and would not convert forest land to a nonforest use. Based on a review of the Aerial Photo, no forest lands are located on the Project site. Likewise, the Project site would not contribute to environmental changes that could result in conversion of forest land to non-forest use. No impacts would occur. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(e) Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

No Impact

The Project would not convert farmland to a nonagricultural use. Likewise, the Project site is not adjacent to or in proximity of farmlands and therefore would not contribute to environmental changes that could result in conversion of farmland to nonagricultural use. No impacts would occur. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

3.3 AIR QUALITY.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Conflict with or obstruct implementation of the applicable air quality plan?			**X**	
(b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			**X**	
(c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			**X**	
(d) Expose sensitive receptors to substantial pollutant concentrations?			**X**	
(e) Create objectionable odors affecting a substantial number of people?			**X**	

Source(s): *12111 Buaro Street Project Air Quality and Global Climate Change Impact Analysis*, prepared by Kunzman Associates, Inc., dated March 2, 2017 (*AQ/GCC Impact Analysis*, **Appendix 2**)

(a) Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact

The Project site is located in the South Coast Air Basin (SoCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD is required, pursuant to the federal Clean Air Act, to reduce emissions of criteria pollutants for which the basin is in nonattainment (i.e., ozone (O_3), coarse particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$)). These are considered criteria pollutants because they are three of several prevalent air pollutants known to be hazardous to human health. (An area designated as nonattainment for an air pollutant is an area that does not achieve national and/or state ambient air quality standards for that pollutant.)

The California Environmental Quality Act (CEQA) requires a discussion of any inconsistencies between a proposed Project and applicable General Plans and Regional Plans (CEQA Guidelines Section 15125). The regional plan that applies to the proposed project includes the 2016 SCAQMD Air Quality Management Plan (AQMP). This discussion shall set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the proposed Project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-makers determine that the proposed project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD CEQA Handbook states that "New or amended General Plan Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality

violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP, and

(2) Whether the project will exceed the assumptions in the 2016 AQMP or increments based on the year of project buildout and phase. These are discussed in detail, below.

Consistency Criterion No. 1

- The Project will not result in an increase in the frequency or severity of existing air quality violations, or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

Based on the air quality modeling analysis contained in the *AQ/GCC Impact Analysis*, the short-term construction impacts will not result in significant impacts based on the SCAQMD regional and local thresholds of significance. The *AQ/GCC Impact Analysis* also found that long-term operations impacts will not result in significant impacts based on the SCAQMD regional and local thresholds of significance.

Therefore, the proposed Project is not anticipated to contribute to the exceedance of any air pollutant concentration standards and is found to be consistent with the AQMP for the first criterion.

Consistency Criterion No. 2

- The Project will not exceed the assumptions in the AQMP based on the years of project buildout phase.

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed Project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the proposed Project are based on the same forecasts as the AQMP. The Regional Comprehensive Plan and Guide (RCP&G) consists of three sections: Core Chapters, Ancillary Chapters, and Bridge Chapters. The Growth Management, Regional Mobility, Air Quality, Water Quality, and Hazardous Waste Management chapters constitute the Core Chapters of the document. These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA. For this Project, the City of Garden Grove General Plan defines the assumptions that are represented in the AQMP.

The Project site is currently designated as Civic/Institutional (CI) the City of Garden Grove General Plan and is zoned as Multi-Family Residential (R-3) on the City's zoning map. The proposed Project is for 17 residential condominium townhome units, which is a compatible land use with the existing zoning. The proposed Project would result in an inconsistency with the current land use designation; however, a General Plan Amendment is proposed to change this designation to Medium Density Residential (MDR). The proposed residential Project is not anticipated to exceed the General Plan AQMP assumptions for the Project site and, therefore, is found to be consistent with the AQMP for the second criterion.

Based on the above, the proposed Project would not conflict with the implementation of the SCAQMD AQMP. Therefore, impacts are considered to be less than significant impact. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(b) Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact

As discussed above, the Project site is located in the SoCAB. State and federal air quality standards are often exceeded in many parts of the SoCAB. Please reference *AQ/GCC impact Analysis* (**Appendix 2**), for a description of current background air quality, thresholds of significance, and health impacts. A discussion of the Project's potential short-term construction-period and long-term operational-period air quality impacts is provided below.

Construction Emissions

Construction activities associated with the proposed Project would have the potential to generate air emissions, toxic air contaminant emissions, and odor impacts. Assumptions for the phasing, duration, and required equipment for the construction of the proposed Project were obtained from the Project applicant. The construction activities for the proposed Project are anticipated to include: demolition of approximately 8,250 square feet of existing buildings, grading of approximately 0.987 acres, construction of 17 residential condominium dwelling units with approximately 3,302 square feet of landscaping, paving of approximately 22 parking spaces and alley way, and application of architectural coatings. The proposed Project is expected to be constructed in one phase with construction beginning January 2018 and estimated to be completed by the end of 2018. The Project is expected to be operational in 2018.

Construction activities associated with the Project will result in emissions of CO, VOCs, NO_x, SO_x, PM_{10}, and $PM_{2.5}$. Construction related emissions are expected from the following construction activities:

- Site Preparation;
- Grading;
- Building Construction;
- Paving;
- Architectural Coating; and
- Construction Workers Commuting.

Construction Emissions Summary

The SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to:

- Rule 1113 (Architectural Coatings);
- Rule 431.2 (Low Sulfur Fuel);
- Rule 403 (Fugitive Dust); and
- Rule 1186 / 1186.1 (Street Sweepers).

The construction-related criteria pollutant emissions for each phase are shown below in **Table 3.3-1, *Construction-Related Regional Pollutant Emissions***. **Table 3.3-1** shows that none of the Project's emissions will exceed regional thresholds. Therefore, a less than significant regional air quality impact would occur from construction of the proposed Project.

Table 3.3-1
Construction-Related Regional Pollutant Emissions[1]

Activity	Pollutant Emissions (pounds/day)					
	ROG	NOx	CO	SO_2	PM10	PM2.5
Demolition						
On-Site[2]	1.21	10.50	7.92	0.01	1.05	0.75
Off-Site[3]	0.10	1.35	0.73	0.00	0.19	0.06
Total	**1.31**	**11.85**	**8.65**	**0.02**	**1.23**	**0.80**
Grading						
On-Site[2]	1.21	10.50	7.92	0.01	1.04	0.86
Off-Site[3]	0.06	0.04	0.44	0.00	0.11	0.03
Total	**1.27**	**10.54**	**8.36**	**0.01**	**1.15**	**0.89**
Building Construction						
On-Site	1.28	12.76	8.07	0.01	0.86	0.79
Off-Site	0.16	0.85	1.23	0.00	0.30	0.09
Total	**1.44**	**13.61**	**9.30**	**0.02**	**1.16**	**0.88**
Paving						
On-Site	1.01	8.74	7.22	0.01	0.51	0.47
Off-Site	0.09	0.06	0.71	0.00	0.20	0.05
Total	**1.10**	**8.80**	**7.93**	**0.01**	**0.71**	**0.53**
Architectural Coating						
On-Site	15.16	2.01	1.85	0.00	0.15	0.15
Off-Site	0.03	0.02	0.20	0.00	0.06	0.02
Total	**15.19**	**2.02**	**2.05**	**0.00**	**0.21**	**0.17**
Total for overlapping phases[4]	**17.73**	**24.44**	**19.28**	**0.03**	**2.08**	**1.57**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds	No	No	No	No	No	No

[1] **Source:** CalEEmod Version 2016.3.1.
[2] On-site emissions from equipment operated on-site that is not operated on public roads.
[3] Off-site emissions from equipment operated on public roads.
[4] Construction, paving and painting phases may overlap.

As shown in **Table 3.3-2, *Maximum Number of Acres Disturbed Per Day***, below, the maximum number of acres disturbed in a day would be 1.5 acres during grading.

Table 3.3-2
Maximum Number of Acres Disturbed Per Day[1]

Activity	Equipment	Number	Acres/8hr-day	Total Acres
Demolition	Tractors/Loaders/Backhoes	2	0.5	1
	Rubber Tired Dozers	1	0.5	0.5
Total per phase		-	-	**1.5**
Grading	Rubber Tired Dozers	1	0.5	0.5
	Tractors/Loaders/Backhoes	2	0.5	1
Total per phase		-	-	**1.5**

[1] **Source:** South Coast AQMD, Fact Sheet for Applying CalEEModto Localized Significance Thresholds, 2011b.

The local air quality emissions from construction were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold Look-up Tables and the methodology described in Localized Significance Threshold Methodology, prepared by SCAQMD, revised July 2008. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NO_x, PM_{10}, and $PM_{2.5}$ from the proposed Project could result in a significant impact to the local air quality. The emission thresholds were calculated based on the Central Orange County source receptor area (SRA) 17 and a disturbance value of one acre per day, to be conservative. According to LST Methodology, any receptor located closer than 25

meters (82 feet) shall be based on the 25 meter thresholds. The nearest sensitive receptors are the existing multi-family attached and single-family detached residential dwelling units located directly adjacent to the north and west and Walton Intermediate School located adjacent to the south of the site; therefore, the SCAQMD Look-up Tables for 25 meters was used. **Table 3.3-3, *Local Construction Emissions at Nearest Sensitive Receptors***, below, details the on-site emissions from the CalEEMod model for the different construction phases and the calculated emissions thresholds.

Table 3.3-3
Local Construction Emissions at Nearest Sensitive Receptors[1]

Phase	On-Site Pollutant Emissions (pounds/day)			
	NOx	CO	PM10	PM2.5
Demolition	10.50	7.92	1.05	0.75
Grading	10.50	7.92	1.04	0.86
Building Construction	12.76	8.07	0.86	0.79
Paving	8.74	7.22	0.51	0.47
Architectural Coating	2.01	1.85	0.15	0.15
SCAQMD Threshold for 25 meters (82 feet) or less[2]	**81**	**485**	**4**	**3**
Exceeds Threshold?	No	No	No	No

[1] **Source:** Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for one acre in Orange County.

The data provided in **Table 3.3-3** shows that none of the analyzed criteria pollutants would exceed the calculated local emissions thresholds at the nearest sensitive receptors. Therefore, a less than significant local air quality impact would occur from construction of the proposed Project.

Construction Related Toxic Air Contaminant Impacts

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed Project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk." "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 30-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the relatively limited number of heavy-duty construction equipment and the short-term construction schedule, the proposed Project would not result in a long-term (i.e., 30 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. Furthermore, construction-based particulate matter (PM) emissions (including diesel exhaust emissions) do not exceed any local or regional thresholds. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed Project.

Operational Emissions

The on-going operation of the proposed Project would result in a long-term increase in air quality emissions. This increase would mainly be due to emissions from the Project-generated vehicle trips. The following discussion provides an analysis of potential long-term air quality impacts due to regional air quality and local air quality impacts with the on-going operations of the proposed Project.

Operational Activities

Operational activities associated with the Project will result in emissions of VOCs, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$. Operational emissions would be expected from the following primary sources:

1. Mobile Source Emissions;
2. Area Source Emissions; and
3. Energy Source Emissions.

1. *Mobile Source Emissions*

Mobile sources include emissions from the additional vehicle miles generated from the proposed Project. The vehicle trips associated with the proposed Project have been analyzed by inputting the project-generated vehicular trips from the *12111 Buaro Street Focused Traffic Analysis* (**Appendix 8**) into the CalEEMod Model. The Traffic Analysis found that the proposed Project would have a trip generation rate of 5.81 trips per dwelling unit per day. The program then applies the emission factors for each trip which is provided by the EMFAC2014 model to determine the vehicular traffic pollutant emissions. The CalEEMod default trip lengths were used in this analysis.

2. *Area Source Emissions*

Area sources include emissions from hearths, consumer products, landscape equipment and architectural coatings. The area source emissions were based on the on-going use of the proposed 17 residential condominium dwelling units in the CalEEMod model. In order to account for SCAQMD Rule 445, no wood burning stoves or fireplaces will be included. No other changes were made to the default area source parameters.

3. *Energy Usage*

Energy usage includes emissions from the generation of electricity and natural gas used on-site. The energy usage emissions were based on the on-going use of the proposed 17 residential condominium dwelling units in the CalEEMod model. No changes were made to the default energy usage parameters.

The worst-case summer or winter VOC, NO_x, CO, SO_2, PM_{10}, and $PM_{2.5}$ emissions generated by the proposed Project's long-term operations have been calculated and are summarized below in **Table 3.3-4, *Operational Regional Pollutant Emissions***. **Table 3.3-4** shows that none of the analyzed criteria pollutants would exceed the regional emissions thresholds. Therefore, a less than significant regional air quality impact would occur from operation of the proposed Project.

Table 3.3-4
Operational Regional Pollutant Emissions[1]

Activity	Pollutant Emissions (pounds/day)					
	ROGs	NOx	CO	SO2	PM10	PM2.5
Area Sources[2]	0.83	0.27	1.52	0.00	0.03	0.03
Energy Usage[3]	0.01	0.09	0.04	0.00	0.01	0.01
Mobile Sources[4]	0.20	0.83	2.73	0.01	0.73	0.20
Total Emissions	**1.04**	**1.19**	**4.29**	**0.01**	**0.76**	**0.24**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	No	**Yes**	No	No	No	No

[1] **Source:** CalEEmod Version 2016.3.1.
[2] Area sources consist of emission from consumer products, architectural coatings, hearths and landscaping equipment.
[3] Energy usage consists of emissions from generation of electricity and no-site non-hearth natural gas usage.
[4] Mobile sources consist of emissions from vehicles and road dust.

Cumulative Regional Air Quality Impacts

Cumulative projects include local development as well as general growth within the Project area. However, as with most development, the greatest source of emissions is from mobile sources, which travel well out of the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and when wind patterns are considered, would cover an even larger area. Accordingly, the cumulative analysis for the Project's air quality must be generic by nature.

The Project area is out of attainment for O_3, PM_{10}, and $PM_{2.5}$. Construction and operation of cumulative projects will further degrade the local air quality, as well as the air quality of the South Coast Air Basin. The greatest cumulative impact on the quality of regional air cell will be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with the construction of these projects. Air quality will be temporarily degraded during construction activities that occur separately or simultaneously. However, in accordance with the SCAQMD methodology, projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact. With respect to long-term emissions, this Project would create a less than significant cumulative impact.

Operations-Related Local Air Quality Impacts

Project-related air emissions may have the potential to exceed the State and Federal air quality standards in the Project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the South Coast Air Basin. The proposed Project has been analyzed for the potential local CO emission impacts from the Project generated vehicular trips and from the potential local air quality impacts from on-site operations. The following analysis analyzes the vehicular CO emissions, local impacts from on-site operations.

1. Local CO Emission Impacts from Project-Generated Vehicular Trips

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with project CO levels to the State and Federal CO standards.

To determine if the proposed Project could cause emission levels in excess of the CO standards, a sensitivity analysis is typically conducted to determine the potential for CO "hot spots" at a number of

intersections in the general Project vicinity. Because of reduced speeds and vehicle queuing, "hot spots" potentially can occur at high traffic volume intersections with a Level of Service E or worse.

The *12111 Buaro Street Focused Traffic Analysis* (**Appendix 8**) showed that the Project would generate a maximum of 99 trips. The intersection with the highest traffic volume is located at Buaro Street and Chapman Avenue and has an opening year with Project evening peak hour volume of 1,514 vehicles. The 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan) showed that an intersection which has a daily traffic volume of approximately 100,000 vehicles per day would not violate the CO standard. Therefore, as the intersection with the highest traffic volume falls far short of 100,000 vehicles, no CO "hot spot" modeling was performed and no significant long-term air quality impact is anticipated to local air quality with the on-going use of the proposed Project.

2. Local Air Quality Impacts from On-Site Operations

The local air quality impacts from the operation of the proposed Project would occur from emissions generated on-site. Sources of on-site operational emissions include architectural coatings off-gassing, landscaping equipment emissions, natural gas appliance emissions and on-site vehicular emissions. Because of the residential nature of the proposed Project, the majority of the proposed Project's operational emissions are from vehicles traveling on roadways away from the Project site. These emissions are then spread over a vast area traversed by various mobile sources and do not result in localized air quality impacts in proximity to the Project site. As such, localized operational modeling for Project operations are not prepared for residential developments. Therefore, the on-going operations of the proposed Project would create a less than significant operations-related impact to local air quality due to onsite emissions.

3. Operations-Related Toxic Air Contaminant Impacts

Particulate matter from diesel exhaust is the predominate toxic air contaminant (TAC) in urban areas and based on a statewide average in 2000 was estimated to represent about two-thirds of cancer risk from TACs. Some chemicals in diesel exhaust, such as benzene and formaldehyde have been listed as carcinogens by State Proposition 65 and the Federal Hazardous Air Pollutants program. Due to the nominal number of diesel truck trips generated by the proposed Project, a less than significant toxic air contaminant impact would occur during the on-going operations of the proposed Project and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS:

SC-AQ-1 The Project is required to comply with SCAQMD Rule 403 - Fugitive Dust. Rule 403 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Applicable dust suppression techniques from Rule 403 are summarized below. Implementation of these dust suppression techniques can reduce the fugitive dust generation (and thus the PM10 component). Compliance with these rules would reduce impacts on nearby sensitive receptors. Rule 403 measures may include but are not limited to the following:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least three times daily. (Locations where grading is to occur will be thoroughly watered prior to earthmoving.).

- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 0.6 meters (2 feet) of freeboard (vertical space between the top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code section 23114.
- Reduce traffic speeds on all unpaved roads to 15 miles per hour (mph) or less.
- Suspension of all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph. Bumper strips or similar best management practices shall be provided where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip.
- Replanting disturbed areas as soon as practical.
- During all construction activities, construction contractors shall sweep on-site and off-site streets if silt is carried to adjacent public thoroughfares, to reduce the amount of particulate matter on public streets. All sweepers shall be compliant with SCAQMD Rule 1186.1, Less Polluting Sweepers.

SC-AQ-2 The Project is required to comply with SCAQMD Rule 445. SCAQMD Rule 445 prohibits permanently installed wood burning devices into any new development. A wood burning device means any fireplace, wood burning heater, or pellet-fueled wood heater, or any similarly enclosed, permanently installed, indoor or outdoor device burning any solid fuel for aesthetic or space-heating purposes, which has a heat input of less than one million British thermal units per hour.

MITIGATION MEASURES: No mitigation measures are required.

(c) Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less Than Significant Impact

Projects could contribute to an existing or projected air quality exceedance because the SoCAB is currently in nonattainment for O_3, PM_{10}, and $PM_{2.5}$. With regard to determining the significance of the cumulative contribution from the Project, the SCAQMD recommends that any given project's potential contribution to cumulative impacts be assessed using the same significance criteria as for project-specific impacts. Therefore, individual projects that do not generate operational or construction emissions that exceed the SCAQMD's daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the air basin is in nonattainment and therefore would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be cumulatively considerable. As previously noted, the Project will not exceed the applicable SCAQMD regional thresholds for construction and operational-source emissions. As such, the Project will result in a cumulatively less than significant impact.

STANDARD CONDITIONS AND REQUIREMENTS: The Project is required to comply with SCAQMD Rule 403 (**Standard Condition SC-AQ-1**) and SCAQMD Rule 445 (**Standard Condition SC-AQ-2**). See details in Section 3.3.b., above.

MITIGATION MEASURES: No mitigation measures are required.

(d) Would the Project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact

As discussed in Section 3.3.b, above, results of the LST analysis, which were developed in response to environmental justice and health concerns, indicate that the Project will not exceed the SCAQMD localized significance thresholds during construction, with the incorporation of mitigation. Therefore, sensitive receptors would not be subject to significant air toxic impacts during construction at the Project site. Results of the LST analysis also indicate that the Project would not exceed the SCAQMD localized significance thresholds during operational activity.

STANDARD CONDITIONS AND REQUIREMENTS: The Project is required to comply with SCAQMD Rule 403 (**Standard Condition SC-AQ-1**) and SCAQMD Rule 445 (**Standard Condition SC-AQ-2**). See details in Section 3.3.b., above.

MITIGATION MEASURES: No mitigation measures are required.

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

Less Than Significant Impact

Potential sources that may emit odors during construction activities include the application of materials such as asphalt pavement and diesel exhaust emissions. The objectionable odors that may be produced during the construction process are of short-term in nature and the odor emissions are expected to cease upon the drying or hardening of the odor producing materials. Due to the short-term nature and limited amounts of odor producing materials being utilized, no significant impact related to odors would occur during construction of the proposed Project. Diesel exhaust and VOCs would be emitted during construction of the Project, which are objectionable to some; however, emissions would disperse rapidly from the Project site and therefore should not reach an objectionable level at the nearest sensitive receptors.

According to the CEQA Air Quality Handbook, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). Odors are typically associated with industrial projects involving the use of chemicals, solvents, petroleum products, and other strong-smelling elements used in manufacturing processes, as well as sewage treatment facilities and landfills. Potential odor sources associated with the operation of the Project are anticipated to be those that would be typical of any residential development. Residential developments typically do not result in odor impacts.

It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the proposed Project construction and operations would be less than significant and no mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: The Project is required to comply with SCAQMD Rule 402. SCAQMD Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or

property.

MITIGATION MEASURES: No mitigation measures are required.

3.4 BIOLOGICAL RESOURCES.

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

Source(s): Figure 2-1, *Aerial Photo*.

Findings of Fact:

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

No Impact

The Project site is located in an urban area and is currently fully developed with a preschool, pool, associated facilities, and parking lot. The Project site does not does not contain native habitat. Construction and operation of the proposed Project would not result in the removal of vegetation or disruption to any existing habitat containing a sensitive or special-status species. Therefore, no significant impacts to sensitive or special-status species would result from Project implementation. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

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

No Impact

The Project site is located in an urban area and is currently fully developed with a preschool, pool, associated facilities, and parking lot. The Project site does not contain any riparian habitat or sensitive natural communities identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the United States Fish and Wildlife Service. No impacts related to riparian habitat or other sensitive natural communities identified in local or regional plans would result from Project implementation. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

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

No Impact

The Project site is located in an urban area, is currently fully developed with a preschool, pool, associated facilities, and parking lot, and does not contain native habitat. No natural hydrologic features or federally protected wetlands as defined by Section 404 of the Clean Water Act are present on the Project site. Therefore, no direct removal, filling, or hydrological interruption of a wetland area would occur with development of the Project site. No impacts are anticipated. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

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

Less Than Significant Impact With Mitigation Incorporated

The Project site is located in an urban area, is currently fully developed with a preschool, pool, associated facilities, and parking lot, and does not contain native habitat. No portion of the Project site or immediately surrounding areas contains an open body of water that serves as natural habitat in which fish could exist. Likewise, there is no established native resident or migratory wildlife corridor existing within or adjacent to the Project site.

Existing ornamental landscaping and trees on the Project site may provide suitable habitat for nesting birds. Disturbing or destroying active nests is a violation of the Migratory Bird Treaty Act (MBTA). In addition, nests and eggs are protected under Fish and Game Code Section 3503.

Project implementation must be accomplished in a manner that avoids impacts to active nests during the breeding season. As such, avoiding impacts can be accomplished through a variety of means, including restricting brush and tree removal to periods outside the avian nesting season (August 16 through February 14) or through performance of nesting bird surveys prior to clearing when clearing occurs during the nesting season. With implementation of **Mitigation Measure MM-BIO-1**, below, potentially significant impacts to nesting birds would be reduced to a less than significant level.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES:

MM-BIO-1 Compliance with Migratory Bird Treaty Act. In the event that Project construction or grading activities should occur within the active breeding season for birds (i.e., February 15 through August 15), a nesting bird survey shall be conducted by a qualified biologist prior to commencement of grading or construction activities.

If active nesting of birds is observed within 100 ft. of the designated construction area prior to construction, the construction crew shall establish an appropriate buffer around the active nest. The designated Project biologist shall determine the buffer distance based on the specific nesting bird species and circumstances involved. Once the Project biologist verifies that the birds have fledged from the nest, the buffer may be removed.

Prior to commencement of grading activities and issuance of any building permits, the City of Garden Grove Director of Community Development, or designee, shall verify that all Project grading and construction plans include specific documentation regarding the Migratory Bird Treaty Act (MBTA) requirements for a nesting bird survey should construction or grading occur from February 15 through August 15, that preconstruction surveys have been completed and the results reviewed by staff, and that the appropriate buffers (if needed) are noted on the plans and established in the field with orange snow fencing.

(e) Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact

Title 11 of the City of Garden Grove Municipal Code codifies the protection, maintenance, removal, and planting of trees in the public streets, parks, and other public places within the City limits. This ordinance applies to any vegetation with a woody trunk. According to the Municipal Code, written permission from the City Manager, or authorized agent, is required before removing, cutting, pruning, breaking, injuring, defacing, or in any other way interfering with any tree or shrub, or any part thereof, either above or below the ground, growing on any public thoroughfare, park, or public place (as defined in Sections 11.32.020). Although the City has not established a standard tree relocation requirement or tree replacement ratio, conditions of approval typically require compliance with project-specific provisions to replace or relocate trees.

The only vegetation on the Project site consists of small ornamental landscaping areas and mature ornamental trees adjacent to buildings, along portions of the Project perimeter, internal to the Project site, and along the street frontage. Because the subject Project site is entirely developed and it is not a public thoroughfare, park, or public place, the proposed Project would not conflict with the provisions of the

Municipal Code that pertain to tree removal. Further, the Project would replace any existing on-site trees to be removed as part of the Project with additional on-site landscaping. Therefore, the proposed Project would not result in any impacts related to local policies or ordinances protecting biological resources. No mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(f) Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?

No Impact

The Project site is not located within the boundaries of the Orange County Central Coastal Natural Communities Conservation Plan (NCCP)/Habitat Conservation Plan (HCP). Therefore, the proposed Project would not conflict with local ordinances or the adopted Orange County NCCP/HCP, or other approved local, regional, or State HCPs. The proposed Project would not result in impacts related to local ordinances and the adopted NCCP/HCP. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

3.5 CULTURAL RESOURCES.

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

Source(s): General Plan; *Local Government Tribal Consultation List Request to Native American Heritage Commission (***Appendix 3a***);* Native American Heritage Commission Response Letter and List of Tribes, March 24, 2017 *(***Appendix 3b***); Project Notification Pursuant to Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18) Formal Notification for Consultation for the Property Located at 12111 Buaro Street, City of Garden Grove, Orange County, California,* prepared by City of Garden Grove, mailed out to 16 Tribes, as directed by the NAHC April 12, 2017 *(***Appendix 3c***);* and *Preliminary Geotechnical Investigation Report and Liquefaction Study for the Multi-Family Residential Development Located at 1211 Buaro Street in the City of Garden Grove, Orange County, California*, prepared by LGC Geo-Environmental, Inc. October 16, 2016 (**Appendix 4**).

Findings of Fact:

(a) Would the Project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

No Impact

Historic structures and sites are typically defined using local, State, and federal criteria. The California Environmental Quality Act (CEQA) defines a "historical resource" as a resource that meets one or more of the following criteria: (1) listed in, or determined eligible for listing in, the California Register of Historical Resources (California Register); (2) listed in a local register of historical resources as defined in Public Resources Code (PRC) Section 5020.1(k); (3) identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (4) determined to be a historical resource by a project's lead agency (PRC Section 21084.1 and *State CEQA Guidelines* Section 15064.5(a)). The United States Department of the Interior has established specific guidelines and criteria that indicate the manner in which a site, structure, or district is to be identified as having historic significance through a determination of eligibility for listing on the National Register of Historic Places. Significance may be determined if the property is associated with events, activities, or developments that were important in the past, with the lives of people who were important in the past, or represents significant architectural, landscape, or engineering elements. Additionally, a site or structure may be historically significant if it is locally protected through a local general plan or historic preservation ordinance. A site or structure may have local historical significance even if it is not formally identified pursuant to the aforementioned criteria.

Existing structures/facilities on the Project site were developed as far back as the 1950s**.** Although the existing structures/facilities would be demolished the existing structures/facilities do not appear to meet any of the aforementioned significance criteria for consideration as a historic resource. Further, the site is not identified as being historically significant in the City's General Plan. Therefore, no significant adverse

impacts related to a historical resource are anticipated due to Project implementation. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(b) Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant Impact With Mitigation Incorporated

The proposed Project would demolish the existing preschool and associated facilities. Project construction includes development of 17 attached 2- and 3-story townhomes within 2 buildings and open parking spaces on .99-acres. It is considered unlikely that archaeological resources would be encountered on the Project site due to significant prior disturbance from past grading and development activities. However, to ensure that no significant impacts occur in the event that unknown resources are discovered, **Mitigation Measure MM-CUL-1** will be implemented to reduce potential impacts to a less than significant level. **Mitigation Measure MM-CUL-1** requires that a qualified Native American Monitor be on site during grading and other significant ground-disturbing activities.

At the completion of Project construction, the proposed Project would not result in further disturbance of native soils on the Project site and, therefore, operation of the proposed Project would not result in a substantial adverse change in the significance of an archeological resource as defined in Section 15064.5 of the *State CEQA Guidelines*. Therefore, operation of the proposed Project would not cause a substantial adverse change in the significance of any known archaeological resource.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURE:

MM-CUL-1: *Unknown Archeological Resources.* Prior to the issuance of grading permits, the Applicant shall be required to obtain the services of a qualified Native American Monitor (Monitor) during all construction-related ground disturbance activities. The Monitor must be approved by the tribal representatives and will be present on-site during the construction phases that involve any ground disturbing activities. The Monitor will complete monitoring logs on a daily basis. The logs will provide descriptions of the daily activities, including construction activities, locations, soil, and any cultural materials identified. The Monitor will photo-document the ground disturbing activities. The Monitor must also have Hazardous Waste Operations and Emergency Response (HAZWOPER) certification. In addition, the Monitor will be required to provide insurance certificates, including liability insurance, for any archaeological resource(s) encountered during grading and excavation activities, pertinent to the provisions outlined in the California Environmental Quality Act, California Public Resources Code Division 13, Section 21083.2 (a) through (k). In the event that archaeological resources are discovered during any construction-related ground disturbance activities, the Applicant shall retain, with the approval of the City of Garden Grove (City) Community Development Director, or designee, a qualified archaeological monitor from the Orange County List of Qualified Archaeologists to assist in the assessment of said resources. The on-site monitoring shall end when the Project site

grading and excavation activities are completed, or when the Monitor has indicated that the site has a low potential for archeological resources.

(c) *Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

Less Than Significant Impact With Mitigation Incorporated

According to the *Preliminary Geotechnical Investigation*, the proposed Project site is underlain by topsoil, Qaurternary Alluvium (Qal), and Qaurternary Older Alluvium (Qoal). Generally, topsoil and younger alluvial fan deposits are considered to have Low Paleontological sensitivity because not enough time has passed for plant and animal species to become fossilized. Quarternary Older Alluvium was found starting at depths 6.0-8.0 feet. The potential for paleontological resources increases within this stratum; however, overexcavation depths for grading on the site are not recommended by the *Preliminary Geotechnical Investigation* into this soil.

Although it is unlikely that paleontological resources would be encountered during ground-disturbing Project construction activities, implementation of **Mitigation Measure MM-CUL-2** would be required to reduce impacts to potential unknown paleontological resources to a less than significant level. **Mitigation Measure MM-CUL-2** requires that construction activities be halted and a qualified paleontologist be contacted in the event that paleontological resources are encountered during ground disturbing activities.

At the completion of Project construction, the proposed Project would not result in further disturbance of native soils on the project site and, therefore, operation of the proposed Project would not result in a substantial adverse change in the significance of a paleontological resource as defined in Section 15064.5 of the *State CEQA Guidelines*.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES:

MM-CUL-2: *Paleontological Resources*. In the event that paleontological resources are encountered during Project construction, work in the immediate area of the find shall be ceased in order to allow the Applicant to retain, with the approval of the City's Community Development Director, or designee, a qualified paleontologist from the Orange County List of Qualified Paleontologists to assess the findings for scientific significance. If any fossil remains are discovered in sediments with a Low paleontological sensitivity rating (Young Alluvial Deposits), the paleontologist shall make recommendations as to whether monitoring shall be required in these sediments on a full-time basis, in accordance with Society of Vertebrate Paleontology standards. The property owner and/or applicant on whose land the paleontological fossils are discovered shall provide appropriate funding for monitoring, reporting, delivery and curating the fossils at the institution where the fossils will be placed, and will provide confirmation to the City that such funding has been paid to the institution.

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

Less Than Significant Impact With Mitigation Incorporated

No known human remains are present on the Project site, and there are no facts or evidence to support the idea that Native Americans or people of European descent are buried on the Project site. In the unlikely event that human remains are encountered during Project grading, the Orange County (County) Coroner would be notified, and standard procedures for the respectful handling of human remains during the earthmoving activities would be adhered to as described in **Mitigation Measure MM-CUL-3**. Implementation of **Mitigation Measure MM-CUL-3** would reduce potential Project impacts related to the discovery of human remains on the proposed Project site to a less than significant level.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURE:

MM-CUL-3: *Human Remains.* In the event that human remains are discovered during ground-disturbing or construction activities, the following steps shall be taken:

a. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the Orange County Coroner is contacted to determine that no investigation of the cause of death is required. If the Coroner determines the remains to be Native American, then the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the most likely descendant from the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98; or

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

    1. The NAHC is unable to identify a most likely descendant, or the most likely descendant failed to make a recommendation within 48 hours after being notified by the NAHC;

    2. The identified descendant fails to make a recommendation; or

    3. The landowner or his/her authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.

3.6 GEOLOGY AND SOILS.

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

Source(s): *Preliminary Geotechnical Investigation Report and Liquefaction Study for the Multi-Family Residential Development Located at 1211 Buaro Street in the City of Garden Grove, Orange County, California*, prepared by LGC Geo-Environmental, Inc., October 16, 2016 (*Preliminary Geotechnical Investigation*, **Appendix 4**).

Findings of Fact:

(a) i) Would the Project 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?

No Impact

As with all of Southern California, the entire .99-acre Project site is subject to strong ground motion resulting from earthquakes on nearby faults. However, according to the *Preliminary Geotechnical Investigation* the Project site is not located within a hazard zone as defined by the State of California and as established by the Alquist-Priolo Fault Zoning Act. Therefore, the proposed Project would not result in impacts related to rupture of a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(a) ii) Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

Less Than Significant Impact

The .99-acre Project site, and all of Southern California, is located in a seismically active region. The Project site lies in relatively close proximity to several active faults that have historically generated moderate to occasionally high levels of ground motion. As such, the Project may experience similar moderate to occasionally high ground shaking from nearby fault zones, and some background shaking from other seismically active areas in the region. According to the *Preliminary Geotechnical Investigation*, there are approximately 9 active faults within a 20 mile radius of the Project site, with the closest being 7.0 miles away from the Project site.

Ground shaking generated by fault movement is considered a potentially significant impact that may potentially affect the proposed Project. **Mitigation Measure MM-GEO-1** requires the Project Applicant to comply with the recommendations of the *Preliminary Geotechnical Investigation*, the most current California Building Code (CBC), and the Structural Engineer Association of California Guidelines, which stipulates appropriate seismic design provisions that shall be implemented with Project design and construction. Compliance with this mitigation measure is applicable to all development. With adherence to **Mitigation Measure MM-GEO-1**, potential impacts related to seismic ground shaking would be considered less than significant.

STANDARD CONDITIONS AND REQUIREMENTS:

No standard conditions are required.

MITIGATION MEASURES:

MM-GEO-1 The Project Applicant shall comply with the recommendations of the *Preliminary Geotechnical Investigation*, the most current California Building Code (CBC), and the Structural Engineer Association of California Guidelines, which stipulates appropriate seismic design provisions that shall be implemented with Project design and construction.

Geotechnical Observations and Testing. Prior to the start of grading, a meeting should be held at the site with the owner, developer, city inspector, grading contractor, civil engineer, and geotechnical consultant to discuss the work schedule and geotechnical aspects relative to rough and precise grading. Rough grading, which includes clearing and grubbing, overexcavation, scarification/processing, and fill placement should be accomplished under the full-time observation and testing of the geotechnical consultant. Fills should not be placed without prior approval from the geotechnical consultant.

Clearing and Grubbing. Weeds, grasses, and trees in areas to be graded should be stripped and hauled offsite. Trees to be removed should be grubbed so that their stumps and major-root systems are also removed and the organic materials hauled offsite. During site grading, laborers should clear from fills, roots, tree branches and other deleterious materials missed during clearing and grubbing operations.

The Project geotechnical consultant, or his qualified representative, should be notified at the appropriate times to provide observation and testing services during clearing and grubbing operations to observe and document compliance with the above recommendations. In addition, buried structures and unusual or adverse soil conditions encountered that are not described or anticipated herein, should be brought to the immediate attention of the geotechnical consultant.

Overexcavation and Ground Preparation. The site is generally underlain by approximately 2 feet to 7 feet of potentially compressible soils (topsoil and the upper alluvium) which may be prone to future settlement under the surcharge of foundation and/or fill loads. These materials should be overexcavated to underlying competent alluvium or older alluvium within proposed building areas and competent alluvium within areas of proposed pavement areas and improvements outside building areas then replaced with compacted fill soils. Within the proposed building areas overexcavations should also extend at least 5 feet below proposed pad grade or 3 feet below the lowest proposed footings, whichever is deeper and at least 5 feet outside proposed footings. Within proposed wall areas, outside of the proposed building areas overexcavations should also extend at least 5 feet below proposed grade or 2 feet below the lowest proposed footings, whichever is deeper. Therefore, overexcavations are anticipated to be approximately 4 feet to 7 feet within the proposed building areas and 2 feet to 4 feet within areas of proposed pavement and improvements outside building areas. However, localized, deeper overexcavation should be anticipated where deemed necessary by the geotechnical consultant based on observations during grading as well as by proposed depths of footings or structural loads. Actual depths of overexcavation should be evaluated upon review of final grading and foundation plans, on the basis of observations and testing during grading by the Project geotechnical consultant.

Prior to placing engineered fill, exposed bottom surfaces in each overexcavated area should first be scarified to a depth of approximately 6 inches, watered or air-dried as necessary to achieve a uniform moisture content of optimum or higher, and then compacted in place to a relative compaction of 90 percent or more (based on American Standard of Testing and Materials [ASTM] Test Method D1557).

The estimated locations, extent and approximate depths for overexcavation of unsuitable materials are indicated on the Geotechnical Map (Plate 1) included in the *Preliminary Geotechnical Investigation*. The geotechnical consultant should be provided with appropriate survey staking during grading to document that depths and/or locations of recommended overexcavation are adequate.

Sidewalls for overexcavations greater than 5 feet in height should be no steeper than 1:1 (H:V) and should be periodically slope-boarded during their excavation to remove loose surficial debris and facilitate mapping. Flatter excavations may be necessary for stability.

The grading contractor will need to consider appropriate measures necessary to excavate adjacent existing improvements adjacent to the site without endangering them due to caving or sloughing.

Fill Suitability. Soil materials excavated during grading are generally considered suitable for use as compacted fill provided they do not contain significant amounts of trash, vegetation, construction debris and oversize material.

Oversized Material. Oversized material greater than 8 inches that may be encountered during grading should be reduced in size or removed from the site.

Benching. Where compacted fills are to be placed on natural slope surfaces inclining at 5:1 (H:V) or greater, the ground should be excavated to create a series of level benches, which are at least a minimum height of 4 feet, excavated into competent bedrock.

Import Soils for Grading. In the event import soils are needed to achieve final design grades, all potential import materials should be free of deleterious/oversize materials, very low in expansion, and approved by the project geotechnical consultant prior to commencement of delivery onsite.

Cut/Fill Transitions and Differential Fill Thicknesses. To mitigate distress to structures and walls, related to the detrimental effect of differential settlement, the cut portions should be eliminated from cut/fill transition areas in order that the entire structure or wall is founded on a uniform bearing material. This should be accomplished by overexcavating the "cut" portions and shallow fill portions 4 feet or more below proposed pad grade or 3 feet below proposed footings, whichever is deeper, and replacing the excavated materials as properly compacted fill. Recommended depths of overexcavation are provided in the *Preliminary Geotechnical Investigation.*

Fill Placement. Fills should be placed in lifts no greater than 8 inches in uncompacted thickness, watered or air-dried as necessary to achieve a uniform moisture content of at least optimum moisture content, and then compacted in place to relative compaction of 90 percent or more. Fills should be maintained in a relatively level condition. The laboratory maximum dry density and optimum moisture content for each change in soil type should be determined in accordance with ASTM Test Method D1557.

Shrinkage/Bulking and Subsidence. Volumetric changes in earth quantities will occur when excavated onsite soils are replaced as properly compacted fill. The *Preliminary Geotechnical Investigation* includes a table containing an estimate of the shrinkage and bulking factors for the various geologic units present onsite. These estimates are based on in-place densities of the various materials and on the estimated average degree of relative compaction that will be achieved during grading.

Subsidence due to recompaction of the bottom of overexcavations, prior to fill placement and placement of proposed fills, is estimated to be approximately 0.15 feet to 0.25 feet.

The estimates of shrinkage/bulking and subsidence included in the *Preliminary Geotechnical Investigation* are intended as an aid for Project engineers in determining earthwork quantities. These are preliminary rough estimates which may vary with depth of removal, stripping losses, field conditions at the time of grading, etc. However, these estimates should be used with some caution since they are not absolute values. Contingencies should be made for balancing earthwork quantities based on actual shrinkage/bulking and subsidence that occurs during the grading operations.

Slope Stability. No grading plans has been developed and provided for review, however, based on the *Preliminary Geotechnical Investigation* review of the 40-scale site plan, the existing site topography, and current knowledge of the existing area of the proposed development, cut slopes and fill slopes may not be necessary in the final design.

Temporary Excavations. Temporary excavations varying up to a height of approximately 7 feet below existing grades will be necessary to accommodate the recommended overexcavation of the unsuitable soil materials. Based on the physical properties of the onsite soils, temporary excavations exceeding 5 feet in height should be cut back at a ratio of 1:1 (H:V) or flatter, for the duration of the overexcavation and recompaction of unsuitable soil material. Temporary slopes excavated at the above slope configurations are expected to remain stable during grading operations. However, the temporary excavations should be observed by a representative of the Project geotechnical consultant for any evidence of potential instability. Depending on the results of these observations, revised slope configurations may be necessary.

Other factors which should be considered with respect to the stability of the temporary slopes include construction traffic and storage of materials on or near the tops of the slopes, landscaping irrigation, construction scheduling, presence of nearby walls or structures on adjacent properties, and weather conditions at the time of construction. Applicable requirements of the California Construction and General Industry Safety Orders, the Occupational Safety and Health Act of 1970, and the Construction Safety Act should also be followed.

Additional site testing and final design evaluation shall be conducted by the Project geotechnical consultant to refine and enhance these requirements. The Applicant shall require the Project geotechnical consultant to assess whether the requirements in the *Preliminary Geotechnical Investigation* need to be modified or refined to address any changes in the Project that occur prior to the start of grading. If the Project geotechnical consultant identifies modifications or refinements to the requirements, the Project Applicant shall require appropriate changes to the final Project design and specifications and shall submit any revised geotechnical reports to the Land Development Section of the Engineering Division, or designee, for approval prior to issuance of any grading or construction permits.

The Land Development Section of the Engineering Division, or designee, shall review grading plans prior to the start of grading to verify that the requirements developed during the geotechnical design evaluation have been appropriately incorporated into the Project plans. Design, grading, and construction shall be performed in accordance with the requirements of the City' Building Code and the California Building Code (CBC) applicable at the time of grading, as well as the recommendations of the Project geotechnical consultant as summarized in a final report subject to review by the City's Building Official, or designee, prior to the start of grading activities. On-site inspection during grading shall be conducted by the Project geotechnical consultant and the Land Development Section of the Engineering Division to ensure compliance with geotechnical specifications as incorporated into Project plans.

(a) iii) Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

Less Than Significant Impact

Liquefaction commonly occurs when three conditions are present simultaneously: (1) high groundwater; (2) relatively loose, cohesionless (sandy) soil; and (3) earthquake-generated seismic waves. The presence of these conditions may cause a loss of shear strength and, in many cases, the settlement of subsurface soils.

The liquefaction susceptibility of the on-site subsurface soils and the potential for seismically-induced settlement were evaluated as part of the *Preliminary Geotechnical Investigation* prepared for the proposed Project. According to the *Preliminary Geotechnical Investigation*:

> *"Due to the amount of overburden and the minor amount of potential dynamic sand settlement of about 0.50 inches, and a differential dynamic settlement of about 0.25 inches, the potential for dynamic settlement should not manifest itself at the surface even if the anticipated high groundwater ever exists in the future."*

Therefore, based on the site-specific tests performed as part of the *Preliminary Geotechnical Investigation*, the potential for liquefaction of the on-site subsurface soils as a result of seismic-related ground failure is not anticipated.

Mitigation Measure MM-GEO-1 requires the Project Applicant to comply with the recommendations of the *Preliminary Geotechnical Investigation*, the most current California Building Code (CBC), and the Structural Engineer Association of California Guidelines, which stipulates appropriate seismic design provisions that shall be implemented with Project design and construction. Compliance with this mitigation measure is applicable to all development. Potential impacts related to liquefaction would be considered less than significant.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: The Project is required to comply with **Mitigation Measure MM-GEO-1** (see details in Section 3.6.a.ii, above).

(a) iv) Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

No Impact

According to the *Preliminary Geotechnical Investigation*, the Project site does not indicate the presence of landslides on, or directly adjacent to the Project site. No impacts are anticipated. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(b) Would the Project result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact

During construction activities, soil would be exposed, and there would be an increased potential for soil erosion compared to existing conditions. Additionally, during a storm event, soil erosion could occur at an accelerated rate. The potential for increased erosion is discussed in Section 3.9, Hydrology and Water Quality of this Initial Study. With adherence to **Standard Condition SC-WQ-1** and incorporation of infiltration BMPs as part of the Project, impacts related to soil erosion during operation of the proposed Project would be less than significant and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS:

SC-WQ-1 Construction General Permit. Prior to issuance of a grading permit, the Applicant/Developer shall demonstrate to the City of Garden Grove (City) Public Works Department that coverage has been obtained under California's General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) by providing a copy of the Notice of Intent (NOI) submitted to the State Water Resources Control Board and a copy of the subsequent notification of the issuance of a Waste Discharge Identification (WDID) Number or other proof of filing. A copy of the current Storm Water Pollution Prevention Program (SWPPP) required by the General Permit shall be kept at the Project site and be available for review by City representatives upon request.

MITIGATION MEASURES: No mitigation measures are required.

(c) Would the Project 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?

Less Than Significant Impact

As previously stated, the Project site is not in an area susceptible to landslides.

The liquefaction susceptibility of the on-site subsurface soils and the potential for seismically-induced settlement were evaluated as part of the *Preliminary Geotechnical Investigation* prepared for the proposed Project. According to the *Preliminary Geotechnical Investigation*:

> *"Due to the amount of overburden and the minor amount of potential dynamic sand settlement of about 0.50 inches, and a differential dynamic settlement of about 0.25 inches, the potential for dynamic settlement should not manifest itself at the surface even if the anticipated high groundwater ever exists in the future."*

Based on the site-specific tests performed as part of the *Preliminary Geotechnical Investigation*, the potential for liquefaction of the on-site subsurface soils as a result of seismic-related ground failure is not anticipated.

According to the *Preliminary Geotechnical Investigation*, the proposed Project site is underlain by topsoil, Qaurternary Alluvium (Qal), and Quarternary Older Alluvium (Qoal). Generally, topsoil and younger alluvial fan deposits are considered to have Low Paleontological sensitivity because not enough time has

passed for plant and animal species to become fossilized. Quarternary Older Alluvium was found starting at depths 6.0-8.0 feet.

Soil subsidence (caving) in the sandy zones on the Project site may occur during construction.

Mitigation Measure MM-GEO-1 requires the Project Applicant to comply with the recommendations of the *Preliminary Geotechnical Investigation*, the most current California Building Code (CBC), and the Structural Engineer Association of California Guidelines, which stipulates appropriate seismic design provisions that shall be implemented with Project design and construction. Compliance with this mitigation measure is applicable to all development. Potential impacts related to lateral spreading or subsidence would be considered less than significant. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: The Project is required to comply with **Mitigation Measure MM-GEO-1** (see details in Section 3.6.a.ii, above).

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

No Impact

Expansive soils contain types of clay minerals that occupy considerably more volume when they are wet or hydrated than when they are dry or dehydrated. Volume changes associated with changes in the moisture content of near-surface expansive soils can cause uplift or heave of the ground when they become wet or, less commonly, cause settlement when they dry out.

A common procedure for evaluating and rating soil expansion potential is the expansion index (EI) test. Expansive soils are defined as soils with an EI greater than twenty (20). According to the *Preliminary Geotechnical Investigation*, on-site soils exhibit a low expansion potential. **Mitigation Measure MM-GEO-1** requires the Project Applicant to comply with the recommendations of the *Preliminary Geotechnical Investigation*, the most current California Building Code (CBC), and the Structural Engineer Association of California Guidelines, which stipulates appropriate seismic design provisions that shall be implemented with Project design and construction. Compliance with this mitigation measure is applicable to all development. Potential impacts related to expansive soils would be considered less than significant. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: The Project is required to comply with **Mitigation Measure MM-GEO-1** (see details in Section 3.6.a.ii, above).

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

No Impact

The proposed Project would not include construction of, or connections to, septic tanks or alternative wastewater disposal systems. Therefore, the proposed Project would not result in impacts related to the soils capability to adequately support the use of septic tanks or alternative wastewater disposal systems,

and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

3.7 GREENHOUSE GAS EMISSIONS.

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

Source(s): *12111 Buaro Street Project Air Quality and Global Climate Change Impact Analysis*, prepared by Kunzman Associates, Inc., dated March 2, 2017 (*AQ/GCC Impact Analysis*, **Appendix 2**).

Findings of Fact:

(a) Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact

The proposed Project would result in the construction and on-going use of 17 residential condominium dwelling units. The proposed Project is anticipated to generate GHG emissions from area sources, energy usage, mobile sources, waste disposal, water usage, and construction equipment.

The GHG emissions have been calculated for opening year 2018. A summary of the results is shown below in **Table 3.7-1, *Project Related Greenhouse Gas Emissions***, and the CalEEMod Model runs for all modeled years are provided in Appendix C of the *AQ/GCC Impact Analysis* (**Appendix 2).**

Table 3.7-1
Project Related Greenhouse Gas Emissions[1]

Residential Category	Greenhouse Gas Emissions (Metric Tons/Year)					
	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e
Area Sources[2]	0.00	3.96	3.96	0.00	0.00	3.99
Energy Usage[3]	0.00	54.02	54.02	0.00	0.00	54.26
Mobile Sources[4]	0.00	141.82	141.82	0.01	0.00	141.98
Solid Waste[5]	1.59	0.00	1.59	0.09	0.00	3.93
Water[6]	0.35	7.07	7.42	0.04	0.00	8.60
Construction[7]	0.00	3.80	3.80	0.00	0.00	3.82
Total Emissions	1.94	210.67	212.60	0.14	0.00	**216.58**
					SCAQMD Screening Threshold	**3,000**
					Exceeds Threshold?	**No**

1 **Source:** CalEEmod Version 2016.3.1 Year 2018 emissions (opening year).
2 Area sources consist of emission from consumer products, architectural coatings, hearths and landscaping equipment.
3 Energy usage consists of GHG emissions from f electricity and natural gas usage.
4 Mobile sources consist of GHG emissions from vehicles.
5 Solid waste includes CO_2 and CH_4 emissions created from the solid waste placed in landfills.
6 Water includes GHG emissions from electricity used for transport of water and processing wastewater.
7 Construction GHG emissions CO_2e based on a 30-year amortization rate.

Table 3.7-1 shows that the proposed Project's emissions would generate approximately 216.58 metric tons

of CO_2e per year. A cumulative global climate change impact would potentially occur if the GHG emissions created from the on-going operations would exceed the SCAQMD's interim proposed screening threshold of 3,000 metric tons per year of CO_2e. Therefore, operation of the proposed Project would not create a significant cumulative impact to global climate change.

The Project is also subject to the requirements of the California Green Building Standards Code. The Project will be required to comply with these requirements under **Standard Condition SC-GHG-1**. On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. The Code is a comprehensive and uniform regulatory code for all residential, commercial and school buildings.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. The Code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official.

The California Green Building Standards Code (code section in parentheses) requires:

- Water Efficiency and Conservation [Indoor Water Use (4.303.1)]. Fixtures and fixture fittings reducing the overall use of potable water within the building by at least 20 percent shall be provided. The 20 percent reduction shall be demonstrated by one of the following methods:
    - Prescriptive Method: Showerheads (≤ 2.0 gpm @ 80 psi); Residential Lavatory Faucets (≤ 1.5 gpm @ 60 psi); Nonresidential Lavatory Faucets (≤ .4 gpm @ 60 psi); Kitchen Faucets (≤ 1.8 gpm @ 60 psi); Toilets (≤ 1.28 gal/flush); and urinals (≤ 0.5 gal/flush).
    - Performance Method: Provide a calculation demonstrating a 20% reduction of indoor potable water using the baseline values set forth in Table 4.303.1. The calculation will be limited to the total water usage of showerheads, lavatory faucets, water closets and urinals within the dwelling.
- Water Efficiency and Conservation [Outdoor Water Use (4.304.1)]. Irrigation Controllers. Automatic irrigation system controllers for landscaping provided by the builder and installed at the time of final inspection shall comply with the following:
    - Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' watering needs as weather or soil conditions change.
    - Weather-based controllers without integral rain sensors or communication systems that account for rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s).
- Construction Waste Reduction of at least 50 percent (4.408.1). Recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4; OR meet a more stringent local construction and demolition waste management ordinance. Documentation is required per Section 4.408.5. Exceptions:
    - Excavated soil and land-clearing debris.
    - Alternate waste reduction methods developed by working with local enforcing agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.
    - The enforcing agency may make exceptions to the requirements of this section when jobsites are located in areas beyond the haul boundaries of the diversion facility.
- Materials pollution control (4.504.1 – 4.504.6). Low-pollutant emitting interior finish materials such as

paints, carpet, vinyl flooring and particleboard.

- Installer and Special Inspector Qualifications (702.1-702.2). Mandatory special installer inspector qualifications for installation and inspection of energy systems (e.g., heat furnace, air conditioner, mechanical equipment).

STANDARD CONDITIONS AND REQUIREMENTS:

SC-GHG-1 The Project shall comply to the requirements of the California Green Building Standards Code.

MITIGATION MEASURES: No mitigation measures are required.

(b) Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact

The proposed Project would have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. The City of Garden Grove does not currently have a Climate Action Plan; therefore, the Project has been compared to the goals of the CARB Scoping Plan.

Emission reductions in California alone would not be able to stabilize the concentration of greenhouse gases in the earth's atmosphere. However, California's actions set an example and drive progress towards a reduction in greenhouse gases elsewhere. If other states and countries were to follow California's emission reduction targets, this could avoid medium or higher ranges of global temperature increases. Thus, severe consequences of climate change could also be avoided.

The CARB Board approved a Climate Change Scoping Plan in December 2008. The Scoping Plan outlines the State's strategy to achieve the 2020 greenhouse gas emissions limit. The Scoping Plan "proposes a comprehensive set of actions designed to reduce overall greenhouse gas emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health" (California Air Resources Board 2008). The measures in the Scoping Plan have been in place since 2012.

This Scoping Plan calls for an "ambitious but achievable" reduction in California's greenhouse gas emissions, cutting approximately 30 percent from business-as-usual emission levels projected for 2020, or about 10 percent from today's levels. On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman and child in California down to about 10 tons per person by 2020.

The Project is consistent with the applicable strategies in **Table 3.7-2, *CARB Scoping Plan Measures***, below. Therefore, the Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. At a level of 216.58 $MTCO_2e$ per year, the Project's GHG emissions fall well below the SCAQMD's interim proposed screening threshold of 3,000 metric tons per year of CO_2e for all land uses. The Project will comply with applicable Green Building Standards and City of Garden Grove's policies regarding sustainability (as dictated by the City's General Plan). Any impacts are considered less than significant. No mitigation is required.

Table 3.7-2
CARB Scoping Plan Measures[1]

Scoping Plan Measures to Reduce Greenhouse Gas Emissions
California Light-Duty Vehicle Greenhouse Gas Standards – Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.
Energy Efficiency – Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.
Low Carbon Fuel Standard – Develop and adopt the Low Carbon Fuel Standard.
Vehicle Efficiency Measures – Implement light-duty vehicle efficiency measures.
Medium/Heavy-Duty Vehicles – Adopt medium and heavy-duty vehicle efficiency measures.
Green Building Strategy – Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.
High Global Warming Potential Gases – Adopt measures to reduce high global warming potential gases.
Recycling and Waste – Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.
Water – Continue efficiency programs and use cleaner energy sources to move and treat water.

[1] **Source:** CARB Scoping Plan (2008).

STANDARD CONDITIONS AND REQUIREMENTS: The Project is required to comply with **Standard Condition SC-GHG-1 and Standard Condition SC-GHG-2** (see details in Section 3.7.a, above).

MITIGATION MEASURES: No mitigation measures are required.

3.8 HAZARDS AND HAZARDOUS MATERIALS.

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

Source(s): *Phase I Environmental Site Assessment Report, Page Private School, 12111 Buaro Street, Garden Grove, California 92840*, prepared by Partner Engineering and Science, Inc., October 6, 2016 (*ESA*, **Appendix 5**); and Google Maps.

Findings of Fact:

(a) Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact With Mitigation Incorporated

Hazardous materials are chemicals that could potentially cause harm during an accidental release or mishap, and are defined as being toxic, corrosive, flammable, reactive, an irritant, or strong sensitizer. Hazardous substances include all chemicals regulated under the United States Department of Transportation "hazardous materials" regulations and the United States Environmental Protection Agency (EPA) "hazardous waste" regulations. Hazardous wastes require special handling and disposal because of their potential to damage public health and the environment. The probable frequency and severity of consequences from the use, transport, or disposal of hazardous materials is affected by the type of substance, quantity used or managed, and the nature of the activities and operations.

Construction. The Project will be constructed on .99-acres. During demolition and construction activities for the proposed Project, there is a possibility of generating small quantities of hazardous materials.

Construction activities would also use a limited amount of hazardous and flammable substances/oils during heavy equipment operations for site grading and construction. The amount of hazardous chemicals present during construction is limited and would be in compliance with existing government regulations and would not pose a significant hazard to workers or the environment. Furthermore, the construction contractor would be required to implement standard best management practices regarding hazardous materials storage, handling, and disposal during construction in compliance with the State Construction General Permit to protect water quality (refer to Section 3.9, Hydrology and Water Quality). Any associated risk would be adequately reduced to a level that is less than significant through compliance with these standards and regulations; thus, the limited use and storage of hazardous materials during construction of the proposed Project would not pose a significant hazard to the public or the environment. Accordingly, the potential for the release of hazardous materials during Project construction would be low and, even if a release would occur, it would not result in a significant hazard to the public, surrounding land uses, or environment due to the small quantities of these materials associated with construction, and no mitigation would be required.

The purpose of a *Phase I Environmental Site Assessment (ESA)* is to assess the presence of recognized environmental conditions (RECs) and other suspect environmental conditions with a property and to determine whether further investigation is required. Based on site reconnaissance conducted as part of the *ESA* (**Appendix 5**), the presence of hazardous building materials such as asbestos-containing materials (ACMs), lead-based paints (LBPs), and polychlorinated biphenyl (PCB)- containing fixtures cannot be completely ruled out due to the approximate age of the on-site buildings. ACMs and LBPs are associated with building materials, and PCBs are potentially used in electrical transformers.

Because the proposed Project includes the demolition of the existing structures, the presence of these chemicals cannot be ruled out, and mitigation would be required. Required pre-demolition surveys, identified in **Mitigation Measure MM-HAZ-1**, would ensure testing for the presence of any hazardous building materials prior to disturbance and/or demolition of existing on-site structures, and would ensure that the appropriate precautions would be taken to properly remove and dispose of such materials. With implementation of **Mitigation Measure MM-HAZ-1**, impacts related to hazardous building materials would be reduced to a less than a significant level.

The *ESA* did not identify any properties immediately adjacent to the Project site that were anticipated to have adversely impacted conditions at the Project site. However, in the unlikely event that unknown hazardous materials are discovered during construction activities, the Project contractor would be required to comply with a Contingency Plan developed and approved prior to the commencement of grading activities. As stated in **Mitigation Measure MM-HAZ-2**, in the event that construction workers encounter underground tanks, gases, odors, uncontained spills, or other unidentified substances, the Contingency Plan requires the contractor to stop work, cordon off the affected area, and notify the Garden Grove Fire Department (GGFD). The GGFD responder shall determine the next steps regarding possible site evacuation, sampling, and disposal of the substance consistent with local, State, and federal regulations. In addition, the California Department of Transportation, the California Highway Patrol, and local police and fire departments are trained in emergency response procedures for safely responding to accidental spills of hazardous substances on public roads, further reducing potential impacts to a less than significant level. With implementation of **Mitigation Measure MM-HAZ-2**, potential risks associated with encountering unknown hazardous wastes during construction would be reduced to a less than significant level.

With implementation of **Mitigation Measure MM-HAZ-1** and **Mitigation Measure MM-HAZ-2**, construction of the proposed Project would not create a significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous materials.

Operation. As a mixed-use development, long-term operational activities typical of the proposed residential uses, such as landscape and building maintenance, would occur on the Project site. Maintenance activities related to landscaping include the use of fertilizers and light equipment (such as lawn mowers and edgers). These types of activities do not involve the use of a large or substantial amount of hazardous materials. Operation of residential uses, such as those proposed, typically involves the use and storage of small quantities of potentially hazardous materials in the form of cleaning solvents and pesticides. However, such materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations. Any associated risk would be adequately reduced to a less than significant level through compliance with these standards and regulations. Further, operation of the proposed Project would not store, transport, generate, or dispose of large quantities of hazardous substances. Thus, potential impacts from the routine transport, use, or disposal of hazardous materials resulting from operation of the proposed Project would be less than significant, and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES:

MM-HAZ 1: *Predemolition Surveys*. Prior to commencement of demolition activities, the City of Garden Grove (City) Building Official, or designee, shall verify that predemolition surveys for asbestos-containing materials (ACMs) and lead-based paints (LBPs) (including sampling and analysis of all suspected building materials) and inspections for polychlorinated biphenyl (PCB)-containing electrical fixtures and other suspect hazardous building materials have been performed. All inspections, surveys, and analyses shall be performed by appropriately licensed and qualified individuals in accordance with applicable regulations (i.e., American Society for Testing and Materials [ASTM] E 1527-05, and 40 Code of Federal Regulations [CFR], Subchapter R, Toxic Substances Control Act [TSCA], Part 716). If the predemolition surveys do not find ACMs, LBPs, PCB-containing electrical fixtures, or other hazardous building materials, the inspectors shall provide documentation of the inspection and its results to the City Building Official, or designee**,** to confirm that no further abatement actions are required.

If the predemolition surveys find evidence of ACMs, LBPs, or PCB- containing electrical fixtures, or other hazardous building materials, all such materials shall be removed, handled, and properly disposed of by appropriately licensed contractors according to all applicable regulations during demolition of structures (40 CFR, Subchapter R, TSCA, Parts 745, 761, and 763). Air monitoring during these predemolition surveys shall be completed, as applicable, by appropriately licensed and qualified individuals in accordance with applicable regulations both to ensure adherence to applicable regulations (e.g., South Coast Air Quality Management District [SCAQMD]) and to provide safety to workers and the adjacent community.

The City shall provide documentation (e.g., all required waste manifests, sampling, and air monitoring analytical results) to the County of Orange (County) Environmental Health Division showing that abatement of any ACMs, LBPs, PCB-containing electrical fixtures, or other hazardous building materials identified in these structures has been completed in

full compliance with all applicable regulations and approved by the appropriate regulatory agency(ies) (40 CFR, Subchapter R, TSCA, Parts 716, 745, 761, 763, and 795 and California Code of Regulations [CCR] Title 8, Article 2.6). An Operating & Maintenance (O&M) Plan shall be prepared for any ACM, LBP, PCB-containing fixtures, or other hazardous building materials to remain in place and will be reviewed and approved by the County Environmental Health Division.

MM-HAZ-2: *Contingency Plan*. Prior to commencement of grading activities, the Director of the County Environmental Health Division, or designee, shall review and approve a contingency plan that addresses the procedures to be followed should on-site unknown hazards or hazardous substances be encountered during demolition and construction activities. The plan shall indicate that if construction workers encounter underground tanks, gases, odors, uncontained spills, or other unidentified substances, the contractor shall stop work, cordon off the affected area, and notify the Garden Grove Fire Department (GGFD). The GGFD responder shall determine the next steps regarding possible site evacuation, sampling, and disposal of the substance consistent with local, State, and federal regulations.

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

Less Than Significant Impact With Mitigation Incorporated

Construction. Construction activities would involve the routine use of hazardous materials such as vehicle fuels, oils, and transmission fluids. With the implementation of standard best management practices (BMPs) for water quality such as Erosion Control and Sediment Control BMPs designed to minimize erosion and retain sediment on site and Good Housekeeping BMPs to prevent spills, leaks, and discharge of construction debris and waste into receiving waters, and **Mitigation Measure MM-HAZ-1**, which requires predemolition surveys, any risks associated with the storage, handling, or disposal of hazardous materials would be reduced to a level that is less than significant during construction. In addition, there are no reported releases on site or off site that would pose a potential concern during construction activities. **Mitigation Measure MM-HAZ-2**, outlining the requirements for a contingency plan, would reduce impacts related to the possible discovery of unknown wastes or suspect materials during construction activities. Therefore, with implementation of **Mitigation Measure MM-HAZ-1** and **Mitigation Measure MM-HAZ-2** impacts would be reduced to a less than significant level.

Operation. Operation of the proposed Project would involve the use of chemical agents, solvents, paints, and other hazardous materials typical of residential, commercial, and community facility uses, that when used properly, would not produce hazardous emissions or require users to handle acutely hazardous materials, substances, or waste. The use of these chemicals would be in compliance with existing government regulations to ensure that operation of the proposed Project would result in a less than significant hazard to the public or to the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment during Project operation, and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: The Project is required to comply with **Mitigation Measure MM-HAZ-1** and **Mitigation Measure MM-HAZ-2** (see details in Section 3.8.a, above).

(c) Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact With Mitigation Incorporated

The Walton Intermediate School has been identified directly south of the Project site.

Construction. Construction activities would involve the routine use of hazardous materials such as vehicle fuels, oils, and transmission fluids. However, with the implementation of standard best management practices (BMPs) for water quality such as Erosion Control and Sediment Control BMPs designed to minimize erosion and retain sediment on site and Good Housekeeping BMPs to prevent spills, leaks, and discharge of construction debris and waste into receiving water and **Mitigation Measure MM-HAZ-1**, any risks associated with the storage, handling, or disposal of hazardous materials during construction would be reduced to a level that is less than significant. In addition, there are no reported releases on site or off site that would pose a potential concern during construction activities. **Mitigation Measure MM-HAZ-2**, which outlines the preparation and use of a contingency plan, would reduce impacts related to the possible discovery of unknown hazardous materials, substances, or waste during construction activities. Therefore, with implementation of **Mitigation Measure MM-HAZ-1** and **Mitigation Measure MM-HAZ-2**, the proposed Project would result in a less than significant hazard to the public or the environment, including Walton Intermediate School.

Operation. The Project site is located 460 feet away from the closest Walton Intermediate School building. During operation, the proposed Project would involve the use of potentially hazardous materials (e.g., solvents, cleaning agents, paints, and pesticides) typical of residential uses that, when used properly, in accordance with applicable regulations, would not produce hazardous emissions or result in the handling of substantial amounts of acutely hazardous materials, substances, or waste. Therefore, compliance with applicable regulations would ensure that operation of the proposed Project would result in a less than significant hazard to the public or the environment, including Walton Intermediate School, and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: The Project is required to comply with **Mitigation Measure MM-HAZ-1** and **Mitigation Measure MM-HAZ-2** (see details in Section 3.8.a, above).

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

No Impact

The proposed Project site is not included on any hazardous materials sites pursuant to Government Code Section 65962.5 and would not create a significant hazard to the public or the environment. No impacts are anticipated. No mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

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

No Impact

The proposed Project is not located within an airport land use plan or located within 2 miles of a public airport or public use (Google Maps). The nearest public airports are the John Wayne Airport located at 18601 Airport Way, approximately 9 miles southeast of the Project site, or the Fullerton Municipal Airport (FMA), a general aviation airport located at 4011 West Commonwealth Avenue, approximately 6.9 miles northwest of the Project site. As a result, the proposed Project would not cause an airport safety hazard for people residing or working in the Project area. No impacts are anticipated. No mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

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

No Impact

The proposed Project is not located within the vicinity of a private airstrip, and as a result, the proposed Project would not result in a safety hazard for people residing or working in the Project area. No impacts are anticipated. No mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(g) *Would the Project impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan?*

Less Than Significant

Construction. Implications of construction include increased travel time due to flagging or stopping of traffic to accommodate trucks entering and exiting the Project site. While it is unlikely that such activities would result in complete closure of Buaro Street, they may temporarily close a single travel lane. The development of a Construction Staging and Traffic Management Plan as required by **Standard Condition SC-TR-4** (refer to Section 3.16, Traffic of this Initial Study) would ensure that emergency vehicles would be able to navigate through streets adjacent to the Project site. Traffic management personnel (flagpersons), required as part of the Congestion Staging and Traffic Management Plan, would be trained to assist in emergency response by restricting or controlling the movement of traffic that could interfere with emergency vehicle access. With implementation of the Construction Staging and Traffic Management Plan, it is not anticipated that construction of the proposed Project would impede any pass-through emergency vehicles or impair any emergency evacuation plans. Therefore, impacts to emergency response and evacuation plans associated with construction of the proposed Project would not be significant with implementation of **Standard Condition SC-TR-4**.

Operation. The proposed Project would not physically interfere with an adopted emergency response plan or emergency evacuation plan. The proposed Project would be developed in accordance with the City's emergency access standards. Access to, from, and on site for emergency vehicles would be reviewed and approved by the GGFD prior to Project construction. The proposed Project would also be required to comply with all applicable codes and ordinances for emergency vehicle access, which would ensure adequate access to, from, and on site for emergency vehicles. Therefore, operation of the proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Potential Project impacts would be less than significant, and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS:

SC-TR-4 *Construction Staging and Traffic Management Plan*. A construction Staging and Traffic Management Plan shall be prepared for approval by the Director of the City of Garden Grove Public Works Department, or designee, prior to issuance of any demolition or grading permits. (See Construction Section above).

MITIGATION MEASURES: No mitigation measures are required.

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

No Impact

The area surrounding the Project site is considered urban. The Project site is located in an urbanized area, surrounded by multi-family residences to the north and west, a skilled nursing facility to the west across Jentges Avenue, Walton Intermediate School to the south, and single-family homes and a Marriott Suites to the east, and is not adjacent to wildland areas. As a result, the proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Therefore, no impacts are anticipated, and no mitigation measures would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

3.9 HYDROLOGY AND WATER QUALITY.

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Violate any water quality standards or waste discharge requirements?			X	
(b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
(c) 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 a substantial erosion or siltation on- or off-site?			X	
(d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
(e) 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?			X	
(f) Otherwise substantially degrade water quality?			X	
(g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			X	
(h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			X	
(i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
(j) Inundation by seiche, tsunami, or mudflow?				X

Source(s): *Water Quality Management Plan, Buaro Street TTM – Pinnacle Homes, 12111 Buaro Street,* prepared by Proactive Engineering Consultants, Inc., November 18, 2016 (*WQMP*, **Appendix 6a**); **Figure 3.9-1, *Flood Insurance Rate Map Number 06059C0141J***; *Preliminary Drainage Report,* prepared by Proactive Engineering Consultants, Inc. (March 21, 2017) (*Drainage*, **Appendix 6b**); and General Plan Exhibit SAF-4, Flood Zones.

Findings of Fact:

(a) Would the Project violate any water quality standards or waste discharge requirements?

Less Than Significant Impact

Pollutants of concern during Project construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. Excavated soil would be exposed

during construction activities, and there would be an increased potential for soil erosion and sedimentation compared to existing conditions. During construction, the total disturbed soil area would be approximately .99 acres (over 1 acre of soil with the inclusion of disturbances/improvements in the right-of-way). In addition, chemicals, liquid products, petroleum products (such as paints, solvents, and fuels), and concrete-related waste may be spilled or leaked and have the potential to be transported via storm runoff into receiving waters. Implementation of the proposed Project would demolish the existing pre-school facility, remove the parking lot, and construct the multi-family development comprised of 17 units, open space, and parking.

During operation, expected pollutants associated with the residential facility uses include suspended solids/sediments, nutrients, pathogens (bacteria/virus), pesticides, oil and grease, and trash and debris. Compared to existing conditions, the proposed Project will have reduced impervious areas when compared to the current site. Any change in impervious area would change the volume of runoff during a storm, which would more effectively transport pollutants to receiving waters. The stormwater runoff currently surface flows in a southwest direction through a wall opening and ultimately off-site to the adjacent school yard at the southwest end of the site. The proposed improvements will preserve the current flow patterns but through the addition of new BMPS on the project site water quality will be improved and stormwater runoff will be reduced. It should be noted that the Project will result in a benefit to water quality, as no such water quality facilities, including BMPs, currently exist on the Project site. (It is my understanding that the site will be improved with new BMPs which will help to reduce the amount of stormwater runoff – this is what David told us when we were meeting with the Engineering staff.

The proposed Project would be required to comply with all pertinent requirements of the National Pollutant Discharge Elimination System (NPDES). The first requirement involves compliance with the State Water Resources Control Board's NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002) (Construction General Permit) (see **Standard Condition SC-WQ-1**). Because the proposed Project would disturb greater than 1 acre of soil during construction, the Project must comply with the requirements of the Construction General Permit, including the preparation of a Storm Water Pollution Prevention Plan (SWPPP) and implementation of the construction Best Management Practices (BMPs) detailed in the SWPPP during construction activities. Construction BMPs would include, but not be limited to, Erosion Control and Sediment Control BMPs designed to minimize erosion and retain sediment on site and Good Housekeeping BMPs to prevent spills, leaks, and discharge of construction debris and waste into receiving waters. Drain inserts will be installed in all inlets within the project site to prevent pollutants from entering the underground infiltration basin. To comply with the requirements of the Construction General Permit, the Applicant must ensure that the Permit Registration Document, including a SWPPP and Notice of Intent, are filed with the State Water Resources Control Board prior to issuance of a grading permit.

The second requirement involves the preparation, submittal, and implementation of a Water Quality Management Plan (WQMP) that includes design features and BMPs to target pollutants of concern in stormwater runoff from the Project site (see **Standard Condition SC-WQ-2**). The City is required to approve the WQMP prior to the issuance of any grading or building permit. A *Preliminary Water Quality Management Plan* has been prepared for the proposed Project that details the BMPs that would be implemented to reduce impacts to water quality from operation of the proposed Project. Proposed Source Control BMPs include education for property owners, tenants, and occupants; activity restriction; common area landscape maintenance; BMP maintenance; common area litter control; employee training; common area catch basin inspection; street sweeping of the driveway and parking area, storm drain signage and stenciling; efficient irrigation systems and landscape design; and slope protection. Proposed Site Design BMPs include maximizing natural infiltration capacity, preserving existing drainage patterns

and time of concentration, and disconnecting impervious areas. Proposed infiltration BMPs include drain inserts, storm drain inlet stenciling and an underground infiltration basin.

With adherence to the aforementioned requirements, outlined below as **Standard Condition SC-WQ-1** and **Standard Condition SC-WQ-2**, potential impacts related to waste discharge requirements would be less than significant. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS:

SC-WQ-1 *Construction General Permit*. Prior to issuance of a grading permit, the Applicant/Developer shall demonstrate to the City of Garden Grove (City) Public Works Department that coverage has been obtained under California's General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) by providing a copy of the Notice of Intent (NOI) submitted to the State Water Resources Control Board and a copy of the subsequent notification of the issuance of a Waste Discharge Identification (WDID) Number or other proof of filing. A copy of the current Storm Water Pollution Prevention Program (SWPPP) required by the General Permit shall be kept at the Project site and be available for review by City representatives upon request.

SC-WQ-2 *Final Water Quality Management Plan*. Prior to issuance of a grading permit, the Project Applicant/Developer shall submit a Final Water Quality Management Plan (WQMP) to the City Public Works Department for review and approval. Both Source Control and Site Design BMPs designed to reduce impacts to water quality from operation of the proposed Project shall be identified in the Final WQMP.

MITIGATION MEASURES: No mitigation measures are required.

(b) Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of 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)?

Less Than Significant Impact

The Project design, as depicted on the Project plans and Project-specific *WQMP*, will allow for water to percolate back into the ground and allow for groundwater recharge. Under the current site condition 96% of the Project site consists of impervious surfaces. The proposed Project will result in a reduction of impervious surfaces from 96% to 65% of the Project site. This will offset any impacts from the other non-pervious elements contained in the proposed Project. Therefore, implementation of the proposed Project will not 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). Any impacts are considered less than significant. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(c) *Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site?*

Less Than Significant Impact

Implementation of the proposed Project would demolish the existing pre-school facility, remove the parking lot, and construct the multi-family development comprised of 17 units, open space, and parking. During construction activities, soil would be exposed and disturbed, drainage patterns would be temporarily altered during grading and other construction activities, and there would be an increased potential for soil erosion and siltation compared to existing conditions. Additionally, during a storm event, soil erosion and siltation could occur at an accelerated rate. With adherence to **Standard Condition SC-WQ-1** and **Standard Condition SC-WQ-2**, above, potential impacts related to waste discharge requirements would be less than significant. No mitigation is required.

Compared to existing conditions, the proposed Project would have comparable impervious area when compared to the current site. Under the current site condition 96% of the Project site consists of impervious surfaces. The proposed Project will result in a reduction of impervious surfaces from 96% to 65% of the Project site. Any change in impervious area would change the volume of runoff during a storm, which would more effectively transport pollutants to receiving waters. The stormwater runoff currently surface flows in a southwest direction through a wall opening and ultimately to the adjacent school yard at the southwest end of the site. The proposed improvements will preserve the current flow patterns. It should be noted that the Project will result in a benefit to erosion or siltation on- or off-site, as no such facilities currently exist on the Project site.

In the developed conditions, stormwater runoff will surface along street gutters. Stormwater runoff will be routed to a proposed underground infiltration to infiltrate the Design Capture Volume, which is the volume of runoff resulting from the Design Storm (precipitation pattern defined for use in the design of hydrologic system), this volume must be captured within Stormwater BMPs to achieve Pollutant removal to the Maximum Extent Practicable (MEP). The underground infiltration will be located in the southwest corner of the Project site. Stormwater runoff generated by storms greater than the 85th percentile storm will bypass the underground detention basin and outlet through a wall opening and be discharged to an adjacent school yard at the southwest end of the site. Through implementation of infiltration BMPs, the proposed Project would not substantially increase runoff that could contribute to downstream erosion or siltation. Finally, the proposed Project would not alter the course of a stream or river. With implementation of construction and infiltration BMPs, impacts related to the alteration of existing drainage pattern in a manner that would result in on- or off-site erosion or siltation would be less than significant. No mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: The Project is required to comply with **Standard Condition SC-WQ-1 and Standard Condition SC-WQ-2** (see details in Section 3.9.a, above).

MITIGATION MEASURES: No mitigation measures are required.

(a) *Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*

Less Than Significant Impact

Development of the proposed Project on the Project site would not alter the existing on-site drainage patterns, nor result in an increase of the impervious surface area compared to existing conditions. Under the current site condition 96% of the Project site consists of impervious surfaces. The proposed Project will result in a reduction of impervious surfaces from 96% to 65% of the Project site. The proposed Project is anticipated to add to the runoff peak flow during storm events. Underground infiltration will be located in the southwest corner of the Project site. Stormwater runoff generated by storms greater than the 85th percentile storm will bypass the underground detention basin and outlet through a wall opening and discharged to an adjacent school yard at the southwest end of the site. With implementation of infiltration BMPs as part of the Project design, impacts related to the alteration of the existing drainage pattern in a manner that would result in on- or off-site flooding would be less than significant. It should be noted that the Project will result in a benefit to water quality, as no such facilities currently exist on the Project site. No mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: The Project is required to comply with **Standard Condition SC-WQ-1 and Standard Condition SC-WQ-2** (see details in Section 3.9.a, above).

MITIGATION MEASURES: No mitigation measures are required.

(b) Would the Project 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?

Less Than Significant Impact

Development of the proposed Project on the Project site would **not** alter the existing on-site drainage patterns. The Project will change the impervious surface area compared to existing conditions. As a result of the decrease in impervious surface area, the proposed Project is anticipated to contribute less runoff peak flow during storm events than the current site condition. Under the current site condition 96% of the Project site consists of impervious surfaces. The proposed Project will result in a reduction of impervious surfaces from 96% to 65% of the Project site. Underground infiltration will be located in the southwest corner of the Project site. Stormwater runoff generated by storms greater than the 85th percentile storm will bypass the underground detention basin and outlet through a wall opening and be discharged to an adjacent school yard at the southwest end of the site. Therefore, the proposed Project would not create or contribute runoff that would exceed the capacity of the downstream storm drain system. Project impacts related to storm drain capacity would be less than significant, and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: The Project is required to comply with **Standard Condition SC-WQ-1 and Standard Condition SC-WQ-2** (see details in Section 3.9.a, above).

MITIGATION MEASURES: No mitigation measures are required.

(c) Would the Project otherwise substantially degrade water quality?

Less Than Significant Impact

Refer to Response 3.9 (a), above. With adherence to the aforementioned requirements, outlined below as **Standard Condition SC-WQ-1** and **Standard Condition SC-WQ-2**, potential impacts related to water quality would be less than significant. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: The Project is required to comply with **Standard Condition SC-WQ-1 and Standard Condition SC-WQ-2** (see details in Section 3.9.a, above).

MITIGATION MEASURES: No mitigation measures are required.

(d) Would the Project 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?

Less Than Significant Impact

The Project site is not located within a designated 100-year special flood hazard area. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No 0605900141J (December 3, 2009), reference **Figure 3.9-1, *Flood Insurance Rate Map Number 06059C0141J***, the Project site is located within Regular Flood Hazard Zone X, which is defined as the area of 0.2 percent annual chance flood (500-year flood), areas of 1 percent annual chance flood (100-year flood) with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1 percent annual chance flood.

The Project site is located within the Prado Dam inundation area. The proposed Project would not increase the chance of inundation from failure of Prado Dam. Prado Dam was designed in the 1930s, but has recently increased its functioning capability due to the Seven Oaks Dam, which was completed in November 1999 and is located approximately 40 miles upstream on the Santa Ana River. During a flood, Seven Oaks Dam would store water destined for Prado Dam for as long as the reservoir pool at Prado Dam is rising. When the flood threat at Prado Dam has passed, Seven Oaks Dam would begin to release its stored flood water at a rate that does not exceed the downstream channel capacity. Working in tandem, the Prado and Seven Oaks Dams provide increased flood protection to Orange County.

Prado Dam is maintained and inspected to ensure its integrity and to ensure that risks are minimized. Given that the proposed Project is considered infill development and that it would not increase the risk of failure of Prado Dam, Project impacts related to placement of housing within a 100-year flood hazard area would be less than significant. No mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(e) Would the Project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Less Than Significant Impact

The Project site is not located within a designated 100-year special flood hazard area. The Project site is located within Regular Flood Hazard Zone X, which is defined as the area of 0.2 percent annual chance flood (500-year floodplain), areas of 1 percent annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1 percent annual chance flood.

The entire Project site is located within the Prado Dam inundation area. Given that the proposed Project is considered infill development and that it would not increase the risk of failure of Prado Dam, Project impacts related to placement of structures within a 100-year flood hazard area would be less than

significant. No mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(f) Would the Project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less Than Significant Impact

The entire Project site is located within the Prado Dam inundation area. The proposed Project would not increase the chance of inundation from failure of Prado Dam. Prado Dam is maintained and inspected to ensure its integrity and to ensure that risks are minimized. Given that the proposed Project is considered infill development and that it would not increase the risk of failure of Prado Dam, Project impacts from exposure of people or structures to loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam, would be less than significant. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(g) Would the Project expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?

No Impact

Seiching is a phenomenon that occurs when seismic ground shaking induces standing waves (seiches) inside water retention facilities such as reservoirs and water tanks. Such waves can cause retention structures to fail and flood downstream properties. The West Street Basin is located approximately 333' west of the Project site. A building is located between the West Street Basin and the Project site. While there is a risk associated with a possible seiche wave(s) the probability is relatively low. Therefore, it is not considered a potential constraint or a potentially significant impact of the Project. Any impacts are considered less than significant. No mitigation is required.

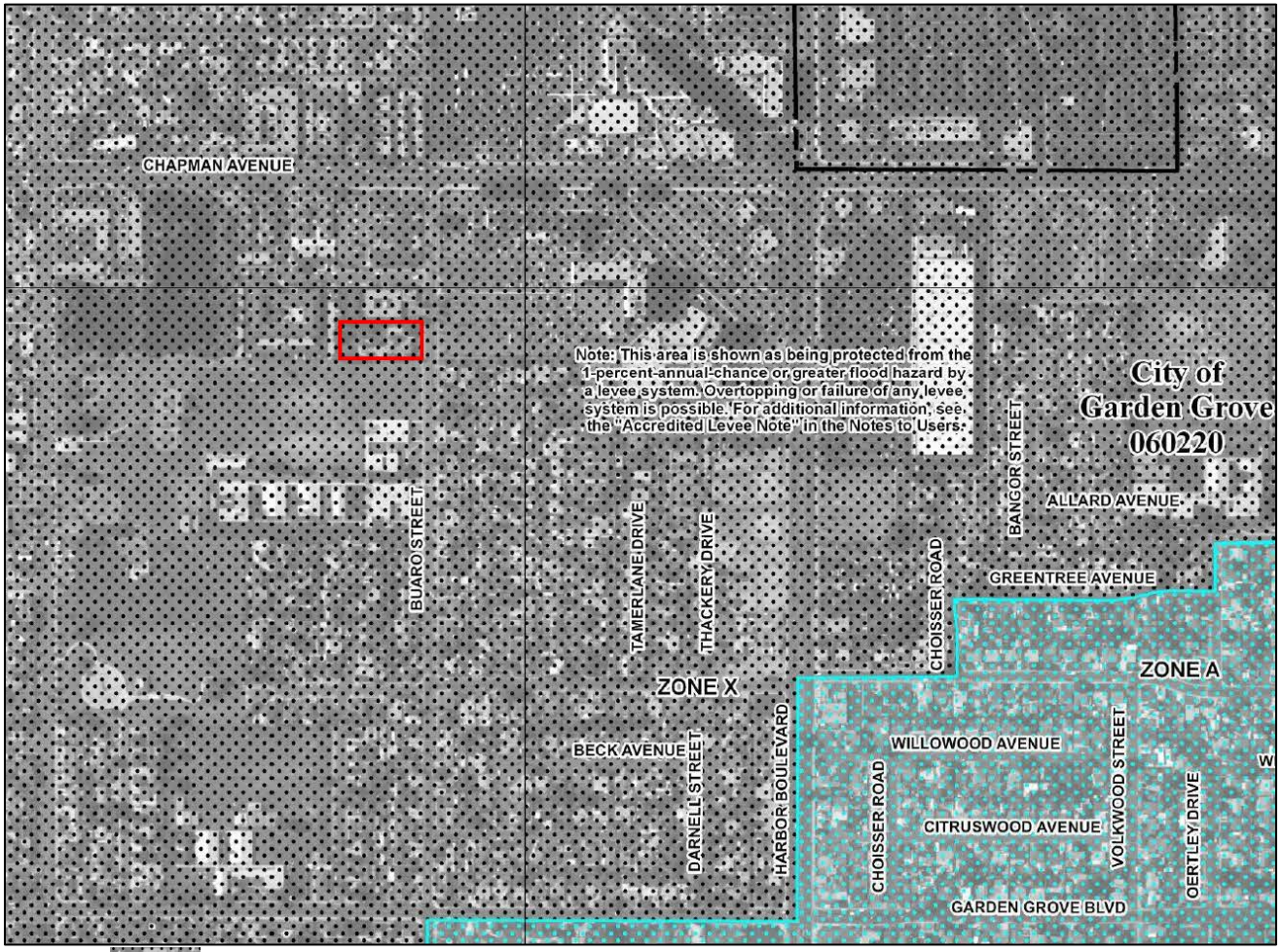
Tsunamis are generated wave trains generally caused by tectonic displacement of the sea floor associated with shallow earthquakes, sea floor landslides, rock falls, and exploding volcanic islands. The Project site is located more than 10.5 miles (mi) from the ocean shoreline and is not in a tsunami inundation area (State of California Department of Conservation, Orange County Tsunami Inundation Maps). The risk associated with tsunamis is, therefore, not considered a potential hazard or a potentially significant impact, and no mitigation would be required.

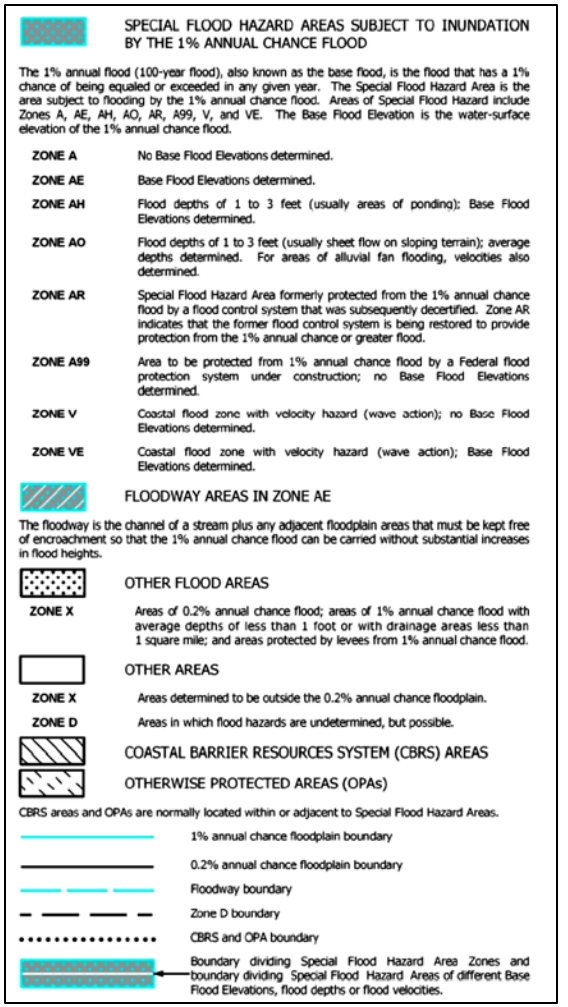
Mudslides and slumps are described as a shallower type of slope failure, usually affecting the upper soil mantle or weathered bedrock underlying natural slopes and triggered by surface or shallow subsurface saturation. The Project site and surrounding area is relatively flat. The risk associated with possible mudflows and mudslides is, therefore, not considered a potential constraint or a potentially significant impact of the project, and no mitigation is necessary.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

FIGURE 3.9-1, *Flood Insurance Rate Map Number 06059C0141J*





SITE

Source: FEMA Maps, 2009

3.10 LAND USE/PLANNING.

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Physically divide an established community?				X
(b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
(c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Source(s): *General Plan Land Use Element (Chapter 2); General Plan Community Design Element (Chapter 3); Elevations (**Appendix 1b**); and General Plan Circulation Element (Chapter 5).*

Findings of Fact:

(a) Would the Project physically divide an established community?

No Impact

The proposed Project would be constructed on approximately .99 acres. The existing pre-school and associated facilities, would be demolished and 17 multi-family units, parking, and open space re-built on the site. Because the proposed Project would be constructed on an existing developed site and is considered in-fill development, implementation of the proposed Project would not divide an established community. The proposed Project would not disrupt or modify the existing roadway network, nor would it affect or disrupt residential neighborhoods in the Project vicinity. The proposed Project would provide additional housing options to the surrounding community. Vehicular access to the project site would be provided by a new driveway on Buaro Street. Therefore, implementation of the proposed Project would not result in the physical division of any established community, and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

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

Less Than Significant Impact

The main guiding documents regulating land use on and around the Project site are the City of Garden Grove's (City's) General Plan and Zoning Ordinance.

General Plan. The 2030 Garden Grove General Plan (General Plan) establishes a vision for the City's future growth and change and provides a blueprint for development throughout the community. As shown on *Figure 1.4*, **General Plan Land Use Designations**, the Project site has a Civic/Institutional (CI) land use designation. As shown on *Figure 1.4*, **Zoning Classifications**, the zoning classification is Multiple-Family Residential (R-3). GPA-003-2017 will be required to change the General Plan Land Use Diagram designation to Medium Density Residential (MDR).

Allowable uses within the MDR General Plan land use designation include traditional multi-family apartments, condominiums, townhomes, and single-family small-lot subdivisions. The MDR land use designation allows residential densities between 18.1 and 32 dwelling units per acre (du/ac). While the implementing R-3 zoning keeps densities lower than the GP allowable density, the MDR Designation would accommodate any affordable or senior density bonuses on top of the R-3 number of units (meaning that ultimate build-out review through the General Plan would cover density bonuses).

The Civic/Institutional (C/I) Land Use designation from the General Plan includes educational uses, such as, elementary, middle, and high schools, colleges, universities, hospitals, and governmental facilities. This designation was added for the first time to the current General Plan 2030 and is appropriate for the Walton Intermediate School to the south of the subject property. Walton Intermediate had a Land Use Designation of Open Space in the previous General Plan (1995-2008) which stated, "shown as Open Space are City parks, public schools, golf courses, and other public and private open space land". But the subject property along with five properties to the north, west, and northwest were not included in the Open Space Designation in the previous General Plan. These properties were developed mainly with residential apartments and had a Land Use Designation of Medium Density Residential (MDR) which was then changed to Civic/Institutional in the current General Plan. The subject property and the additional five parcels all retain an R-3, Multi-Family Residential zoning. Planning staff have reviewed the history of the General Plan designations and determined that the C/I designation on these six properties is a mapping error in the current General Plan. Changing the subject property to the MDR designation will repair an inconsistency between the General Plan and the Zoning and allow for appropriate development of the site.

Therefore, following approval of the proposed Project and GPA-003-2017, no inconsistency with the City's General Plan land use designation would occur. Impacts are considered less than significant. No mitigation is required.

The City's General Plan Land Use Element also contains goals and policies that are applicable to the proposed Project. These applicable goals and policies from the City's General Plan are listed below, along with a consistency analysis of the proposed Project with each relevant goal and policy. In order to eliminate repetitive policies and focus on key issues, policies that are not relevant to the proposed Project are not included. The purpose of this discussion is to provide a guide to the decision-makers' policy interpretation and should be considered preliminary; a final determination of consistency with plans and policies would be made by City decision-makers. As identified through this consistency analysis, the proposed Project would be consistent with all applicable policies in the City's General Plan.

City of Garden Grove General Plan Consistency Analysis

Land Use Element

Policy LU-2.2: Strive to provide a diverse mix of housing types, along with uniformly high standards of residential property maintenance to preserve residents' real estate values and their high quality of life.

Consistent. The existing pre-school and associated facilities, would be demolished and 17 multi-family units, parking, and open space built on the site. This Project would contribute to the diverse mix of housing types in the City with high-quality development, and would therefore serve to increase property values and the quality of life of residents in the surrounding area.

LU-IMP-2B: New development shall be similar in scale to the adjoining residential neighborhood to preserve its character.

Consistent. The Project's site density would be 17.0 du/ac. Therefore, the proposed Project would be considered a medium-density project according to the City's General Plan Land Use Element. Surrounding land uses in the Project vicinity include multi-family residences to the north and west, a skilled nursing facility to the west across Jentges Avenue, Walton Intermediate School to the south, and single-family homes and a Marriott Suites to the east. The proposed Project would be similar in scale to existing development on the Project site and with existing residential developments in the surrounding area.

LU-IMP-3A: Design new residential sites so that housing does not front onto a major corridor, but instead on intersecting local streets or on cul-de-sacs, in order that sight and sound buffering from traffic can be included in these new residential site plans.

Consistent. The proposed Project takes access on a local street (Buaro Street) which is not categorized as an arterial or secondary arterial in the General Plan Circulation Element. Buildings A and B would front onto a 25' internal drivelane. Units 1 and 17 engage the local street with front entries sited toward Buaro Street, a 20' front landscape setback and a 4' landscaped parkway. Visual and noise impacts from traffic in the surrounding area will not significantly impact the residences fronting on a local residential street.

LU-IMP-3B: Design multi-family housing in mixed use areas and on major corridors to provide a buffer between the corridor and lower density residential areas.

Consistent. The proposed Project takes access on a local street (Buaro Street) which is not categorized as an arterial or secondary arterial in the General Plan Circulation Element. Buildings A and B would front onto a 25' internal drivelane. Units 1 and 17 engage the local street with front entries sited toward Buaro Street, a 20' front landscape setback and a 4' landscaped parkway. Visual and noise impacts from traffic in the surrounding area will not significantly impact the residences fronting on a local residential street.

LU-IMP-3C: Require attractive side and rear facades and landscaping on multi-family housing structures in order to improve the streetscape and effect a visual transition to lower density residential areas.

Consistent. The proposed Project includes a number of architectural design and landscaping features to ensure its aesthetic consistency with the surrounding community. The Project has been designed with attractive units that front onto Buaro Street, as opposed to showing only side elevations along this streetscape. Additionally, the long side elevation that is visible from across the Walton School's open playing fields, is well-detailed, with an interesting mix of front entries and architectural detailing. The Project also proposes landscaped walkways to the units along the side elevations. Overall, the Project has been designed to be consistent with the character of the adjacent and surrounding residential development, and to match the visual character of the adjacent area. The Project's design includes elements such as siding, balconies with composite wood railings, and awnings. Buildings would include stucco color finish, asphalt shingle tiles, and window trim.

The density for the Project site will be 17.0 du/ac, which would be considered medium-density by the City's General Plan Land Use Element. Surrounding land uses in the Project vicinity include multi-family residences to the north and west, a skilled nursing facility to the west across Jentges Avenue, Walton Intermediate School to the south, and single-family homes and a Marriott Suites to the east. There are no lower density areas adjacent to the Project site.

LU-IMP-3D: Front multi-family housing on local streets with appropriate setbacks to be consistent with neighborhood development patterns.

Consistent. Buildings A and B would front onto a 25' internal drivelane. Units 1 and 17 are located closest to Buaro Street and will be separated from the back of sidewalk by 20' of on-site landscaping and a 4' landscaped parkway. A buffer has been provided to Buaro Street. This setback is consistent with other development along Buaro Street and therefore, the proposed Project is consistent with surrounding neighborhood development.

Policy LU-4.1: Locate higher density residential uses within proximity of commercial uses to encourage pedestrian traffic, and to provide a consumer base for commercial uses.

Consistent. The proposed Project would develop the Project site with a medium-density residential development. Commercial uses exist to the east of the Project site at the intersection of Chapman Avenue and South Harbor Boulevard, approximately ¼-mile from the Project site. Therefore, the Project proposes residential uses within proximity of commercial uses to encourage pedestrian traffic, and to provide a consumer base for commercial uses.

Community Design Element

Policy CD-1.1: Enhance the positive qualities that give residential, commercial, and industrial areas their unique identities, while also allowing flexibility for innovative design.
Consistent. The proposed Project would include a variety of architectural and landscape design features that would contribute to the visual character and uniqueness of the Project.

Policy CD-IMP-4E: Require that all sides of a building visible from City streets display fully finished architectural detail, including finished doors, windows, and exterior surfaces identical to, or which complement the front of the building.

Consistent. The sides of Units 1 and 17 are located closest to Buaro Street. These elevations will be separated from the back of sidewalk by 20' of on-site landscaping and a 4' landscaped parkway. Varied roof planes, colors and materials, similar to the front of the medium density residential structure are proposed.

Policy CD-IMP-4: Require landscaping treatment on all parts of a building site, visible from City streets.

Consistent. Units 1 and 17 are located closest to Buaro Street and will be separated from the back of sidewalk by 20' of on-site landscaping and a 4' landscaped parkway. Landscape treatment has been provided to Buaro Street, which is the visible City street adjacent to the Project. Additionally, the long side elevation that is visible from across the Walton School's open playing fields, is well-detailed, with an interesting mix of front entries and architectural detailing. The Project also proposes landscaped walkways to the units along the side elevations.

Circulation Element

Policy CIR-1.8: Ensure that new development can be accommodated within the existing circulation system, or planned circulation improvements, such that the standard of Level of Service (LOS) D is maintained.

Consistent. As discussed further in Section 3.16, Transportation/Traffic, of this Initial Study, the proposed Project would be accommodated within the existing circulation system and would not cause the City's acceptable Level of Service (LOS) D to be exceeded at any study area intersection.

Policy CIR-3.5: Require new developments to implement access and traffic management plans that would reduce the potential for neighborhood traffic intrusion through factors such as driveway location, turn restrictions, shuttle bus operations, and/or travel demand strategies.

Consistent. Access to the proposed Project would be provided through one driveway located on Buaro Street. As discussed further in Section 3.16, Transportation/Traffic, of this Initial Study, the proposed Project would not generate a significant number of trips during peak or off- peak hours that would contribute to a negative impact on traffic patterns in the surrounding neighborhood.

Policy CIR-5.1: Promote the use of public transit.

Consistent. The proposed Project is located within approximately 0.1 mile of a stop on the OCTA Route 54 Chapman-Buaro bus service on Chapman Avenue and 0.4 mile away from the Target S/B bus station on Harbor Boulevard where four different lines are available.

Policy CIR-5.3: Provide appropriate bicycle access throughout the City of Garden Grove.
Consistent. The proposed Project will not interfere with any existing bike access ways. Commercial uses exist to the east of the Project site at the intersection of Chapman Avenue and South Harbor Boulevard, approximately ¼-mile from the Project site. Residents of the Project site would be able to bicycle to nearby commercial, retail, and office uses.

Policy CIR-5.4: Provide appropriate pedestrian access throughout the City of Garden Grove.

Consistent. The proposed Project will provide pedestrian access to Buaro Street, will not interfere with any existing pedestrian access ways, and will include internal walkways connecting buildings on the Project site. Further, commercial uses exist to the east of the Project site at the intersection of Chapman Avenue and South Harbor Boulevard, approximately ¼-mile from the Project site. Residents of the Project site would be able to walk to nearby commercial, retail, and office uses.

Policy CIR-7.1: Design safe and efficient vehicular access to properties from arterial streets to ensure efficient vehicular ingress and egress.

Consistent. Access to the Project site would be provided via a right-in right-out driveway on Buaro Street. The Project design features would comply with all City standards. Furthermore, there are no sight distance obstructions along Buaro Street, and the proposed driveway would intersect with Buaro Street at 90 degrees.

Infrastructure Element

Policy INFR-1.2: New development and redevelopment projects shall ensure that water infrastructure systems are adequate to serve the development.

Consistent. Water is provided to the proposed Project by the City of Garden Grove Water Services Division (GGWSD), a division of the Public Works Department. Wastewater from the proposed Project would be treated by the Garden Grove Sanitation District (GGSD), a division of the Public Works Department. As discussed further in Section 3.18, Utilities, of this Initial Study, it is not anticipated that the Project would result in demands for water or wastewater services that would result in significant impacts to existing water and wastewater infrastructure systems.

Policy INFR-2.3: Support sustainable wastewater services that respect and improve the natural environment.

Consistent. As previously stated, wastewater from the proposed Project would be treated by the GGSD.

Policy INFR 3.3: Minimize the adverse effects of urbanization upon drainage and flood control facilities.
Consistent. As discussed further in Section 3.9, Hydrology and Water Quality, of this Initial Study, the proposed Project would comply with all Best Management Practices (BMPs) for the new development and would not result in significant increases in stormwater runoff or changes to existing drainage patterns on the Project site. Therefore, development of the proposed Project would not result in significant adverse impacts related to drainage and flood control facilities.

INFR-IMP-3A: Continue to participate in the NPDES permit program.

Consistent. As discussed further in Section 3.9, Hydrology and Water Quality, of this Initial Study, the proposed Project would obtain a National Pollutant Discharge Elimination System (NPDES) permit, thus ensuring the project's compliance with the NPDES permit program.

INFR-IMP-3B: Require new development and redevelopment projects (greater than one acre) to provide a Water Quality Management Plan.

Consistent. As part of the environmental review and documentation process for the proposed Project, a site-specific Water Quality Management Plan (*WQMP*, **Appendix 6.a**) was prepared for the proposed Project.

NFR-IMP-3D: Continue to require the implementation of adequate erosion control measures for development or redevelopment projects in order to minimize sedimentation damage to drainage facilities.

Consistent. The proposed Project would be required to implement erosion control measures in order to minimize sedimentation damage to drainage facilities in compliance with the NPDES and the site-specific WQMP.

Policy INFR-4.1: Provide sufficient levels of storm drainage service to protect the community from flood hazards and minimize the discharge of materials into the storm drain system that are toxic or which would obstruct flows.

Consistent. As discussed further in Section 3.9, Hydrology and Water Quality, of this Initial Study, the proposed Project would not result in significant impacts related to flooding. Further, the proposed Project would be required to implement BMPs to minimize discharge of materials into the storm drain system.

Noise Element

Policy N-1.1: Require all new residential construction in areas with an exterior noise level greater than 55 dBA to include sound attenuation measures.

Consistent. The Project site is located within the 60 dBA CNEL contour along Buaro Street. The City of Garden Grove land use compatibility guidelines set forth noise/land use compatibility criteria for various land use types. The guidelines state that the proposed Project would be "normally acceptable" in areas with noise levels up to 65 dBA CNEL and "conditionally acceptable" in areas with noise levels up to 70 dBA CNEL. Vehicle traffic associated with Buaro Street is not expected to exceed 65 dBA CNEL at the Project site. No impacts are anticipated. No mitigation is required.

Policy N-1.3: Require noise reduction techniques in site planning, architectural design, and construction, where noise reduction is necessary consistent with the standards in Tables 7-1 and 7-2, Title 24 of the California Code of Regulations, and Section 8.47 of the Municipal Code.

Consistent. The Project site is located within the 60 dBA CNEL contour along Buaro Street. The City of Garden Grove land use compatibility guidelines set forth noise/land use compatibility criteria for various land use types. The guidelines state that the proposed Project would be "normally acceptable" in areas with noise levels up to 65 dBA CNEL and "conditionally acceptable" in areas with noise levels up to 70 dBA CNEL. Vehicle traffic associated with Buaro Street is not expected to exceed 65 dBA CNEL at the Project site. No impacts are anticipated. No mitigation is required.

Policy N-1.4: Ensure acceptable noise levels are maintained near schools, hospitals, convalescent homes, churches, and other noise sensitive areas.

Consistent. Surrounding land uses in the Project vicinity include multi-family residences to the north and west, a skilled nursing facility to the west across Jentges Avenue, Walton Intermediate School to the south, and single-family homes and a Marriott Suites to the east. Section 8.47.060 of the City of Garden Grove Municipal Ordinance limits construction to between the hours of 7:00 a.m. and 10:00 p.m. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Per **Standard Condition SC-NOI-1**, construction activities will have to adhere to the City of Garden Grove's policies found in the General Plan Noise Element and Municipal Code limiting the construction hours of operation. Adherence to these hours for construction activities, and implementation of the **Mitigation Measure MM-NOI-1**, will minimize construction noise impacts. Any impacts are considered less than significant with adherence to **SC-NOI-1** and **MM-NOI-1**.

Policy N-1.7: Avoid locating noise-sensitive land use in existing and noise-impacted areas.

Consistent. The Project site is not located in an area that is considered a noise-impacted area.

N-IMP-1D: Require construction activity to comply with the limits established in the City's Noise Ordinance.

Consistent. Section 8.47.060 of the City of Garden Grove Municipal Ordinance limits construction to between the hours of 7:00 a.m. and 10:00 p.m. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Per **Standard Condition SC-NOI-1**, construction activities will have to adhere to the City of Garden Grove's policies found in the General Plan Noise Element and Municipal Code limiting the construction hours of operation.

N-IMP-1E: Require buffers or appropriate mitigation of potential noise sources on noise sensitive areas.

Consistent. Surrounding land uses in the Project vicinity include multi-family residences to the north and west, a skilled nursing facility to the west across Jentges Avenue, Walton Intermediate School to the south, and single-family homes and a Marriott Suites to the east. Section 8.47.060 of the City of Garden Grove Municipal Ordinance limits construction to between the hours of 7:00 a.m. and 10:00 p.m. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Per **Standard Condition SC-NOI-1**, construction activities will have to adhere to the City of Garden Grove's policies found in the General Plan Noise Element and Municipal Code limiting the construction hours of operation. Adherence to these hours for construction activities, and implementation of the **Mitigation Measure MM-NOI-1**, will minimize construction noise impacts. The skilled nursing home is situated within ten-feet of the northern property line. It is considered a "modern industrial/commercial building." This building could experience transient vibration levels ranging between 0.24 to 0.58 PPV for short periods of time if a vibratory roller and/or large bulldozer is utilized along the northern property line. Use of a vibratory roller along the northern property line should be limited, and would cease upon completion of this phase of construction. Impacts would be below the 2.0 PPV threshold identified in **Table 3.12-5**. Any impacts are considered less than significant with adherence to **SC-NOI-1** and **MM-NOI-1**.

N-IMP-1H: Orient residential units away from major noise sources, particularly in mixed use projects.

Consistent. The Project site is located within the 60 dBA CNEL contour along Buaro Street. The City of Garden Grove land use compatibility guidelines set forth noise/land use compatibility criteria for various land use types. The guidelines state that the proposed Project would be "normally acceptable" in areas with noise levels up to 65 dBA CNEL and "conditionally acceptable" in areas with noise levels up to 70 dBA CNEL. Vehicle traffic associated with Buaro Street is not expected to exceed 65 dBA CNEL at the Project site. No impacts are anticipated. No mitigation is required.

N-IMP-1I: Encourage the location of balconies and operable windows of residential units in mixed use projects away from arterials and other major noise sources.

Consistent. The proposed Project takes access on a local street (Buaro Street) which is not categorized as an arterial or secondary arterial in the General Plan Circulation Element. The two Buildings A and B have front doors facing the walkways along the side property lines and balconies overlooking the ~~would front onto a~~ 25' internal drivelane. There are no balconies facing Buaro Street. Similarly, the majority of the windows in the townhome units face the side property lines or internal drivelane. Units 1 and 17 are located closest to Buaro Street and are separated from the back of sidewalk by 20' of on-site landscaping and a 4' landscaped parkway.

The Project site is located within the 60 dBA CNEL contour along Buaro Street. The City of Garden Grove land use compatibility guidelines set forth noise/land use compatibility criteria for various land use types. The guidelines state that the proposed Project would be "normally acceptable" in areas with noise levels up to 65 dBA CNEL and "conditionally acceptable" in areas with noise levels up to 70 dBA CNEL. Vehicle traffic associated with Buaro Street is not expected to exceed 65 dBA CNEL at the Project site. No impacts are anticipated. No mitigation is required.

Policy N-2.3: Incorporate noise reduction features for items such as, but not limited to, parking and loading areas, ingress/egress points, and refuse collection areas, during site planning to mitigate anticipated noise impacts on affected noise sensitive land uses.

Consistent. Buildings A and B would front onto a 25' internal drivelane. Units 1 and 17 are located closest to Buaro Street and will be separated from the back of sidewalk by 20' of on-site landscaping and a 4' landscaped parkway. Sensitive receptors that may be affected by Project generated noise include the multi-family attached residential dwelling units located to the north and west, Walton Intermediate School located adjacent to the south, single-family detached residential dwelling units located approximately 80 feet southeast, and transient lodging uses located approximately 420 feet and 540 feet northeast of the Project site's boundaries. Adequate buffers have been provided as part of site design.

IMP-4A: Install sound attenuation measures, including but not limited to, retrofitting existing residential units or sensitive receptors with double- glazed windows and sound insulation; construction of sound walls and landscaping, use of low walls and landscaped berms, enclose courtyards, rubberized asphalt, or relocation of driveways.

Consistent. Due to the orientation and site design of the Project, none of these sound attenuation measures are required.

Air Quality Element

Policy AQ-1.2: Strive to achieve conformance with the state-mandated congestion management plans (CMPs), transportation demand management, or other like State or federally required pollution reduction plans.

Consistent. As discussed further in Section 3.3, Air Quality, of this Initial Study, the proposed Project would not conflict with the City's ability to achieve conformance with the state-mandated congestion management plans, or other plans, such as State or federally required pollution reduction plans.

Policy AQ-2.3: Continue to improve existing sidewalks, bicycle trails, and parkways, and require sidewalk and bicycle trail improvements and parkways for new development or redevelopment projects.

Consistent. The proposed Project would include construction of internal pedestrian walkways, thus enhancing the existing sidewalk connectivity from the Project site to Buaro Street. Bicyclists will utilize the internal drivelane and Buaro Street.

Policy AQ-2.4: Relieve congestion on major arterials and reduce emissions.

Consistent. Commercial uses exist to the east of the Project site at the intersection of Chapman Avenue and South Harbor Boulevard, approximately ¼-mile from the Project site. Residents of the Project site would be able to walk to nearby commercial, retail, and office uses. This provides the potential to relieve congestion on major arterials and reduce emissions.

Policy AQ-2.5: Separate, buffer, and protect sensitive receptors from significant sources of pollution to the greatest extent possible.

Consistent. The Project will not exceed the SCAQMD localized significance thresholds during construction, with the incorporation of mitigation (SCAQMD Rules). Therefore, sensitive receptors would not be subject to significant air toxic impacts during construction at the Project site. Results of the LST analysis also indicate that the Project would not exceed the SCAQMD localized significance thresholds during operational activity.

AQ-IMP-2B: Require new development or redevelopment projects to provide pedestrian and bicycle trails access to nearby shopping and employment centers.

Consistent. The proposed Project would not conflict with pedestrian or bicycle access to nearby shopping or employment centers. Commercial uses exist to the east of the Project site at the intersection of Chapman Avenue and South Harbor Boulevard, approximately ¼-mile from the Project site. Residents of the Project site would be able to walk to nearby commercial, retail, and office uses.

Policy AQ-4.3: Encourage "walkable" neighborhoods with pedestrian walkways and bicycle paths in residential and other types of developments to encourage pedestrian rather than vehicular travel.

Consistent. The proposed Project would include construction of internal pedestrian walkways, thus enhancing the existing sidewalk connectivity from the Project site to Buaro Street. Bicyclists will utilize the internal drivelane and Buaro Street. Commercial uses exist to the east of the Project site at the intersection of Chapman Avenue and South Harbor Boulevard, approximately ¼-mile from the Project site. Residents of the Project site would be able to walk to nearby commercial, retail, and office uses.

AQ-IMP-4C: Require sidewalks through parking lots, bicycle racks near building entrances and other provisions for the safety and convenience of pedestrian and bicycle riders at all commercial, mixed use, and production facilities.

Consistent. The proposed Project would include construction of internal pedestrian walkways, thus enhancing the existing sidewalk connectivity from the Project site to Buaro Street. Bicyclists will utilize the internal drivelane and Buaro Street from their homes, where bike parking/storage is provided. The site will provide a bicycle rack as well. Commercial uses exist to the east of the Project site at the intersection of Chapman Avenue and South Harbor Boulevard, approximately ¼-mile from the Project site. Residents of the Project site would be able to walk to nearby commercial, retail, and office uses.

Policy AQ-5.5: Avoid locating multiple-family developments close to areas that emit harmful air contaminants.

Consistent. The Project is not located in an area that emits harmful air contaminants. No impacts are anticipated. No mitigation, or standard conditions are required.

Policy AQ-5.6: Increase residential and commercial densities around bus and/or rail transit stations, and along major arterial corridors.

Consistent. The proposed Project would increase the density of the Project site by developing 17 medium-density housing units, on a site located approximately 0.1 mile of a stop on the OCTA Route 54 Chapman-Buaro bus service on Chapman Avenue and 0.4 mile away from the Target S/B bus station on Harbor Boulevard where four different lines are available.

AQ-IMP-6D: Require new development to comply with the energy use guidelines in Title 24 of the California Administrative Code.

Consistent. As described in Section 3.7, Greenhouse Gas Emission, of this Initial Study, the proposed Project would be required to comply with the energy use guidelines in Title 24 of the CBC.

Policy AQ-7.4: Continue to enforce procedures that control dust from building demolition, grading, and construction activities.

Consistent. As described in Section 3.3, Air Quality, of this Initial Study, the proposed Project would be required to comply with all dust control procedures from construction activities as specified by SCAQMD Rule 403.

Policy AQ-7.5: Reduce reactive organic compounds and particulate emissions

Consistent. As described in Section 3.3, Air Quality, of this Initial Study, the Project would be required to comply with regional rules that assist in reducing short-term and long-term air pollutant emissions.

Parks, Recreation, and Open Space Element

Policy PRK-1.3: Allow for a variety of active and passive space for recreation and leisure use.

Consistent. The proposed Project would provide a 1,646 sq. ft. common active use area and 3,515 sq. ft. of private use area for a total of 5,161 sq. ft., to serve on-site residents.

Policy PRK-1.4: Encourage the provision of parks and recreation space in new development and redevelopment projects.

Consistent. The proposed Project would provide a 1,646 sq. ft. common active use area and 3,515 sq. ft. of private use area for a total of 5,161 sq. ft.

PRK-IMP-2A: Maintain compliance with the requirements identified in the Americans with Disabilities Act (ADA).

Consistent. All development included as part of the proposed Project would be required to comply with all requirements identified in the ADA.

Policy PRK-5.1: Continue to require that adequate, usable, and permanent private open space is provided in residential developments.

Consistent. The proposed Project would provide a 1,646 sq. ft. common active use area and 3,515 sq. ft. of private use area for a total of 5,161 sq. ft.

Housing Element

Policy 1.8: Reduce lead-based paint hazard in the housing stock.

Consistent. As previously discussed in Section 3.8, Hazards and Hazardous Materials, of this Initial Study, there is a potential to encounter lead-based paint (LBP) during project demolition of the existing facilities, due to the age of structure(s). As such, the proposed Project would be required to comply with **Mitigation Measure MM-HAZ-1**, which requires the completion of predemolition surveys to identify any on-site LBP. Therefore, with implementation of **Mitigation Measure MM-HAZ-1**, the proposed Project would minimize impacts associated with LBP. Further, the proposed Project would not develop the proposed residential buildings with building materials containing LBP.

Policy 2.7: Improve housing affordability by promoting energy conservation programs and sustainable development as outlined in the Land Use, Air Quality, and Conservation Elements of the General Plan.

Consistent. The proposed Project would be required to comply with Title 24, requiring the provision of energy conservation features in all new development. With implementation of these measures, the Project would add to the affordability of the proposed 17 housing units.

Policy 3.1: Provide adequate sites to encourage housing development that would meet the needs of all income groups.

Consistent. The proposed Project would re-develop the existing site into 17 housing units that would help the City serve the needs of the housing market.

Policy 3.2: Promote a balance of housing types, including mixed-use development, to meet the needs of the community.

Consistent. The Project's site density would be 17.0 du/ac. Therefore, the proposed Project would be considered a medium-density project according to the City's General Plan Land Use Element. Therefore, the proposed Project would promote a balance of housing types to help meet the varying housing needs of the community.

Policy 3.4: Promote the provision of housing for households with special needs, including but not limited to, large families, persons with disabilities, families with children, the elderly, and the homeless.

Consistent. The Project, as proposed, does not preclude the attainment of this Policy.

Policy 5.3: Broaden the accessibility and availability of housing to special needs residents such as the homeless, disabled, developmentally disabled, elderly, large households, families with children, and female-headed households.

Consistent. The Project, as proposed, does not preclude the attainment of this Policy.

Conservation Element

Policy CON-1.2: Reduce the waste of potable water through efficient technologies, conservation efforts, and design and management practices, and by better matching the source and quality of water to the user's needs.

Consistent. The proposed Project would implement a number of sustainable project design features intended to reduce the waste of potable water such as efficient landscape irrigation and low-flow appliances.

Policy CON-1.3: Promote water conservation in new development or redevelopment project design, construction, and operations.

Consistent. The proposed Project would implement a number of sustainable project design features intended to reduce the waste of potable water such as efficient landscape irrigation and low-flow appliances.

CON-IMP-1B: Require on-site infiltration whenever feasible for new development or redevelopment projects.

Consistent. As discussed further in Section 3.9, Hydrology and Water Quality, of this Initial Study, the proposed Project would implement storm water BMPs to improve on-site infiltration.

Policy CON-2.1: Enhance water infiltration throughout watersheds by decreasing accelerated runoff rates and enhancing groundwater recharge. Whenever possible, maintain or increase a site's pre-development infiltration to reduce downstream erosion and flooding.

Consistent. As discussed further in Section 3.9, Hydrology and Water Quality, of this Initial Study, through compliance with the Project's WQMP and implementation of storm water BMPs, the proposed Project would not significantly increase runoff from the Project site. As such, the proposed Project would result in less than significant impacts related to downstream erosion and flooding.

Policy CON-2.2: Encourage practices that enable water to percolate into the surrounding soil, instead of letting sediment, metals, pesticides and chemicals runoff directly into the storm drain system, creeks, or regional flood control facilities.

Consistent. As discussed further in Section 3.9, Hydrology and Water Quality, through compliance with the Project's WQMP and implementation of storm water BMPs, the proposed Project would not significantly increase runoff from the Project site. As such, the proposed Project would result in less than significant impacts related to downstream erosion and flooding.

Policy CON-2.4: Continue to comply with federal, State, and regional governments and agencies to protect and improve the quality of local and regional groundwater resources available to the City.

Consistent. The proposed Project would comply with all federal, State, and regional governments and agencies to protect and improve the quality of local and regional groundwater resources.

CON-IMP-2D: Minimize impervious services for new development, and incorporate technologies such as pervious paving, landscaped roofs, planter boxes, and rainwater capture and reuse.

Consistent. As discussed further in Section 3.9, Hydrology and Water Quality, of this Initial Study, the proposed Project would increase impervious surfaces on the project site; however, this increase in impervious surfaces would be minimal and would not result in significant impacts related to stormwater runoff, due to the implementation of BMPs. Further, the proposed Project would include the addition of onsite landscaping to offset the loss in pervious area associated with Project development, and includes infiltration BMPs to offset any increase in stormwater runoff that would result from the increased impervious surface area.

CON-IMP-3B: Encourage materials recycling during renovation or demolition of old buildings.

Consistent. As discussed further in Section 3.18, Utilities and Service Systems, of this Initial Study, the proposed Project is required to recycle materials during the demolition of old buildings in cooperation with the City's waste hauler, Republic Services.

CON-IMP-3D: Encourage the use of recycled or rapidly renewable materials, and building reuse and renovation over new construction, where feasible.

Consistent. The proposed Project would divert at least 50 percent of site's construction waste from landfills for recycling or reuse.

Policy CON-7.1: Preserve and protect Garden Grove's significant historical, archaeological and cultural value resources.

Consistent. As discussed further in Section 3.5, Cultural Resources, of this Initial Study, the proposed Project site is not anticipated to have any significant impacts to historical, archaeological, or cultural resources.

Policy CON-7.2: Preserve Garden Grove's significant historic resources to promote community identity, stability, and aesthetic character.

Consistent. As discussed further in Section 3.5, Cultural Resources, of this Initial Study, the proposed Project is not anticipated to result in any significant impacts to any historical resources.

CON-IMP-7A: Preserve significant archeological sites in conformance with Public Resources Code Section 21083.2 or Section 21084.1, as applicable.

Consistent. The Project site is located adjacent to a historic Native American Trail. Therefore, **Mitigation Measure MM-CUL-1** has been included to require Tribal Monitoring during ground disturbance activities in order to preserve significant archeological sites in conformance with Public Resources Code Section 21083.2 or Section 21084.1, as applicable.

Safety Element

SAF-IMP-2A: Encourage site design using the following: increased pedestrian-level lighting, pedestrian routes that avoid blind corners and provide escape route choices, low fences or well-placed landscaping, and building entrances visible from public streets.

Consistent. The proposed Project includes internal pedestrian pathways that would be visible from public streets. These pathways would include ornamental landscaping that would be of a height and scale so as to not introduce any potential blind corners.

Policy SAF-5.2: Ensure that the City has adequate resources to respond to health and fire emergencies, such as Fire Stations, personnel, and equipment.

Consistent. Due to the scale of the proposed Project, it is not expected that the development of the 17 housing units would result in an adverse impact to the City's resources to respond to health and fire emergencies.

SAF-IMP-5A: Continue to require installation of automatic fire sprinkler systems in all new structures and existing structures undergoing substantial remodeling, and provide incentives for sprinkler installation in all other habitable structures.

Consistent. The proposed Project would install automatic fire sprinkler systems in compliance with the City of Garden Grove Municipal Code Section 8.32.050 Section 903.2.

SAF-IMP-5D: Continue to require compliance with all provisions of the most recently adopted version of the California Fire Code (with local amendments).

Consistent. The proposed Project shall comply with all applicable provisions of the California Fire Code.

SAF-IMP-5F: Continue to provide adequate staffing of fire response personnel based upon changing conditions, density, and development type.

Consistent. As discussed further in Section 3.14, Public Services, of this Initial Study, the proposed Project would not interfere with the City's ability to provide adequate staffing of fire response personnel.

Policy SAF-6.1: Avoid or minimize to the greatest extent feasible, hazards resulting from development on unstable ground conditions.

Consistent. As discussed further in Section 3.6, Geology and Soils, of this Initial Study, the proposed Project would not result in significant impacts related to unstable ground conditions.

Policy SAF-6.3: Ensure that new structures are seismically safe through the proper design and construction. The minimum level of design necessary would be in accordance with seismic provisions and criteria contained in the most recent version of the State and County Codes. Construction shall require effective oversight and enforcement to ensure adherence to the earthquake design criteria.

Consistent. As discussed further in Section 3.6, Geology and Soils, of this Initial Study, the proposed Project would not result in significant impacts related to seismic activity. Further, the proposed project would comply with all provisions and criteria for seismic safety. Refer to **Standard Condition SC-GEO-1** in Section 3.6, Geology and Soils, of this Initial Study.

SAF-IMP-6C: All new development, with the exception of detached single-family homes, shall be subject to the preparation and submittal of a site specific geology report prepared by a registered geologist or soils engineer to the City Building Services Division for approval.

Consistent. As part of the environmental review and documentation process for the proposed Project, a *Preliminary Geotechnical Investigation Report and Liquefaction Study for the Multi-Family Residential Development Located at 12111 Buaro street in the City of Garden Grove, Orange County, California*,

prepared by LGC Geo-Environmental, Inc. (October 14, 2016) was prepared for the proposed Project and is included as Appendix 4 of this Initial Study.

Policy SAF-7.2: Improve defensive measures against 100-year, or other State-defined scenario, flood conditions through land use and design, such as increased pervious surfaces, on-site water capture and re-use, minimized building footprints, etc.

Consistent. As discussed further in Section 3.9, Hydrology and Water Quality, of this Initial Study, the proposed Project is not located within a designated 100-year special flood hazard area. Although the Project site is located within the Prado Dam Inundation Area, the Project would have no impact on the likelihood of the dam's failure. Therefore, the proposed Project would not result in any significant impacts related to flooding.

SAF-IMP-7B: Encourage use of Low Impact Development (LID) methods that capture and treat water on-site, therefore, reducing flows to storm drain systems.

Consistent. As discussed further in Section 3.9, Hydrology and Water Quality, of this Initial Study, the proposed Project would implement infiltration BMPs. Therefore, the proposed Project would result in less than significant impacts related to flow to storm drain systems.

SAF-IMP-7C: Maintain and improve capacity levels of storm drainage service, where appropriate.

Consistent. As discussed further in Section 3.9, Hydrology and Water Quality, of this Initial Study, the proposed Project would result in less than significant impacts related to the capacity of existing storm drains to receive runoff from the Project site due to implementation of infiltration BMPs, that allow soil to treat stormwater before reaching storm drains. Therefore, with implementation of these infiltration BMPs, storm drainage capacity levels would be maintained.

Policy SAF-9.1: Continue to strictly enforce federal, State, and local laws and regulations related to the use, storage, and transportation of toxic, explosive, and other hazardous and extremely hazardous materials to prevent unauthorized discharges.

Consistent. As discussed further in Section 3.8, Hazards and Hazardous Materials, of this Initial Study, the proposed Project would comply with all applicable federal, State, and local laws and regulations related to the use, storage, and transportation of toxic, explosive, and other hazardous and extremely hazardous materials.

Zoning Ordinance. The City's Zoning Ordinance is the primary implementation tool for the Land Use Element and the goals and policies contained therein. For this reason, the Zoning Map must be consistent with the General Plan Land Use Map. The General Plan Land Use Map indicates the general location and extent of future land use in the City. The Zoning Ordinance, which includes the Zoning Map, contains more detailed information about permitted land uses, building intensities, and required development standards.

The base Zoning Ordinance designation for the 0.99-acre parcel of the proposed Project site located at 12111 Buaro Street site is Multi-Family Residential Development (R-3). According to Chapter 9.12 (Multi-

Family Residential Development Standards), Section 9.12.020.020.A.2 (Summary of Zones of the City's Municipal Code), "the R-3 zone is intended to provide for a variety of types and densities of multiple-family residential dwellings. This zone is intended to promote housing opportunities in close proximity to employment and commercial centers." The proposed Project would be consistent with the zoning designation for the Project site.

The list below provides applicable development standards and an evaluation of the Project's consistency with each standard. Although the proposed Project would not conflict with most of the provisions in the City's Development Standards for R-3 zoning designation, the Project would require two variances to setback from drive aisle to living space; required setback is 10-feet, Project proposes 5-feet, and setback from Public Open Space to living space; required setback is 5-feet, Project proposes 3-feet.

Based on the City's parking requirement, medium density residential uses for developments with less than 50 units, and not adjacent to any principal, major, primary or secondary arterial street would require 3.25 parking spaces per dwelling unit for units with 3 or more sleeping rooms, as outlined in the City's Municipal Code. For the Proposed 17 unit building, the required number of spaces is 55.25; the Project is providing 56 spaces.

Zoning Ordinance Development Standards Consistency Analysis

Height
The maximum building height permitted is 35 ft.

Consistent. Building A would be 35 ft.; and Building B would be 35 ft. Therefore, none of the structures proposed as part of the project would be constructed at a height that would exceed maximum building heights permitted in the City's Zoning Code.

Setbacks
- Front: 20 feet
- Street Side: 15 feet
- From drive aisle to living space: 10 feet
- Public open space to living space: 5 feet

Consistent with Proposed Variance. Setback from drive aisle to living space; required setback is 10-feet, Project proposes 5-feet, and setback from public open space to living space; required setback is 5-feet, Project proposes 3-feet. Two (2) variance applications are included as part of the Project applications. Similar variances have been approved for other residential Projects within the City. Planning Staff agreed with these Variance requests as they provide more efficient use of the site and allow for the open space to be centrally located instead of in the far, rear corner.

Maximum Density
- Maximum Residential Density: 32 units/acre

Consistent. Allowable uses within the MDR General Plan land use designation include traditional multi-family apartments, condominiums, townhomes, and single-family small-lot subdivisions. The MDR land use

designation allows residential densities between 18.1 and 32 dwelling units per acre (du/ac). While the implementing R-3 zoning keeps densities lower than the GP allowable density, the MDR Designation would accommodate any affordable or senior density bonuses on top of the R-3 number of units (meaning that ultimate build-out review through the General Plan would cover density bonuses).

Minimum Dwelling Unit Area

- 1 Bedroom: 750 sq. ft.
- 2 Bedroom: 900 sq. ft.
- 3 or More Bedroom: 1,050 sq. ft.

Consistent. There are three-bedroom units and three-bedroom units with optional den or fourth bedroom proposed; three-bedroom units would be a minimum of 1,467 sq. ft. and three-bedroom units with optional den or fourth bedroom units would be a minimum of 1,627 sq. ft. Therefore, all dwelling units exceed the minimum dwelling unit area for residential units proposed in the R-3 zoning designation.

Maximum Number of Bedrooms per Unit: No single dwelling unit shall have more than four bedrooms.

Consistent. The proposed Project does not include the development of any units with more than four bedrooms.

Residential Parking Requirements:

Enclosed Parking Required. Required residential parking, per 9.12.040.180 (Parking Spaces Required), Developments with less than 50 units, and not adjacent to any principal, major, primary or secondary arterial street, with 3 or more sleeping rooms shall provide 3.25 spaces per dwelling unit. Based on this ratio, the Project requires 56 parking spaces.

Consistent. The Project proposes the development of 17 attached 2- and 3-story townhomes within 2 buildings. Each of the units shall have a 2-car garage, for a total of 34 garage parking spaces. In addition, the Project also includes 22 open parking spaces (20 standard parking spaces and 2 handicapped accessible parking spaces). The total number of parking spaces provided is 56, which meets the requirements of Title 9.

As illustrated by the lists above, the proposed Project would be consistent with applicable goals and policies outlined in the City's General Plan and development standards outlined in the City's Zoning Code. Therefore, implementation of the proposed Project would not result in conflicts with any applicable land use plan, policy, or regulation applicable to the Project**.**

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(c) *Would the Project conflict with any applicable habitat conservation plan or natural community conservation plan?*

No Impact

The Project site is currently developed with a pre-school and its associated facilities. No natural or native habitats are found within the site or in the surrounding area. The Project area is not located within the boundaries of the Orange County Central Coastal Natural Community Conservation Plan/Habitat Conservation Plan (NCCP)/(HCP). The Project does not conflict with local ordinances or the adopted Orange County NCCP/HCP, or other approved local, regional, or State HCPs. Therefore, the proposed Project would not result in an impact related to any applicable HCP or NCCP, and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

3.11 MINERAL RESOURCES.

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

Source(s): General Plan Conservation Element; and Google Maps.

Findings of Fact:

(a) Would the Project result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?

No Impact

No known commercially valuable mineral resources exist on or near the Project site. The Project site has not been used for mining. The Project will include residential uses in an area where these uses currently exist, and will be the predominant future uses in the area. Further, the City's General Plan Conservation Element does not discuss mineral extraction or oil production in the City. Therefore, the proposed Project would not result in the loss of a valuable commercial or locally important mineral resource. No impacts are anticipated. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

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

No Impact

As stated above, no known commercially valuable mineral resources exist on or near the Project site. In addition, the Project site is not identified on a local General Plan, Specific Plan, or other land use plan as the location of a locally important mineral resource. Therefore, implementation of the Project will not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. No impacts are anticipated. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

3.12 NOISE.

Would the Project result in:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) The exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies?		X		
(b) The exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
(c) A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?			X	
(d) Result in the substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?		X		
(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the Project area to excessive noise levels?				X
(f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the Project area to excessive noise levels?				X

Source(s): *General Plan Noise Element*; *12111 Buaro Street Project Noise Impact Analysis*, prepared by Kinzman Associates, Inc., dated February 28, 2017 (*NIA*, **Appendix 7**); and **Figure 2-1, *Aerial Photo***.

Findings of Fact:

A Project would normally have a significant effect on the environment related to noise if it would substantially increase the ambient noise levels for adjoining areas or conflict with the adopted environmental plans and goals of the community in which it is located. The applicable noise standards governing the Project site are the criteria in the City of Garden Grove's (City's) General Plan and in its Noise Ordinance that are for multifamily residential uses (i.e., 50 to 70 A-weighted decibels [dBA] is considered normally acceptable to conditionally acceptable) contained in **Table 3.12-1, *Land Use Compatibility for Exterior Community Noise***, below.

General Plan Noise Element. The Noise Element of the General Plan contains noise standards for residential structures. Specifically, the City's Noise Policy N-1.1 requires "all new residential construction in areas with exterior noise level greater than 55 dBA to include sound attenuation measures." In addition, the City enforces the California Building Code for indoor noise levels, which is 45 dBA Community Noise Equivalent Level (CNEL).

Municipal Code. The City's Municipal Code, Chapter 47, Noise Control, sets forth exterior and interior noise standards for residential and commercial uses. **Table 3.12-2, *City of Garden Grove Ambient Base Noise Levels***, below, lists the exterior noise standards for daytime and nighttime noise standards.

In addition, Section 8.47.060 of the Garden Grove Municipal Code states that:

> *"It shall be unlawful for any person within a residential area, or within a radius of five hundred (500) feet there from, to operate equipment or perform any outside construction or repair work on buildings, structures, or projects, or to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist, or any other construction type device between the hours of 10:00 p.m. of one day and 7:00 a.m. of the next day in such a manner that a person of normal sensitiveness, as determined utilizing the criteria established in Section 8.47.050(B), is caused discomfort or annoyance unless such operations are of an emergency nature."*

Table 3.12-1
City of Garden Grove Noise and Land Use Compatibility Matrix

Land Use Category	Community Noise Equivalent Level (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, Hotel	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, Amphitheatres	NA	50 - 70	NA	65 - 85
Sports Arena, 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

NA:	Not Applicable
Normally Acceptable:	Specified land use is satisfactory, based up 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 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 generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise reduction features included in the design.
Clearly Unacceptable:	New construction or development should generally not be undertaken.

Source: City of Garden Grove General Plan Noise Element, May 2008.

Table 3.12-2
City of Garden Grove Ambient Base Noise Levels

Land Use Designation		Ambient Base Noise Level	Time of Day
Sensitive Uses	Residential Use	55 dBA	7:00 AM - 10:00 PM
		50 dBA	10:00 PM - 7:00 AM
Conditionally Sensitive Uses	Institutional Use	65 dBA	Any Time
	Office-Professional Use	65 dBA	Any Time
	Hotels and Motels	65 dBA	Any Time
Non-Sensitive Uses	Commercial Uses	70 dBA	Any Time
	Commercial/Industrial Uses within 150 feet of Residential Uses	65 dBA	7:00 AM - 10:00 PM
		50 dBA	10:00 PM - 7:00 AM
	Industrial Uses	70 dBA	Any Time

Source: City of Garden Grove Municipal Code, Section 8.47, Noise Control, 2005.

Existing Land Uses and Sensitive Receptors

The Project site (12111 Buaro Street) is located on the west side of Buaro Street between Jentges Avenue and Hampton Avenue in the City of Garden Grove. Land uses to the north currently include multi-family attached residential dwelling units and a nursing home; the land use to the south is Walton Intermediate School; the land use to the west is multi-family attached residential dwelling units, and the land use to the east includes transient lodging and single-family detached residential dwelling units.

The State of California defines sensitive receptors as those land uses that require serenity or are otherwise adversely affected by noise events or conditions. Schools, libraries, churches, hospitals, single and multiple-family residential, including transient lodging, motels and hotel uses make up the majority of these areas. In addition to the proposed residential uses, sensitive receptors that may be affected by Project generated noise include the multi-family attached residential dwelling units located to the north and west, Walton Intermediate School located adjacent to the south, single-family detached residential dwelling units located approximately 80 feet southeast, and transient lodging uses located approximately 420 feet and 540 feet northeast of the Project site's boundaries.

Ambient Noise Measurements

Noise measurements are taken to determine the existing noise levels. A noise receiver or receptor is any location in the noise analysis in which noise might produce an impact. As shown on **Figure 3.12-1, *Noise Measurement Location Map***, below, the noise measurements were taken near the single-family detached residential dwelling units located north of the northeast corner of the Project site; in the southeastern corner of the multi-family attached residential property west of the Project site and at the single-family detached residential area located southeast of the Project site.

FIGURE 3.12-1, *Noise Measurement Location Map*

KUNZMAN ASSOCIATES, INC.

Source: Noise Study February 2017 (**Appendix 7**)

Table 3.12-3, *Short-Term Noise Measurement Summary (dBA)*, below, provides a summary of the short-term ambient noise data. Ambient noise levels ranged between 54.7 and 63.7 dBA Leq. Dominant noise sources included vehicle traffic and children playing. Secondary noise sources included bird song, occasional overhead aircraft, and residential ambiance. Noise meter data are included as Appendix C of the *NIA,* **Appendix 7**.

Table 3.12-3
Short-Term Noise Measurement Summary (dBA)[1,2]

Daytime							
Site Location	Time Started	Leq	Lmax	L(2)	L(8)	L(25)	L(50)
NM1	11:29 AM	63.7	79.6	72.8	69.2	61.9	55.2
NM2	11:48 AM	61.3	79.9	71.2	66.2	59.2	53.0
NM3	12:10 PM	54.7	63.9	60.4	57.7	55.3	52.7

(a) Would the Project result in exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies?

Less than Significant Impact with Mitigation Incorporated

Construction Noise Impacts

Typical noise sources and noise levels associated with the site grading phase of construction are shown in **Table 3.12-4, *Typical Construction Noise Equipment Noise Levels***, below. Demolition and site preparation are expected to produce the highest sustained construction noise levels.

Table 3.12-4
Typical Construction Noise Equipment Noise Levels[1]

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 feet)	Suggested Maximum Sound Levels for Analysis (dBA at 50 feet)
Rock Drills	83-99	96
Jack Hammers	75-85	82
Pneumatic Tools	78-88	85
Pumps	74-84	80
Dozers	77-90	85
Scrappers	83-91	87
Haul Trucks	83-94	88
Cranes	79-86	82
Portable Generators	71-87	80
Rollers	75-82	80
Tractors	77-82	80
Front-End Loaders	77-90	86
Hydraulic Excavators	81-90	86
Graders	79-89	86
Air Compressors	76-89	86
Trucks	81-87	86

[1] See **Figure 3.12-1, *Noise Measurement Location Map***, for noise measurement location. Each noise measurement was performed over a 10-minute duration.
[2] Noise measurements were performed on August 11, 2016.

Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. A likely worst-case construction noise scenario during grading assumes the use of a grader, a dozer, a water truck (modeled as a dump truck), and a backhoe operating between 25 and 150 feet from the property line. Assuming a usage factor of 40 percent for each piece of equipment, unmitigated noise levels have the potential to reach 87.6 dBA L_{eq} and 91.0 dBA_{Lmax} at the property line demolition and site preparation.

Section 8.47.060 of the City of Garden Grove Municipal Ordinance limits construction to between the hours of 7:00 a.m. and 10:00 p.m. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Per **Standard Condition SC-NOI-1**, construction activities will have to adhere to the City of Garden Grove's policies found in the General Plan Noise Element and Municipal Code limiting the construction hours of operation. Adherence to these hours for construction activities, and implementation of the **Mitigation Measure MM-NOI-1**, will minimize construction noise impacts. Any impacts are considered less than significant with adherence to **Standard Condition SC-NOI-1** and **Mitigation Measure MM-NOI-1**.

Noise Impacts to Off-Site Receptors Due to Project Generated Traffic

The proposed Project is expected to generate approximately 99 average daily vehicle trips which will not noticeably increase ambient noise levels in the Project area. Typically, a doubling of traffic volumes is required to result in an increase of 3 dBA, which is considered to be a barely audible change. Based on existing traffic data, Project trip generation and distribution information provided by the *TIA,* **Appendix 8** (February 2017), Project generated traffic will not result in a doubling of traffic volumes along any affected road segment. Any impacts are considered incremental and less than significant.

Transportation Noise Impacts to the Proposed Project

There are no acoustically significant road segments adjacent to the proposed Project site. Buaro Street is not expected to generate more than 2,500 average daily trips per day (City of Garden Grove 2008), and per the future noise contours within the City's General Plan, the Project site is located within the 60 dBA CNEL contour along Buaro Street.

The City of Garden Grove land use compatibility guidelines set forth noise/land use compatibility criteria for various land use types. The guidelines state that the proposed Project would be "normally acceptable" in areas with noise levels up to 65 dBA CNEL and "conditionally acceptable" in areas with noise levels up to 70 dBA CNEL. Vehicle traffic associated with Buaro Street is not expected to **exceed** 65 dBA CNEL at the Project site. No impacts are anticipated. No mitigation is required.

Land Use Compatibility

The proposed Project is surrounded by single-family and multi-family residential uses, school uses, and transient lodging uses. As per the City of Garden Grove land use compatibility guidelines multi-family residential uses are considered "normally acceptable" in areas that reach up to 65 dBA CNEL. Neither measured nor modeled noise levels exceed this criterion. Further, the proposed residential land uses are consistent with existing residential and school land uses surrounding the site. No impacts are anticipated.

No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS:

SC-NOI-1: Construction of the proposed Project would potentially result in relatively high noise levels and annoyance at the closest off-site residential uses. The following standard condition shall be implemented:

- Section 8.47.060 of the Garden Grove Municipal Code prohibits construction activity and repair work where the use of any power tool, device, or equipment would disturb persons occupying sleeping quarters in any dwelling, hotel, apartment, or other place of residence between the hours of 10:00 p.m. and 7:00 a.m., Monday through Saturday. All such activities are also prohibited on Sundays and all federal holidays.

MITIGATION MEASURE(S):

MM- NOI-1: During grading and construction, the City of Garden Grove (City) Building Official, or designee, shall verify that the following measures are implemented to reduce construction noise and vibrations, emanating from the proposed Project:

- During all Project site demolition, excavation and grading on-site, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer standards.
- The contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.
- Equipment shall be shut off and not left to idle when not in use.
- The contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the Project site during all Project construction.
- The contractor shall limit the use of heavy equipment or vibratory rollers and soil compressors along the Project boundaries to the greatest degree possible.

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

Less than Significant Impact

Vibration levels in the Project area may be influenced by construction. **Table 3.12-5, *Guideline Vibration Damage Potential Threshold Criteria***, provides threshold criteria for potential building damage and Table 3.12-6, provides threshold criteria for annoyance. For transient vibration sources, such as construction equipment, damage criteria for residential structures range between 0.50 to 1.0 PPV depending on their age. As shown in **Table 3.12-6*, Guideline Vibration Annoyance Potential Criteria***, transient vibration may become distinctly perceptible and possibly annoying at 0.90 PPV.

Table 3.12-5
Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/secs)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile Buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

Source: California Department of Transportation, 2013.

Table 3.12-6
Guideline Vibration Annoyance Potential Criteria

Human Response	Maximum PPV (in/secs)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely Perceptible	0.04	0.01
Distinctly Perceptible	0.25	0.04
Strongly Perceptible	0.90	0.10
Severe	2.00	0.40

Construction Vibration

There are several types of construction equipment that can cause vibration levels high enough to annoy persons in the vicinity and/or result in architectural or structural damage to nearby structures and improvements. For example, a vibratory roller could generate up to 0.21 PPV at a distance of 25 feet; and operation of a small bulldozer (0.003 PPV) at a distance of 25 feet (two of the most vibratory pieces of construction equipment). Groundborne vibration at sensitive receptors associated with this equipment would drop off as the equipment moves away. For example, as the vibratory roller moves further than 100 feet from the sensitive receptors, the vibration associated with it would drop below 0.0026 PPV. It should be noted that these vibration levels are reference levels and may vary slightly depending upon soil type and specific usage of each piece of equipment.

Architectural Damage

Vibration generated by construction activity has the potential to damage structures. This damage could be structural damage, such as cracking of floor slabs, foundations, columns, beams, or wells, or cosmetic architectural damage, such as cracked plaster, stucco, or tile. As shown in **Table 3.12-5**, residential structures may be damaged when exposed to PPV levels between 0.5 and 1.0. A nursing home is situated within ten-feet of the northern property line. It is considered a “modern industrial/commercial building.” This building could experience transient vibration levels ranging between 0.24 to 0.58 PPV for short periods of time if a vibratory roller and/or large bulldozer is utilized along the northern property line. Use of a vibratory roller along the northern property line should be limited, and would cease upon completion of this phase of construction. Impacts would be below the 2.0 PPV threshold identified in **Table 3.12-5**.

Implementation of **Standard Condition SC-NOI-1** and **Mitigation Measure MM-NOI-1**, will minimize vibration noise impacts. Any impacts will be less than significant. No additional mitigation is required.

Annoyance to Persons

The primary effect of perceptible vibration is often a concern. However, secondary effects, such as the rattling of a china cabinet, can also occur, even when vibration levels are well below perception. Any effect (primary perceptible vibration, secondary effects, or a combination of the two) can lead to annoyance. The degree to which a person is annoyed depends on the activity in which they are participating at the time of the disturbance. For example, someone sleeping or reading will be more sensitive than someone who is running on a treadmill. Reoccurring primary and secondary vibration effects often lead people to believe that the vibration is damaging their home, although vibration levels are well below minimum thresholds for damage potential. Construction activities are not likely to be distinctly perceptible or annoying. No mitigation is required for this impact.

STANDARD CONDITIONS AND REQUIREMENTS: The Project is required to comply with **Standard Condition SC-NOI-1** (see details in Section 3.12.a, above).

MITIGATION MEASURES: The Project is required to comply with **Mitigation Measure MM-NOI-1** (see details in Section 3.12.a, above).

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

Less than Significant Impact

Development of the Project site will result in an increase in daily traffic trips in the Project vicinity over existing conditions; therefore, there would be a potential increase in traffic noise along access roads leading to the project site. However, as described in Response 3.12(a), the Project-increase in traffic-related noise would be less than significant.

Project construction includes development of 17 attached 2- and 3-story townhomes within 2 buildings and open parking spaces on .99-acres. As a residential use, no significant on-site noise-generating activities will occur that would result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project will occur. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

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

Less than Significant Impact with Mitigation Incorporated

Although there would at times be high intermittent construction noise in the Project area during Project construction, construction of the Project would not significantly affect land uses adjacent to the Project site. In addition, construction shall comply with the hourly limits specified by the City's Noise Control Ordinance and **Standard Condition SC-NOI-1** and Project-specific mitigation contained in **Mitigation Measure MM-NOI-1**. Compliance with **Standard Condition SC-NOI-1** and **Mitigation Measure MM-NOI-1** would ensure that potential noise impacts would remain at a less than significant level.

STANDARD CONDITIONS AND REQUIREMENTS: The Project is required to comply with **Standard Condition SC-NOI-1** (see details in Section 3.12.a, above).

MITIGATION MEASURES: The Project is required to comply with **Mitigation Measure MM-NOI-1** (see details in Section 3.12.a, above).

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

No Impact

The nearest public airports are the John Wayne Airport located at 18601 Airport Way, approximately 9 miles southeast of the Project site, or the Fullerton Municipal Airport (FMA), a general aviation airport located at 4011 West Commonwealth Avenue, approximately 6.9 miles northwest of the Project site. At these distances, the Project site is not located within the 65 dBA CNEL airport noise contour. Therefore, no impacts related to excessive airport noise are anticipated, and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

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

No Impact

The Project site is not located within the vicinity of a private airstrip. Therefore, there are no impacts related to this issue, and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

3.13 POPULATION AND HOUSING.

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

Source(s): California Department of Finance. E-5 City/County Population and Housing Estimates, May 2014; Ibid; United States Census Bureau, 2010 Census; California Department of Finance Op. cit; and Southern California Association of Governments, Integrated Growth Forecast, Regional Transportation Plan 2012.

Findings of Fact:

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

Less Than Significant Impact

The proposed Project would intensify the Project site's existing uses by developing .99 acres with a multi-family development consisting of 17 housing units with open space and parking. The development of 17 housing units is anticipated to slightly increase the residential population in the City. According to the California Department of Finance City/County Population and Housing Estimates, the average number of persons per dwelling unit in the City is 3.74 persons. Based on the City's average occupancy rate of 3.74 persons per unit, the proposed Project would introduce approximately 64 persons into the City. However, the addition of 64 new residents would be approximately 0.037 percent of the City's population of 170,883 persons in 2010, 0.036 percent of the City's population of 175,953 in 2014, and 0.035 percent of the City's projected population of 179,400 in 2020 (the closest year to Project build out for which projections are available). As such, the Project-related increase in population would represent a less than significant portion of the City's current and projected population.

Additionally, the proposed Project is located in an established area of the City with surrounding land uses including multi-family residences to the north and west, a skilled nursing facility to the west across Jentges Avenue, Walton Intermediate School to the south, and single-family homes and a Marriott Suites to the east. The proposed Project does not propose to expand surrounding utility infrastructure in the Project vicinity. Therefore, the proposed Project would not directly or indirectly induce population growth through the extension of roads or other infrastructure.

Therefore, impacts related to inducement of population growth would be less than significant. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(b) Would the Project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact

The proposed Project site is currently developed with an abandoned pre-school, and its associated facilities and parking lot, which would be demolished to provide the 17 residential units. No housing currently exists on the Project site and housing displacement would not occur as a result of Project implementation. Therefore, the proposed Project would not result in an impact related to housing displacement. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(c) Would the Project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact

The proposed Project site is currently developed with an abandoned pre-school and its associated facilities and parking lot which would be demolished to provide the 17 residential units. No housing is located on the Project site and no people would be displaced as a result of Project implementation. Therefore, the proposed Project would not result in an impact related to the displacement of people. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

3.14 PUBLIC SERVICES.

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Would the Project result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire Protection?			X	
ii) Police Protection?			X	
iii) Schools?			X	
iv) Parks?			X	
v) Other public facilities?			X	

Source(s): City of Garden Grove Fire Department (GGFD); City of Garden Grove Police Department (GGPD); Garden Grove Unified School District (GGUSD); Appendix C from GGUSD Fee Study Final (2016).; and General Plan.

Findings of Fact:

(a) i) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire services?

Less Than Significant Impact

The City of Garden Grove Fire Department (GGFD) provides fire protection and emergency services throughout the City. The GGFD provides a wide array of services to the community, including emergency medical service, fire suppression and prevention, response to hazardous and toxic material release, and technical rescue. The GGFD operates seven fire stations and has 29 firefighters on duty daily. Total emergency activity includes 25 percent fire protection and 75 percent emergency medical services.

The Project site is located in the service area of Fire Station No. 6, which is located approximately 0.3 mile northwest of the Project site at 12111 Chapman Avenue. This fire station is equipped with one Paramedic Assessment Engine Company (Captain, Engineer, Firefighter/Paramedic). However, Fire Station No. 6 is being replaced with a new building, located in West Haven Park on West Street. The new Fire Station No. 6 will be larger in size and have increased capacity for fire personnel and equipment. Fire Station No. 6 has an expected completion date of October 2017. The proposed Project includes the development of 17 housing units with open space and parking. The proposed Project would represent a small increase in demand for

fire protection service. Based on the City's average occupancy rate of 3.74 persons per unit, the proposed Project would introduce approximately 64 persons into the City. However, the addition of 64 new residents would be approximately 0.037 percent of the City's population of 170,883 persons in 2010, 0.036 percent of the City's population of 175,953 in 2014, and 0.035 percent of the City's projected population of 179,400 in 2020 (the closest year to Project build out for which projections are available). Based on the small increase from the Project and the increased capacity for fire personnel and equipment with the completion of Fire Station No. 6, the proposed Project would not trigger the need for new or altered facilities.

The proposed Project would comply with the California Fire Code in effect at the time of the application for the building permit. The proposed Project would also submit a fire master plan prior to issuance of a building permit to identify standard design features including the design of fire department connections. In addition, for firefighting purposes, all buildings on the Project site would include fire suppression sprinklers. The City may also impose additional standard design features required by the City to be included in the design and construction of new development such as fire hydrants, fire-resistant doors, fire flow standards, and other measures designed to increase fire safety. Therefore, the impact of the proposed Project on fire protection would be less than significant, and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(a) ii) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for sheriff services?

Less Than Significant Impact

The City of Garden Grove Police Department (GGPD) provides police protection services throughout the City. The GGPD station located closest to the Project site is within the Civic Center Complex located at 11301 Acacia Parkway, approximately 1.7 miles southwest of the Project site. Captain Travis Whitman of the Garden Grove Police Department indicated in an e-mail to MFCS dated June 13th, 2017 that police service needs are determined by doing periodic analysis of various factors including officer per capita ratio, number of calls for service, and officer unstructured time. According to Captain Whitman, the current GGPD staffing level is 166 officers to 170,000 residents, or a ratio of 0.976GGPD staff per 1,000 residents. Response times are calculated from time of dispatch to first officer on-scene. Captain Whitman indicated that the citywide average response time for emergency calls as of January 1, 2017 was 4 minutes, 29 seconds. Furthermore, Captain Whitman indicated that the proposed Project would not substantially increase response times or create a substantial increase in demand for staff, facilities, equipment or police or other emergency services; and that the Garden Grove Police Department would be able to adequately serve the proposed Project.

Although the proposed Project would incrementally contribute to demand for additional police protection services, impacts to police services would be less than significant, and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.
MITIGATION MEASURES: No mitigation measures are required.

(a) iii) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools?

Less Than Significant Impact

The proposed Project is located within the Garden Grove Unified School District (GGUSD). Violette Elementary School, Walton Intermediate School, and Santiago High School are the public schools serving the Project site. Violette Elementary School is located approximately 0.5 mile southwest of the Project site at 12091 Lampson Avenue. Walton Intermediate School is located approximately 400 feet south of the Project site at 12181 Buaro Street. Santiago High School is located approximately 1.8 miles southeast of the Project site at 12342 Trask Avenue. GGUSD student generation rates provided in **Table 3.14-1, *Projected School Enrollments*,** below, used for both single and multi-family residential developments, were used to analyze the estimated students generated as a result of the Project implementation. Based on these generation factors, it is assumed that the 17 family units proposed would generate approximately 16 elementary school students, 2 intermediate school students, and 7 high school students.

Table 3.14-1
Projected School Enrollments

Grade Levels	Student Generation	Projected
Elementary School	0.3042 student/unit	16
Intermediate School	0.0937 student/unit	2
High School	0.1840 student/unit	7
Total	**-**	**23**

Source: Appendix C from GGUSD Fee Study Final (2016).

The small increase in students projected as a result of Project implementation would incrementally increase the demand for school facilities. Should seating be unavailable for students, they could be assigned to other schools within the GGUSD on a space-available basis. If and when students are assigned to other schools, the GGUSD would provide transportation, and bus fees may be assigned to the parents.

Pursuant to California Education Code Section 17620(a)(1), the governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district for the purpose of funding the construction or reconstruction of school facilities. The Project Applicant would be required to pay such fees to reduce any impacts of new residential development on school services as provided in Section 65995 of the California Government Code. Pursuant to the provisions of Government Code Section 65996, a Project's impact on school facilities is fully mitigated through payment of the requisite school facility development fees current at the time a building permit is issued. Therefore, with payment of the required fees (**Standard Condition SC-PS-1**), potential impacts to

school services and facilities associated with implementation of the proposed Project would be less than significant, and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS:

SC-PS-1 Prior to building permit issuance, the Project applicant shall pay the requisite, applicable school facility development fees.

MITIGATION MEASURES: No mitigation measures are required.

(a) iv) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks?

Less Than Significant Impact

As discussed further in Section 3.15, Recreation, of this Initial Study, the City owns 14 park properties and uses five public schools as additional park facilities through joint-use agreements with the GGUSD. According to the City's General Plan Parks, Recreation, and Open Space Element, the total amount of parkland in the City is estimated at 157.1 acres. The closest parks to the Project site include the following: West Haven Park Park, Pioneer Park, and Haster Basin Recreational Park. West Haven Park Park is located approximately 0.4 mile from the Project site at 12252 West Street. The West Haven Park–Park is approximately 10 acres and includes amenities such as a play area, reserveable picnic areas, and an open field. Pioneer Park is located 0.6 mile from the Project site at 12722 Chapman Avenue. This park is 4 acres and includes amenities such as a picnic shelter, play area, and fire rings. Haster Basin Recreational Park is located approximately 1 mile from the Project site at 12952 Lampson Avenue. The Haster Basin Recreational Park is a 23 acre park with a lake and includes amenities such as a play area, soccer fields, picnic shelters, an exercise course, and jogging trails.

Development of the proposed Project would result in an increase of an estimated 64 new residents within the Project area. Therefore, although implementation of the proposed project would cause an incremental increase in demand for parks, this increase would be offset by the inclusion of private recreational amenities on site such as the proposed Project's features, which Development of the proposed Project would result in an increase of an estimated 64 new residents within the Project area.

Although implementation of the proposed Project would cause an incremental increase in demand for parks, the city zoning code requires each home to receive 300 sq. ft. of outdoor open space for a total of 5,100 sq. ft. Of that area, a minimum 1,600 sq. ft. must be for active use recreation, the remainder can comprise private use areas and/or passive use areas. The proposed Project would provide a 1,646 sq. ft. common active use area and 3,515 sq. ft. of private use area for a total of 5,161 sq. ft.

The Project proposes ample landscaping around the site, in setback areas, along walkways, and in the active recreation area. The plantings are a mix of trees, shrubs, and groundcovers. All landscaping for the Project would be required to comply with Section 9.12.040.070 of the City's Municipal Code's Landscaping design

standards.

In addition, the City of Garden Grove requires payment of an in-lieu fee for upgrade of existing parks. Therefore, impact to parks and parkland facilities would be less than significant, and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(a) v) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities?

Less Than Significant Impact

The City is served by Orange County Public Library's Garden Grove Regional Branch located at 11200 Stanford Avenue, located approximately 1.7 miles from the Project site, as well as the Garden Grove Chapman Branch located at 9182 Chapman Avenue, approximately 3.2 miles from the Project site. In addition, the Garden Grove West Branch located at 11962 Bailey Street is 10 miles from the project site. Each branch is operated as a community resource providing library materials, computer access, meeting room space, and study areas. As discussed above, development of the proposed project would result in an increase of an estimated 64 new residents within the Project area. Therefore, although implementation of the proposed Project would cause an incremental increase in demand for library facilities, this increase would be minimal, and impacts to library facilities would be less than significant. No mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

3.15 RECREATION.

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) 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?			X	
(b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

Source(s): City of Garden Grove Municipal Code; National Recreation and Park Association website; and City of Garden Grove Parks & Facilities website.

Findings of Fact:

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

Less Than Significant Impact

The City of Garden Grove (City) currently owns 14 park properties, consisting of approximately 157.1 acres, in addition to five public schools that serve as additional park facilities through joint-use agreements with the Garden Grove Unified School District. Parks within the City are categorized as community parks, neighborhood parks, and mini parks, all of which provide a range of passive and active recreation opportunities.

As discussed previously in Section 3.10, Land Use, the proposed Project would increase the housing density on the Project site to 17 du/acre. The 17 housing units proposed as part of the Project would incrementally increase usage of City parks and recreational facilities. Based on the National Recreation and Park Association's recommendation of 2 acres of parks per a population of 1,000, the proposed Project's 64 residents would result in an increased demand for 0.352-acre of parkland in the City, which would be approximately 0.0022 percent of the parkland currently available in the City. This increase in demand for parkland would also be offset by the proposed Project's 5,161 sq.ft. of open space area. In addition, the City of Garden Grove requires payment of an in-lieu fee for upgrade of existing parks.

The proposed Project is consistent with the growth projections developed for the City by the Southern California Association of Governments (SCAG). Although implementation of the proposed Project would cause an incremental increase in demand for parks, this increase would be offset by the inclusion of the proposed on-site recreational amenities. As discussed further in Section 3.15, Recreation, of this Initial Study, the City owns 14 park properties and uses five public schools as additional park facilities through joint-use agreements with the GGUSD. According to the City's General Plan Parks, Recreation, and Open Space Element, the total amount of parkland in the City is estimated at 157.1 acres. The closest parks to the Project site include the following: West Haven Park-Park, Pioneer Park, and Haster Basin Recreational Park. West Haven Park Park is located approximately 0.4 mile from the Project site at 12252 West Street. The

West Haven Park Park is approximately 10 acres and includes amenities such as a play area, reserveable picnic areas, and an open field; this park is being improved as part of the construction of New Fire Station No. 6. Pioneer Park is located 0.6 mile from the Project site at 12722 Chapman Avenue. This park is 4 acres and includes amenities such as a picnic shelter, play area, and fire rings. Haster Basin Recreational Park is located approximately 1 mile from the Project site at 12952 Lampson Avenue. The Haster Basin Recreational Park is a 23 acre park with a lake and includes amenities such as a play area, soccer fields, picnic shelters, an exercise course, and jogging trails.

Development of the proposed Project would result in an increase of an estimated 64 new residents within the Project area. Therefore, although implementation of the proposed project would cause an incremental increase in demand for parks, this increase would be offset by the inclusion of private recreational amenities on site such as the proposed Project's features, which Development of the proposed Project would result in an increase of an estimated 64 new residents within the Project area.

Although implementation of the proposed Project would cause an incremental increase in demand for parks, the city zoning code requires each home to receive 300 sq. ft. of outdoor open space for a total of 5,100 sq. ft. Of that area, a minimum 1,600 sq. ft. must be for active use recreation, the remainder can comprise private use areas and/or passive use areas. The proposed Project would provide a 1,646 sq. ft. common active use area and 3,515 sq. ft. of private use area for a total of 5,161 sq. ft.

The Project proposes ample landscaping around the site, in setback areas, along walkways, and in the active recreation area. The plantings are a mix of trees, shrubs, and groundcovers. All landscaping for the Project would be required to comply with Section 9.12.040.070 of the City's Municipal Code's Landscaping design standards.

In addition, the City of Garden Grove requires payment of an in-lieu fee for upgrade of existing parks. Therefore, impact to parks and parkland facilities would be less than significant, and no mitigation would be required.

As a result, increased usage of parks and facilities in the City from the Project residents is not anticipated to cause substantial deterioration of the parks, facilities, or open space. Therefore, potential impacts related to parks and other recreational facilities would be less than significant, and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(b) *Would the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

Less Than Significant Impact

The proposed Project would provide a 1,646 sq. ft. common active use area and 3,515 sq. ft. of private use area for a total of 5,161 sq. ft. These facilities would be limited to the Project site, and would not adversely affect the surrounding environment. In addition, The City of Garden Grove requires payment of an in-lieu

fee for upgrade of existing parks. Therefore, impacts related to the construction or expansion of recreational facilities included as part of the proposed Project would be less than significant, and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

3.16 TRANSPORTATION/TRAFFIC.

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

Source(s): *12111 Buaro Street Project Focused Traffic Analysis*, prepared by Kunzman Associates, Inc., February 21, 2017 (*FTA* **Appendix 8**).

Findings of Fact:

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

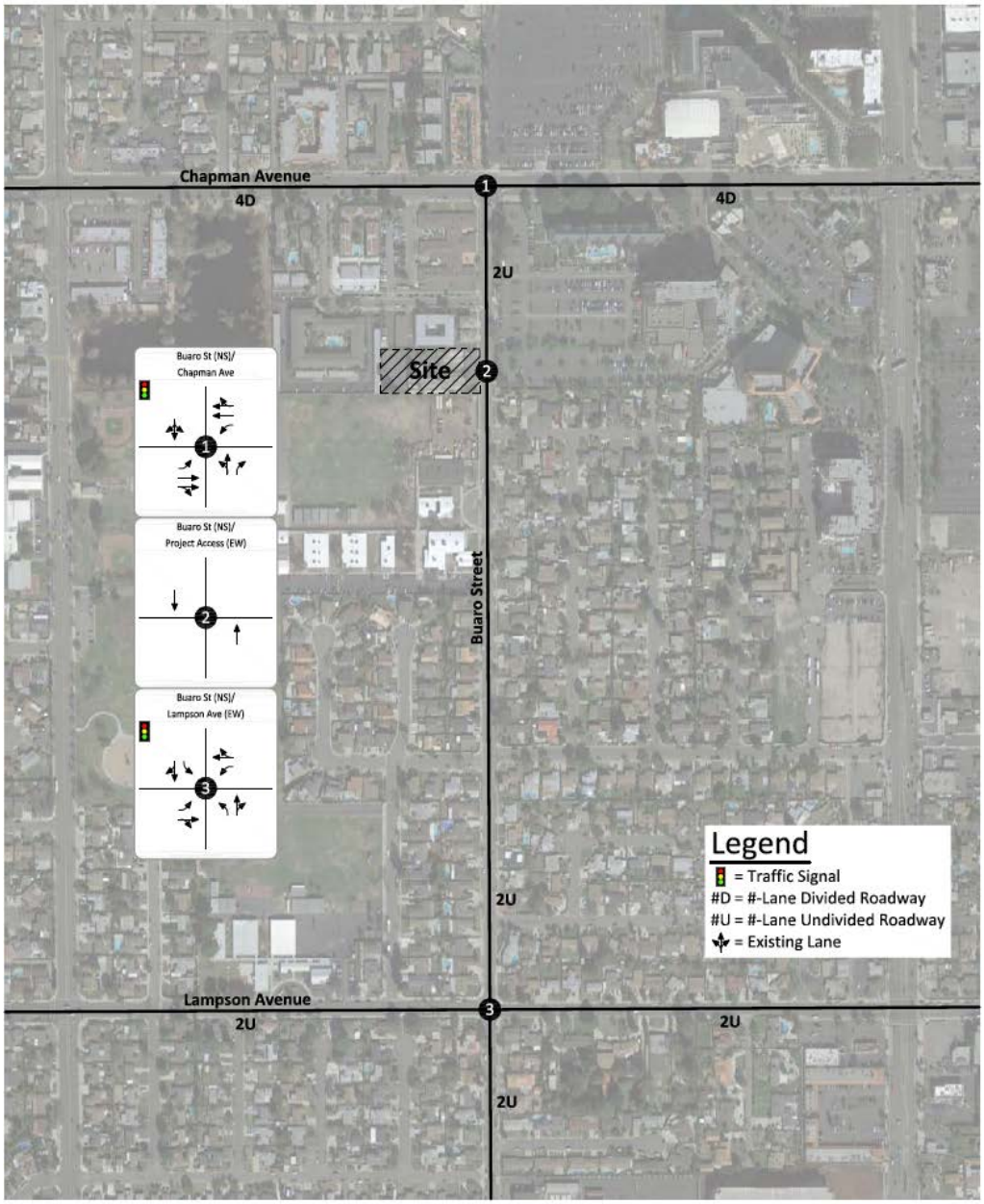
Less Than Significant Impact

The proposed project consists of developing the project site with 17 dwelling units of residential condominium land use. Each dwelling unit is proposed to be built with a two car garage. In addition, 22 open parking spaces and 2 accessible parking spaces will also be provided. Four parking spaces on Buaro Street adjacent to the Project site are available as well.

Existing Conditions

Figure 3.16-1, *Existing Through Travel Lanes and Intersection Controls*, below, identifies the existing number of through lanes, intersection traffic controls, and intersection lane geometry based on a field survey of the study area.

Figure 3.16-1
Existing Through Travel Lanes and Intersection Controls



Source: Figure 3 of *FTA*, **Appendix 8**

1. Chapman Avenue.

Chapman Avenue is currently an east-west four-lane divided roadway in the Project vicinity. On-street parking is generally prohibited east of Buaro Street and allowed west of Buaro Street. Sidewalks and bicycle lanes are provided on both sides of Chapman Avenue. The posted speed limit is 40 miles per hour. Chapman Avenue is classified as a Primary Arterial (typically 100 feet right-of-way) in the City's General Plan Circulation Element.

2. Lampson Avenue.

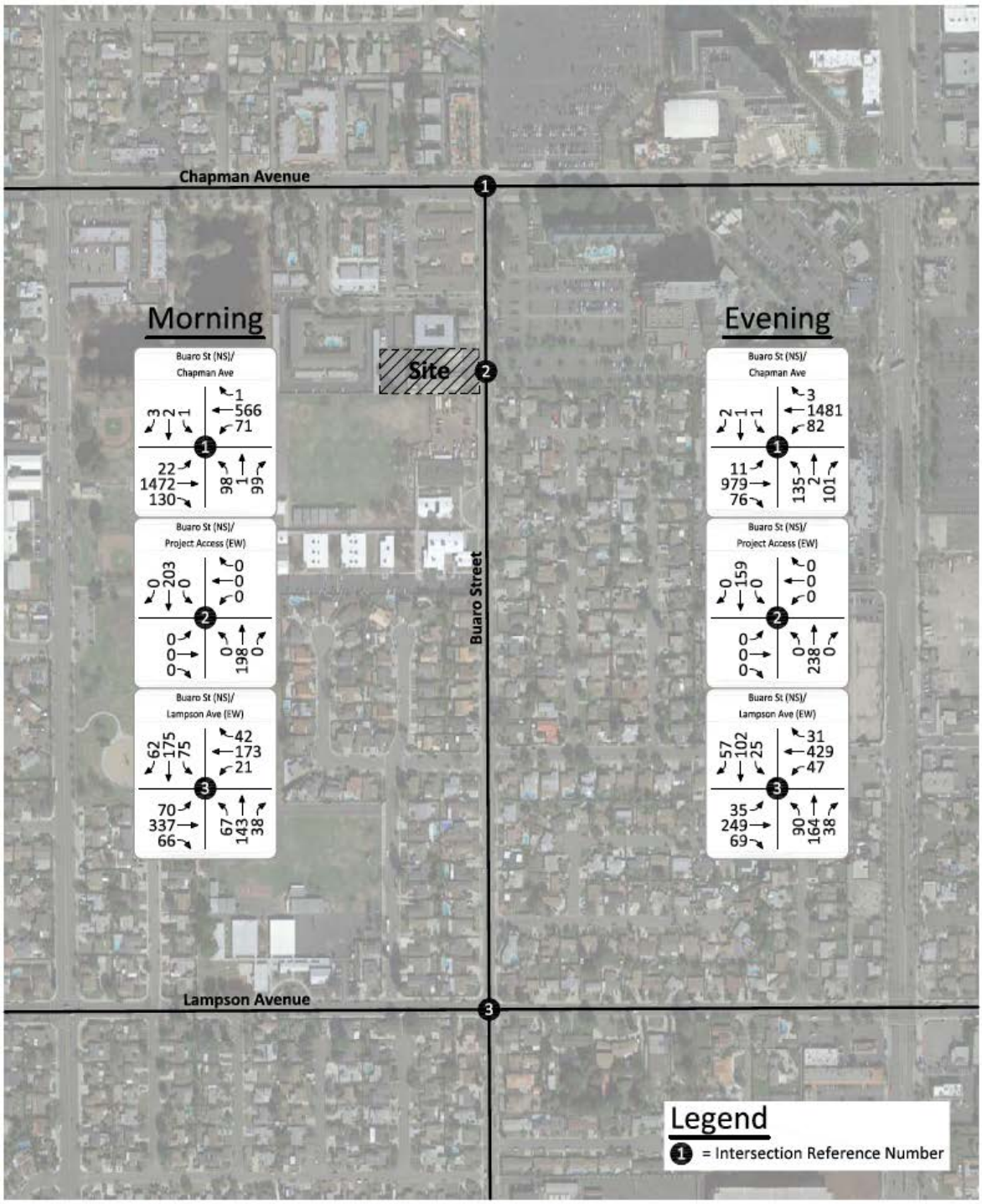
Lampson Avenue is currently an east-west two-lane undivided roadway in the Project vicinity. On-street parking is generally allowed and sidewalks are provided along both sides of Lampson Avenue. Bicycle lanes are currently provided west of Buaro Street. The posted speed limit is 35 miles per hour. Lampson Avenue is classified as a Secondary Arterial (typically 80 feet right-of-way) in the City's General Plan Circulation Element.

3. Buaro Street.

Buaro Street is currently a north-south two-lane undivided roadway in the Project vicinity. On-street parking is generally allowed and sidewalks are provided along both sides Buaro Street. There are currently no bicycle lanes provided on Buaro Street. The posted speed limit is 25 miles per hour. Buaro Street is not specifically classified in the City's General Plan Circulation Element, but would be considered a Local Residential Street.

Figure 3.16-2, ***Existing Peak Hour Intersection Turning Movement Volumes***, below, shows the existing morning peak hour and evening peak hour intersection turning movement volumes. Existing peak hour traffic volumes are based upon morning peak period and evening peak period intersection turning movement counts conducted in February 2017 during typical weekday conditions. The morning peak period was counted between 7:00 AM and 9:00 AM and the evening peak period was counted between 4:00 PM and 6:00 PM. The actual peak hour within the peak period is the four consecutive 15-minute periods with the highest total volume when all movements are added together. Thus, the weekday evening peak hour at one intersection may be 4:45 PM to 5:45 PM if those four consecutive 15-minute periods have the highest combined volume. Traffic count worksheets are provided in Appendix B of the *FTA* (**Appendix 8**).

Figure 3.16-2
Existing Peak Hour Intersection Turning Movement Volumes



Source: Figure 3 of *FTA*, **Appendix 8**

The Intersection Capacity Utilization and Level of Service for existing traffic conditions have been calculated and are shown in **Table 3.16-1, *Existing Intersection Capacity Utilization and Level of Service***, below. As shown in **Table 3.16-1**, the *FTA* study area intersections currently operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Existing traffic conditions. The City of Garden Grove has established Level of Service D as the minimum acceptable Level of Service for its arterial roadway system. Roadway facilities operating at Level of Service E or F are considered deficient.

Table 3.16-1
Existing Intersection Capacity Utilization and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour V/C-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Buaro Street (NS) at:															
Chapman Avenue (EW) - #1	TS	0.5	0.5	1	0	1	0	1	1.5	0.5	1	1.5	0.5	0.625-B	0.576-A
Lampson Avenue (EW) - #3	TS	1	0.5	0.5	1	0.5	0.5	1	0.5	0.5	1	0.5	0.5	0.478-A	0.488-A

Source: Table 1 of *FTA*, **Appendix 8**
[1] L = Left, T = Through, R = Right.
[2] V/C = Volume to Capacity Ration, LOS = Level of Service.
[3] TS = Traffic Signal

Project Trip Generation

Table 3.16-2, *Project Trip Generation*, below, shows the Project trip generation based upon rates obtained from the Institute of Transportation Engineers, Trip Generation Manual, 9th Edition, 2012. Trip generation rates were determined for daily trips, morning peak hour inbound and outbound trips, and evening peak hour inbound and outbound trips for the proposed land use. The Project trip forecast was determined by multiplying the trip generation rates by the land use quantity.

As shown in **Table 3.16-2**, the proposed Project is forecast to generate approximately 99 daily trips, 7 trips of which will occur during the morning peak hour and 9 trips of which will occur during the evening peak hour.

Table 3.16-2
Project Trip Generation

Land Use	Quantity	Units[1]	Trip Generation Rates/Trips Generated								
			Source[2]	Morning Peak Hour			Evening Peak Hour			Daily
				In	Out	Total	In	Out	Total	
Trip Generation Rates										
Condominium/Townhouse	1	DU	ITE 230	0.07	0.37	0.44	0.35	0.17	0.52	5.81
Trips Generated										
Condominium/Townhouse	17	DU	ITE 230	1	6	7	6	3	9	99

Source: Table 2 of *FTA*, **Appendix 8**
[1] DU = Dwelling Units.
[2] ITE = Institute of Transportation Engineers, Trip Generation Manual, 9th Edition, 2012; ### = Land Use Code.

Trip Distribution and Trip Assignment

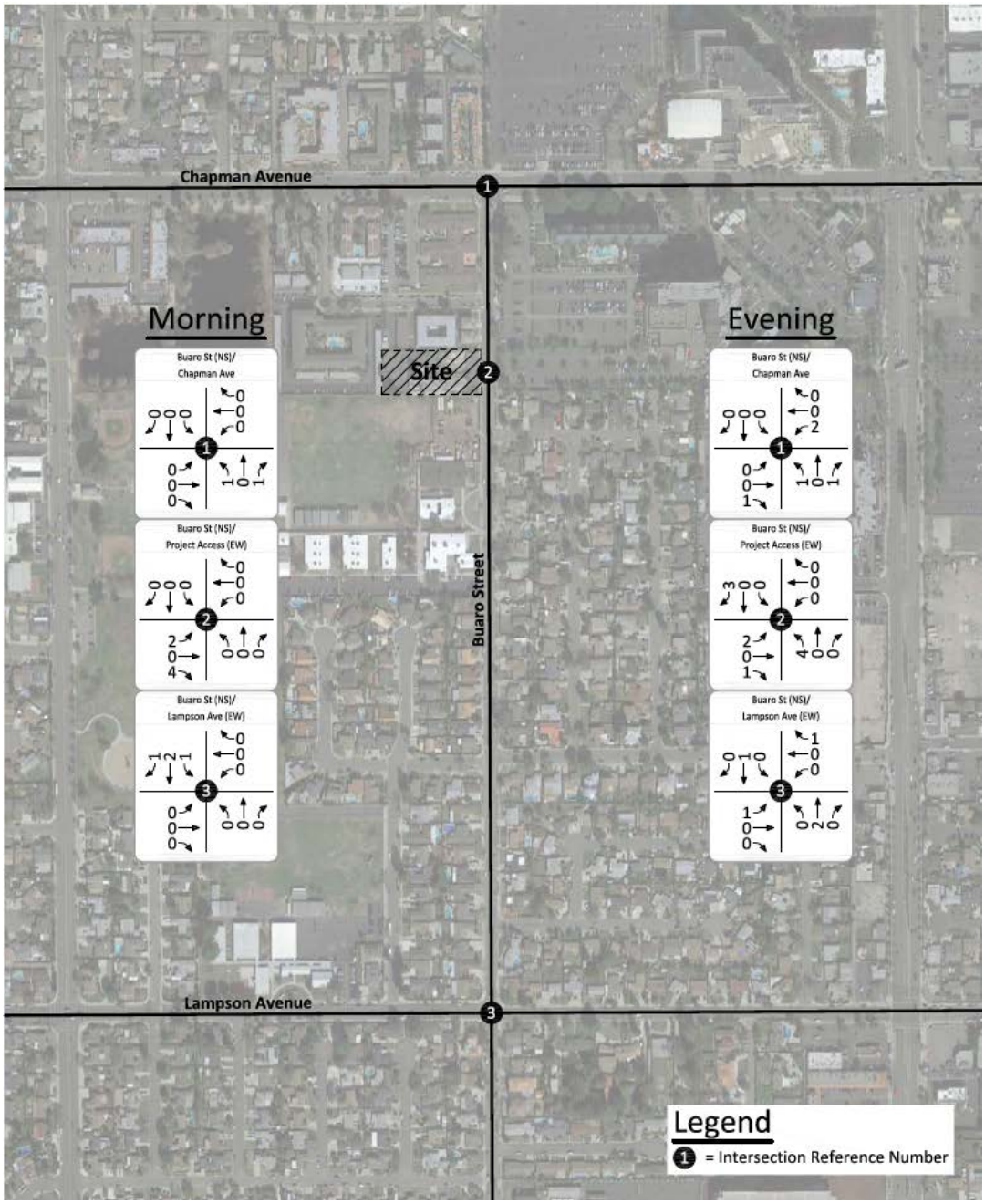
Figure 3.16-3, *Project Trip Distribution*, below, shows the directional distribution of the Project generated trips. The forecast Project trip distribution patterns are based on review of existing traffic data, surrounding land uses, and roadway facilities in the Project vicinity.

Figure 3.16-3
Project Trip Distribution

Source: Figure 5 of *FTA*, **Appendix 8**

Based on the identified Project trip generation and trip distribution, **Figure 3.16-4, *Project Peak Hour Intersection Turning Movement Volumes***, below, shows the morning and evening peak hour intersection turning movement volumes expected from the Project.

Figure 3.16-4
Project Peak Hour Intersection Turning Movement Volumes

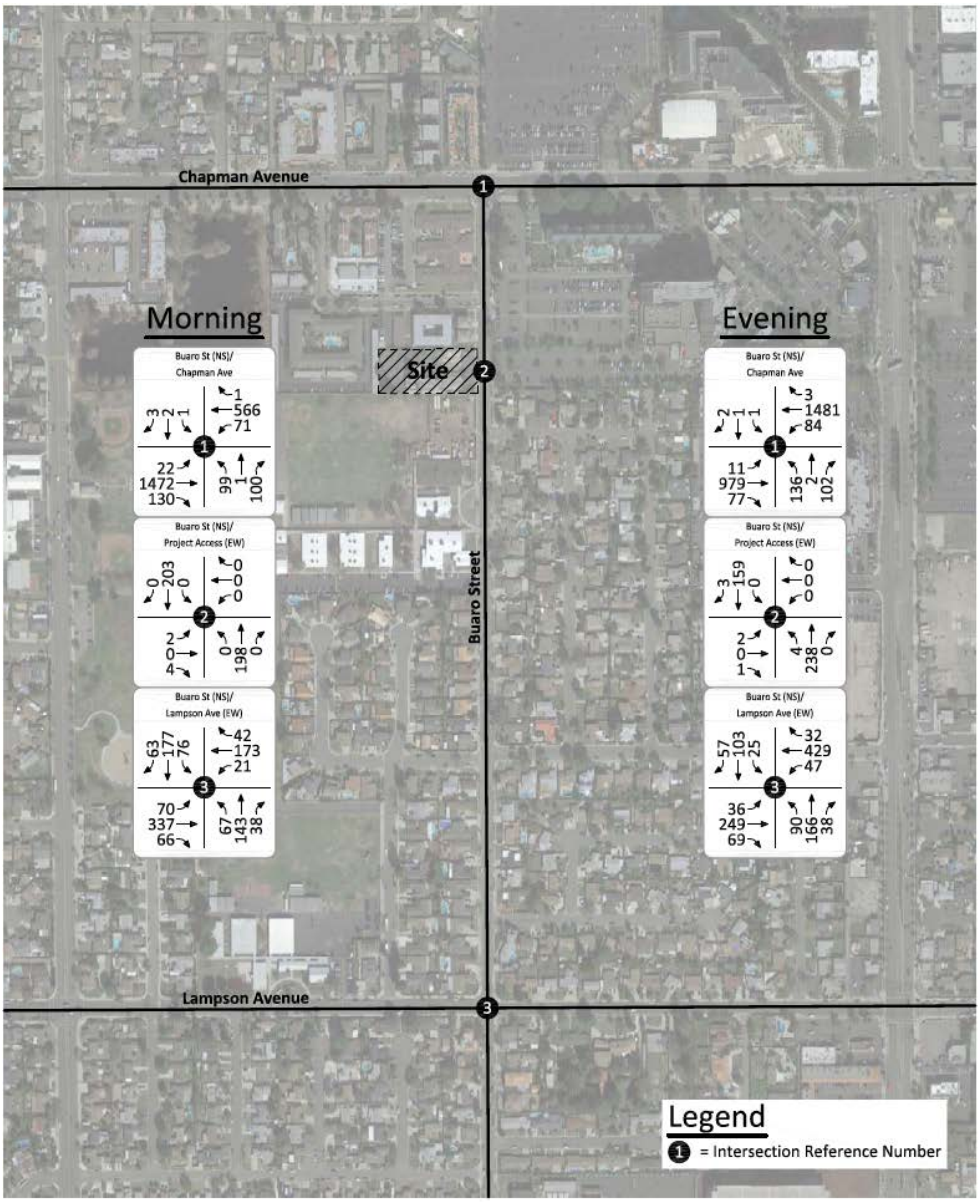


Source: Figure 6 of *FTA*, **Appendix 8**

Existing Plus Project Conditions

The traffic volumes for Existing Plus Project conditions have been derived by adding the Project generated trips to existing traffic volumes. Morning and evening peak hour intersection turning movement volumes for Existing Plus Project traffic conditions are shown below on **Figure 3.16-5, *Existing Plus Project Peak Hour Intersection Turning Movements*.**

Figure 3.16-5
Existing Plus Project Peak Hour Intersection Turning Movements



Source: Figure 7 of *FTA*, **Appendix 8**

The Intersection Capacity Utilization/Delay and Level of Service for Existing Plus Project traffic conditions have been calculated and are shown below in **Table 3.16-3, *Existing Plus Project Intersection Capacity Utilization/Delay and Level of Service***. As shown in Table 3, the study area intersections are forecast to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Existing Plus Project traffic conditions. Existing Plus Project Intersection Capacity Utilization/delay and Level of Service worksheets are provided in Appendix C of the *FTA* (**Appendix 8**).

Table 3.16-3
Existing Plus Project Intersection Capacity Utilization/Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour V/C (Delay)-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Buaro Street (NS) at:															
Chapman Avenue (EW) - #1	TS	0.5	0.5	1	0	1	0	1	1.5	0.5	1	1.5	0.5	0.625-B	0.576-A
Project Access (EW) - #2	**CSS**	0.5	0.5	0	0	0.5	0.5	**0.5**	0	**0.5**	0	0	0	(11.0)-B	(11.0)-B
Lampson Avenue (EW) - #3	TS	1	0.5	0.5	1	0.5	0.5	1	0.5	0.5	1	0.5	0.5	0.480-A	0.489-A

Source: Table 3 of *FTA*, **Appendix 8**

[1] L= Left; T = Through; R = Right; **BOLD** = Improvement.

[2] V/C = Volume to Capacity Ratio; Delay shown in (seconds); LOS = Level of Service; V/C, Delay and LOS have been calculated using the Vistro software (Version 5.00-00). For intersections with cross street stop control, Level of Service is based on average delay of the worst individual movement (or movements sharing a lane) per the Highway Capacity Manual.

[3] TS = Traffic Signal; CSS = Cross Street Stop.

Existing Plus Project Impact Evaluation

Table 3.16-4, *Existing Plus Project Impact Evaluation*, below, summarizes the impact evaluation for Existing Plus Project traffic conditions. As shown in **Table 3.16-4**, the proposed Project is forecast to result in no significant traffic impacts for Existing Plus Project traffic conditions

Table 3.16-4
Existing Plus Project Impact Evaluation

Intersection	Traffic Control[2]	Peak Hour V/C (Delay)-LOS[1]				Project-Related Change in V/C		Significant Impact?
		Existing		Existing Plus Project				
		Morning	Evening	Morning	Evening	Morning	Evening	
Buaro Street (NS) at:								
Chapman Avenue (EW) - #1	TS	0.625-B	0.576-A	0.625-B	0.576-A	0.000	0.000	No
Project Access (EW) - #2	**CSS**	n/a	n/a	(11.0)-B	(11.0)-B	n/a	n/a	No
Lampson Avenue (EW) - #3	TS	0.478-A	0.488-A	0.480-A	0.489-A	+0.002	+0.001	No

Source: Table 4 of *FTA*, **Appendix 8**

[1] V/C = Volume to Capacity Ratio; Delay shown in (seconds); LOS = Level of Service; For intersections with cross street stop control, Level of Service is based on average delay of the worst individual movement per the Highway Capacity Manual.

[2] TS = Traffic Signal; CSS = Cross Street Stop.

Any impacts for existing plus Project are considered less than significant. No mitigation is required.

Opening Year Conditions

To derive Opening Year traffic volumes, existing traffic is combined with ambient growth and trips generated by other development projects. Existing traffic volumes were increased by one (1) percent per year over a two year period to account for ambient traffic growth. The ambient growth rate was confirmed with City of Garden Grove Transportation Department staff. This is a conservative assumption since the ambient growth was applied to all movements at the study intersections.

Other development projects (pending or approved/unconstructed) with the potential to add trips to the *FTA* study area were obtained from the City of Garden Grove Development Projects Update by the Community & Economic Development Department and the City of Anaheim "Andy's Map." The other development projects included in the *FTA* are:

- SP-021-2015: 4 Single-Family Homes;
- DR-016-2015: 1 Single-Family Home;
- SP-025-2016: 940 square foot Coffee Shop w/ Drive-Thru;
- DEV2015-00071: 120 Condominiums; and
- DEV2015-00043: 3 Apartments.

Trips generated by other development projects were calculated based on applicable trip generation rates obtained from the Institute of Transportation Engineers, Trip Generation Manual, 9th Edition, 2012 and assigned to the *FTA* study area. Other development trip generation is shown below in **Table 3.16-5, *Other Development Trip Generation***. It should be noted, trips generated by other development projects not specifically identified above are represented in the traffic growth resulting from application of the ambient growth rate.

Table 3.16-5
Other Development Trip Generation

				Trips Generated							
					Morning Peak Hour			Evening Peak Hour			
Project Name	Land Use	Quantity	Units[1]	Source[2]	In	Out	Total	In	Out	Total	Daily
SP-021-2015	Single-Family Detached Residential	4	DU	ITE 210	1	2	3	3	1	4	38
DR-016-2015	Single-Family Detached Residential	1	DU	ITE 210	0	1	1	1	0	1	10
SP-025-2016	Coffee Shop w/ Drive-Thru	0.940	TSF	ITE 937	48	46	94	20	20	40	769
DEV2015-00071	Residential Condominiums	120	DU	ITE 230	9	44	53	42	21	63	697
DEV2015-00043	Apartments	3	DU	ITE 220	0	1	1	1	1	2	20
Total Other Development Trips Generated					58	94	152	67	43	110	1,534

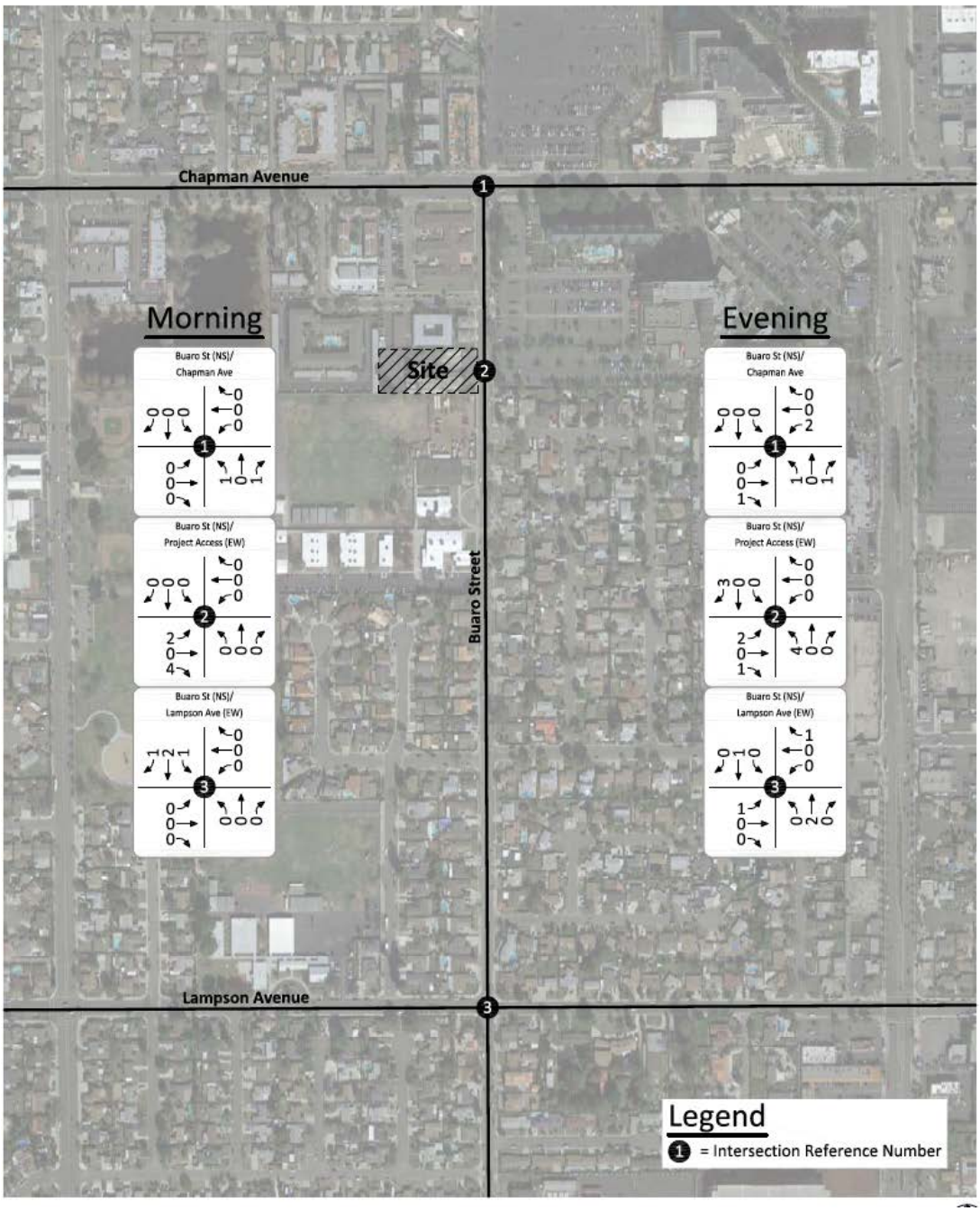
Source: Table 5 of *FTA*, **Appendix 8**

[1] DU = Dwelling Units.

[2] ITE = Institute of Transportation Engineers, Trip Generation Manual, 9th Edition, 2012; ### = Land Use Code.

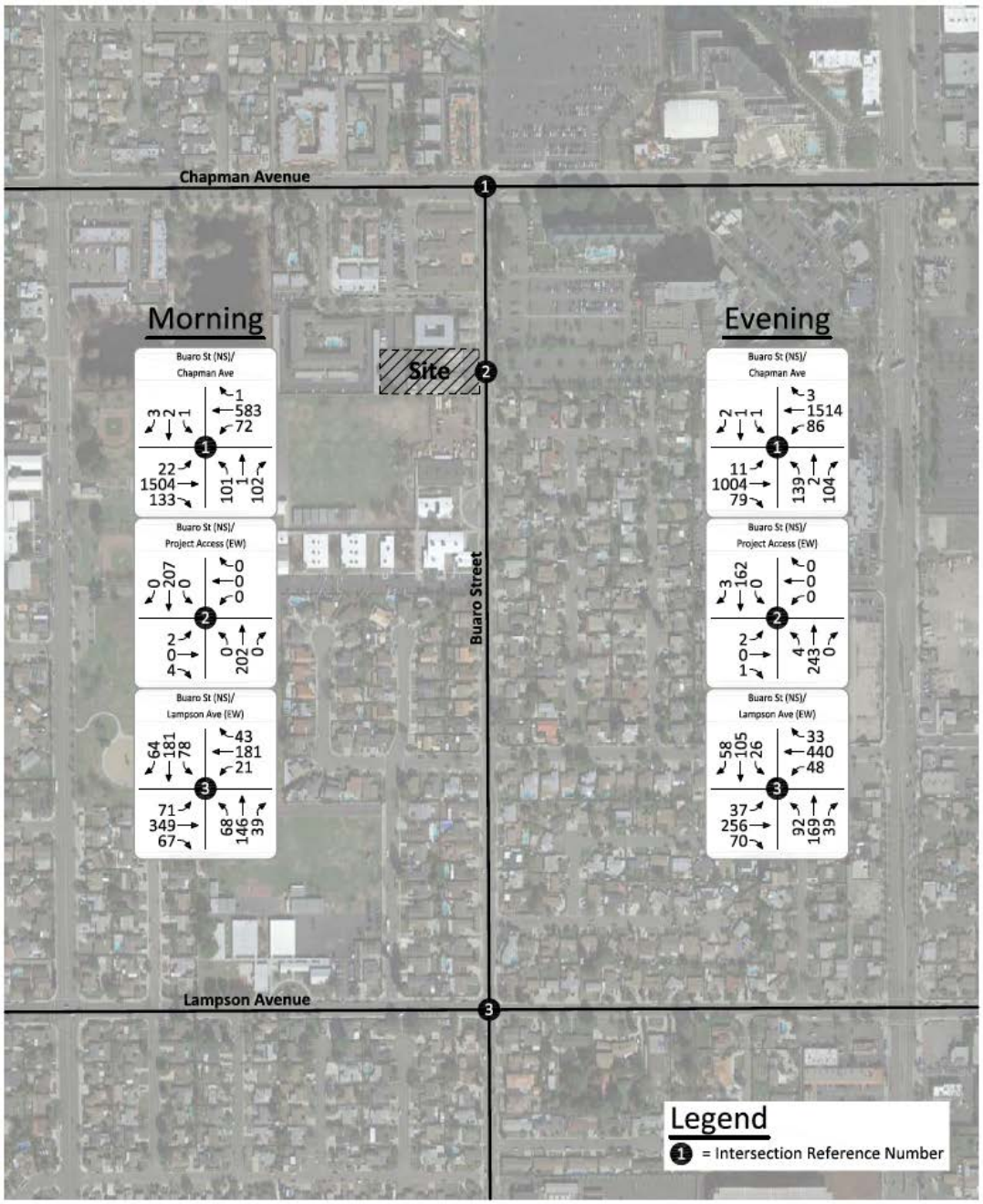
Morning peak hour and evening peak hour intersection turning movement volumes for Opening Year Without Project traffic conditions are shown below on **Figure 3.16-6, *Opening Year Without Project Peak Hour Intersection Turning Movement Volumes***. Opening Year With Project morning peak hour and evening peak hour intersection turning movement volumes are shown on **Figure 3.16-7, *Opening Year With Project Peak Hour Intersection Turning Movement Volumes***.

Figure 3.16-6
Opening Year Without Project Peak Hour Intersection Turning Movement Volumes



Source: Figure 8 of *FTA*, **Appendix 8**

Figure 3.16-7
Opening Year With Project Peak Hour Intersection Turning Movement Volumes



Source: Figure 9 of *FTA*, **Appendix 8**

The Intersection Capacity Utilization and Levels of Service for Opening Year Without Project are shown below in **Table 3.16-6, *Opening Year Without Project Intersection Capacity Utilization and Level of Service***. The Intersection Capacity Utilization/Delay and Levels of Service for Opening Year With Project traffic

conditions have been calculated and are shown in **Table 3.16-7, *Opening Year With Project Intersection Capacity Utilization and Level of Service***. As shown in **Table 3.16-7**, below, the *FTA* study area intersections are forecast to operate within acceptable Levels of Service (D or better) during the morning and evening peak hours for Opening Year With Project traffic conditions. Opening Year Intersection Capacity Utilization/delay and Level of Service worksheets are provided in Appendix C of the *FTA* (**Appendix 8**).

Table 3.16-6
Opening Year Without Project Intersection Capacity Utilization and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour V/C-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Buaro Street (NS) at:															
Chapman Avenue (EW) - #1	TS	0.5	0.5	1	0	1	0	1	1.5	0.5	1	1.5	0.5	0.637-B	0.587-A
Lampson Avenue (EW) - #3	TS	1	0.5	0.5	1	0.5	0.5	1	0.5	0.5	1	0.5	0.5	0.489-A	0.498-A

Source: Table 6 of *FTA*, **Appendix 8**

[1] L= Left; T = Through; R = Right

[2] V/C = Volume to Capacity Ratio; LOS = Level of Service.

[3] TS = Traffic Signal.

Table 3.16-7
Opening Year With Project Intersection Capacity Utilization and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour V/C (Delay)-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Buaro Street (NS) at:															
Chapman Avenue (EW) - #1	TS	0.5	0.5	1	0	1	0	1	1.5	0.5	1	1.5	0.5	0.637-B	0.588-A
Project Access (EW) - #2	**CSS**	0.5	0.5	0	0	0.5	0.5	**0.5**	0	**0.5**	0	0	0	(11.1)-B	(11.1)-B
Lampson Avenue (EW) - #3	TS	1	0.5	0.5	1	0.5	0.5	1	0.5	0.5	1	0.5	0.5	0.491-A	0.500-A

Source: Table 7 of *FTA*, **Appendix 8**

[4] L= Left; T = Through; R = Right; **BOLD** = Improvement.

[5] V/C = Volume to Capacity Ratio; Delay shown in (seconds); LOS = Level of Service; V/C, Delay and LOS have been calculated using the Vistro software (Version 5.00-00). For intersections with cross street stop control, Level of Service is based on average delay of the worst individual movement (or movements sharing a lane) per the Highway Capacity Manual.

[6] TS = Traffic Signal; CSS = Cross Street Stop.

Any impacts for opening year conditions are considered less than significant. No mitigation is required.

Opening Year Impact Evaluation

Table 3.16-8, *Opening Year Impact Evaluation*, below, summarizes the impact evaluation for Opening Year traffic conditions. As shown in **Table 3.16-8**, the proposed Project is forecast to result in no significant traffic impacts for Opening Year With Project traffic conditions.

Table 3.16-8
Opening Year Impact Evaluation

Intersection	Traffic Control[2]	Peak Hour V/C (Delay)-LOS[1]				Project-Related Change in V/C		Significant Impact?
		Existing		Existing Plus Project				
		Morning	Evening	Morning	Evening	Morning	Evening	
Buaro Street (NS) at:								
Chapman Avenue (EW) - #1	TS	0.637-B	0.587-A	0.637-B	0.588-A	0.000	+0.001	No
Project Access (EW) - #2	CSS	n/a	n/a	(11.1)-B	(11.1)-B	n/a	n/a	No
Lampson Avenue (EW) - #3	TS	0.489-A	0.498-A	0.491-A	0.500-A	+0.002	+0.002	No

Source: Table 8 of *FTA*, **Appendix 8**

[1] V/C = Volume to Capacity Ratio; Delay shown in (seconds); LOS = Level of Service; For intersections with cross street stop control, Level of Service is based on average delay of the worst individual movement per the Highway Capacity Manual.

[2] TS = Traffic Signal; CSS = Cross Street Stop.

Standard Conditions SC-TR-1 through SC-TR-3 requires the Project Applicant to provide Project signing, striping, driveway construction, and Buaro Street improvements. Compliance with these standard conditions would typically be applicable to all development; therefore, they are not considered mitigation for CEQA implementation purposes. With adherence to **Conditions SC-TR-1 through SC-TR-3**, potential impacts related to Project conflicts with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit would be considered less than significant. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS:

SC-TR-1 *On-Site Traffic Signing and Striping*. Prior to issuance of an occupancy permit, the Applicant/Developer shall submit a signing and striping plan to the City of Garden Grove Public Works Departments for review and approval.

SC-TR-2 *Driveway Construction*. Prior to issuance of a grading permit, the Project Applicant/Developer shall submit plans for the Project driveway to the City of Garden Grove Public Works Departments for review and approval. Said plans shall be designed in conformance with City of Garden Grove standards, including provisions for sight distance requirements.

SC-TR-3 *Buaro Street*. Prior to issuance of an occupancy permit, the Applicant/Developer shall construct Buaro Street along the Project site boundary at its ultimate half-section width, including landscaping, sidewalk and bicycle lane improvements, in conjunction with development as necessary/required by the City of Garden Grove.

MITIGATION MEASURES: No mitigation measures are required.

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

No Impact

There are no County of Orange (County) Congestion Management Program (CMP) facilities within the vicinity of the Project site, reference **Figure 3.16-8, *2015 CMP Highway System***. As a result, no impacts to CMP locations are anticipated.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(c) *Would the Project 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?*

No Impact

The proposed Project would not result in a change in air traffic patterns. The nearest public airports are the John Wayne Airport located at 18601 Airport Way, approximately 9 miles southeast of the Project site, or the Fullerton Municipal Airport (FMA), a general aviation airport located at 4011 West Commonwealth Avenue, approximately 6.9 miles northwest of the Project site. Therefore, no impacts are anticipated, and no mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

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

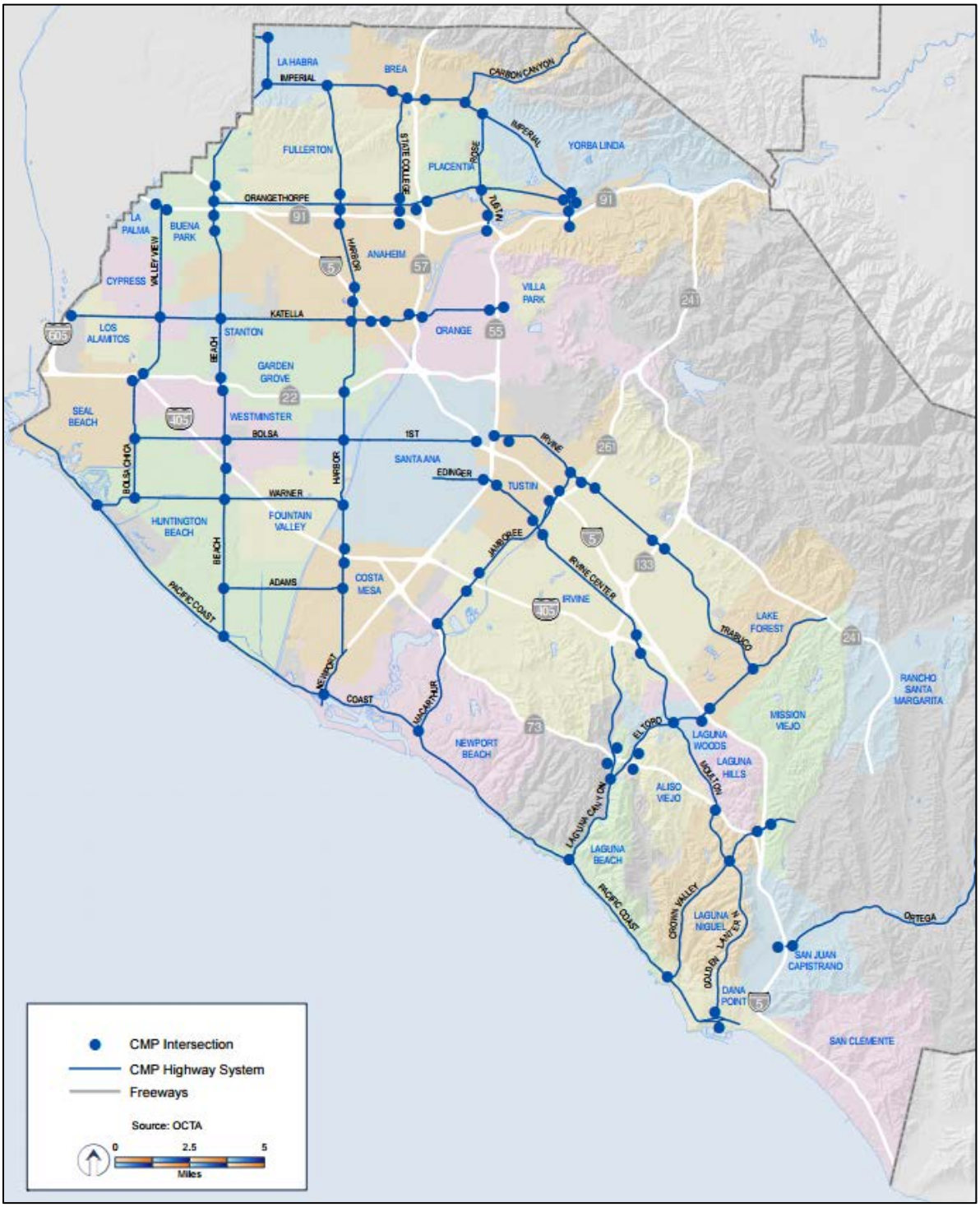
No Impact

Access to the Project site would be provided via a right-in right-out driveway on Buaro Street. The Project design features would comply with all City standards. Furthermore, there are no sight distance obstructions along Buaro Street, and the proposed driveway would intersect with Buaro Street at 90 degrees. Therefore, the Project would not introduce or increase hazards due to its design features. As a result, no impacts are anticipated.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURE(S): No mitigation measures are required.

Figure 3.16-8
2015 CMP Highway System



Source: 2015 Orange County Congestion Management Program

(e) Would the Project result in inadequate emergency access?

Less than Significant Impact

As previously described, the proposed driveway along Buaro Street, as well as the internal circulation, would comply with all City design standards. Therefore, adequate access would be provided for all vehicles (i.e., resident, guest, and emergency vehicles). As a result, no impacts are anticipated. Furthermore, **Standard Condition SC-TR-4** requires a construction Staging and Traffic Management Plan **to** be prepared for approval by the Director of the City of Garden Grove Public Works Department, or designee, prior to issuance of any demolition or grading permits. With adherence to **Standard Condition SC-TR-4**, potential impacts related to emergency access would be considered less than significant. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS:

SC-TR-4 A construction Staging and Traffic Management Plan shall be prepared for approval by the Director of the City of Garden Grove Public Works Department, or designee, prior to issuance of any demolition or grading permits.

MITIGATION MEASURE(S): No mitigation measures are required.

(f) Would the Project conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

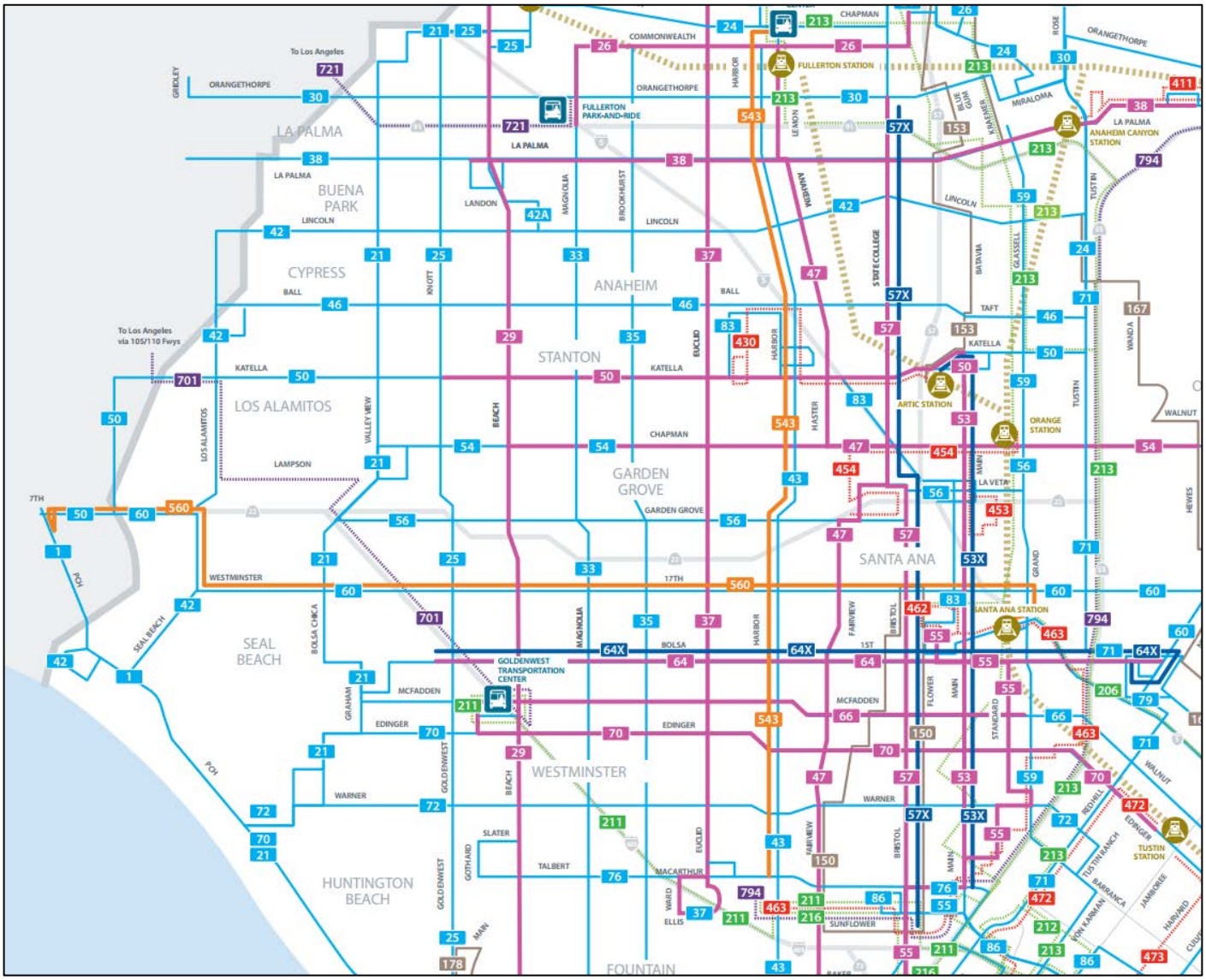
No Impact

The Orange County Transit Authority (OCTA) provides public transit service throughout the City and in proximity to the Project site (i.e., Euclid Avenue and Garden Grove Boulevard). The proposed Project would not affect existing transit service (i.e., bus stops or routes). The proposed Project is located within approximately 0.1 mile of a stop on the OCTA Route 54 Chapman-Buaro bus service on Chapman Avenue and 0.4 mile away from the Target S/B bus station on Harbor Boulevard where four different lines are available. Please reference **Figure 3.16-9, *OCTA Bus Routes***. The Project would not decrease the performance or safety of any public transit, bicycle, or pedestrian facilities. As a result, no impacts are anticipated.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

Figure 3.16-9
OCTA Bus Routes



Source: http://www.octa.net/ebusbook/routePdf/WCCounty.pdf accessed June 2017 accessed June 2017

3.17 TRIBAL CULTURAL RESOURCES.

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1 (k)?		**X**		
(b) Cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c). of Public Resources Code Section 5024.1 for the purpose of this paragraph, the lead agency shall consider the significance to a California Native tribe?		**X**		

Source(s): General Plan; *Local Government Tribal Consultation List Request to Native American Heritage Commission (***Appendix 3a***);* Native American Heritage Commission Response Letter and List of Tribes, March 24, 2017 *(***Appendix 3b***); Project Notification Pursuant to Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18) Formal Notification for Consultation for the Property Located at 12111 Buaro Street, City of Garden Grove, Orange County, California,* prepared by City of Garden Grove, mailed out to 16 Tribes, as directed by the NAHC April 12, 2017 *(***Appendix 3c***);* and *Preliminary Geotechnical Investigation Report and Liquefaction Study for the Multi-Family Residential Development Located at 1211 Buaro Street in the City of Garden Grove, Orange County, California*, prepared by LGC Geo-Environmental, Inc. October 16, 2016 (**Appendix 4**).

Findings of Fact:

(a) Would the Project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1 (k)?

Less Than Significant Impact With Mitigation Incorporated

CEQA defines the term "tribal cultural resource" and delineates restrictions on the meaning of the term "cultural landscape." Pursuant to Public Resources Code section 21074(a), "tribal cultural resources" consist of either of the following:

> "(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following: (A) Included or determined to be eligible for inclusion in the California Register of Historical Resources. (B) Included in a local register of historical resources as defined in subdivision (k) of [Public Resources Code] Section 5020.1; or
>
> (2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of [Public Resources Code] Section 5024.1."
>
> Regarding the application of the term "cultural landscape," Public Resources Code section 21074(b) limits its definition such that "[a] cultural landscape that meets the definition of [Public Resources Code section 21074] subsection (a) is a tribal cultural resource *to the extent that the landscape is geographically defined in terms of the size and scope of the landscape*." (Emphasis added.) Accordingly, if an area that may potentially be considered a "cultural landscape" is *not* geographically defined in terms of the size and scope of the landscape, it cannot be found to be a "tribal cultural resource" even if it otherwise meets the qualifications for such in Public Resources code section 21074(a).

Because the proposed Project would require a General Plan Amendment (GPA) to change the land use designation for Project site from Civic/Institutional (CI) to Medium Density Residential (MDR), City staff conducted Native American consultation for the proposed Project consistent with Senate Bill 18 (SB 18) requirements. Concurrently, City staff conducted Native American consultation for the proposed Project consistent with Assembly Bill 52 (AB52) requirements.

As part of this process, the City staff submitted a request to perform a Sacred Lands File (SLF) search to the Native American Heritage Commission (NAHC) and a Local Tribal Consultation List Request to the NAHC. The *City Letter* (joint SB 18 and AB 52 – per NAHC direction) is included in **Appendix 3a**. The NAHC responded and identified 16 tribes recommended for notification of the Project and the City's desire for consultation. The *NAHC Letter* is included in **Appendix 3b**.

On April 12, 2017, all 16 Native American tribes were notified of the proposed Project. The letters to the Tribes are included in **Appendix 3c**. One (1) response, from the Gabrieleno Band of Mission Indians - Kizh Nation, was received out of the 16 Native American tribes consulted.

On June 15, 2017, Erin Webb (City); Matthew Fagan and Angie Douvres (Matthew Fagan Consulting Services, Inc.); and Andrew Salas and Matthew Teutimez, from the Gabrieleno Band of Mission Indians - Kizh Nation, conducted consultation via the telephone. As a result of this conversation, the City was informed that Harbor Boulevard, which is located approximately 1,420 feet east of the Project site, was considered a pre-historic trading route, and that artifacts and human remains may be beneath the surface at the Project site. As a result of consultation, it was concluded that monitoring of the site would be required during ground

disturbance activities. **Mitigation Measure MM-CUL-1** was deemed to be adequate mitigation by the Gabrieleno Band of Mission Indians - Kizh Nation.

The City did not receive any evidence, from the Gabrieleno Band of Mission Indians - Kizh Nation, or from any Tribes, or other sources, geographically defining the size and scope of any cultural landscape in the Project area. However, to ensure that no significant impacts occur in the event that unknown resources are discovered, Mitigation Measure MM-CUL-1 will be implemented to reduce potential impacts to a less than significant level. Mitigation Measure MM-CUL-1 requires that a qualified Native American Monitor be on site during grading and other significant ground-disturbing activities.

At the completion of Project construction, the proposed Project would not result in further disturbance of native soils on the Project site. Therefore, operation of the proposed Project would not cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1 (k).

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(b) *Would the Project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c). of Public Resources Code Section 5024.1 for the purpose of this paragraph, the lead agency shall consider the significance to a California Native tribe?*

Less Than Significant Impact With Mitigation Incorporated

Because the proposed Project would require a General Plan Amendment (GPA) to change the land use designation for Project site from Civic/Institutional (CI) to Medium Density Residential (MDR), City staff conducted Native American consultation for the proposed Project consistent with Senate Bill 18 (SB 18) requirements. Concurrently, City staff conducted Native American consultation for the proposed Project consistent with Assembly Bill 52 (AB 52) requirements.

As part of this process, the City staff submitted a request to perform a Sacred Lands File (SLF) search to the Native American Heritage Commission (NAHC) and a Local Tribal Consultation List Request to the NAHC. The *City Letter* (joint SB 18 and AB 52 – per NAHC direction) is included in **Appendix 3a**. The NAHC responded and identified 16 tribes recommended for notification of the Project and the City's desire for consultation. The *NAHC Letter* is included in **Appendix 3b**.

On April 12, 2017, all 16 Native American tribes were notified of the proposed Project. The letters to the Tribes are included in **Appendix 3c**. One (1) response, from the Gabrieleno Band of Mission Indians - Kizh Nation, was received out of the 16 Native American tribes consulted.

On June 15, 2017, Erin Webb (City); Matthew Fagan and Angie Douvres (Matthew Fagan Consulting Services, Inc.); and Andrew Salas and Matthew Teutimez, from the Gabrieleno Band of Mission Indians - Kizh Nation, conducted consultation via the telephone. As a result of this conversation, the City was informed that Harbor Boulevard, which is located approximately 1,420 feet east of the Project site, was considered a pre-historic trading route, and that artifacts and human remains may be beneath the surface at the Project site. **Mitigation Measure MM-CUL-1**, shall be implemented, which requires that the Applicant will coordinate with the representative tribes in order to provide a Native American monitor during excavation activities if necessary. With the incorporation of **Mitigation Measure MM-CUL-1**, any impacts will be reduced to a less than significant level.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: The Project is required to comply with **Mitigation Measure MM-CUL-1** (see details in Section 3.5.b., above).

3.18 UTILITIES/SERVICE SYSTEMS.

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

Source(s): City of Garden Grove Public Works Department Letter dated June 15, 2017: Water and Sewer Service for Proposed Project at 12111 Buaro Street (*GGPWD Letter*, **Appendix 9**).

Findings of Fact:

(a) Would the Project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less Than Significant Impact

The Orange County Sanitation District (OCSD) is responsible for the collection, treatment, and disposal of domestic, commercial, and industrial wastewater generated by over 2.5 million people living and working in the central and northwestern County of Orange (County). OCSD facilities would receive wastewater generated from the proposed Project. Wastewater from the Project site would be treated at OCSD's Reclamation Plant No. 2 in Huntington Beach. This facility is responsible for disposal of treated wastewater. The Santa Ana Regional Water Quality Control Board (RWQCB) regulates the treatment of wastewater at treatment plants and the discharge of treated wastewater into receiving waters. Reclamation Plant No. 2 has been designed to treat typical wastewater flows from different land uses in Orange County, including the City of Garden Grove (City). The estimated average daily effluent received at Plant No. 2 is 129 million

gallons per day (mgd). This facility currently has a total primary treatment capacity of 168 mgd, with an average daily treatment of approximately 129 mgd.

Therefore, there is an excess primary treatment capacity of approximately 41 mgd at OCSD Plant No. 2. Plant No. 2 also has 90 mgd of secondary treatment capacity.

According to the review of the Project by the City of Garden Grove Public Works Department staff and their Letter dated June 15, 2017 (*GGPWD Letter* **Appendix 9**), the sewer in this location is capacity sufficient and is adequate to handle the sewage discharge from the Project. Therefore, with adequate capacity, wastewater generated by the proposed Project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities; and would not result in a determination by the wastewater treatment provider that they have inadequate capacity to serve the proposed Project's projected demand in addition to existing commitments. Thus, no potential exists for the proposed project to exceed wastewater treatment requirements of the Santa Ana RWQCB, and potential impacts would be less than significant. No mitigation would be required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(b) Would the Project require or result in the construction of new water or wastewater treatment or collection facilities or expansion of existing facilities, the construction of which would cause significant environmental effects?

Less Than Significant Impact

Water. Delivery of domestic water service in the City is provided by the Water Services Division of the City's Public Works Department. The Water Services Division is responsible for maintaining the wells, reservoirs, import water connections, and the distribution systems that deliver water throughout the City. To meet its infrastructure needs, the Water Services Division collaborates with other jurisdictions, agencies, and service providers, as required. According to the *GGPWD Letter*, the water system in the Project area is adequate for domestic water supply and fire protection.

Wastewater. The Garden Grove Sanitary District is responsible for installation and maintenance of local wastewater collection facilities, which convey wastewater to OCSD trunk sewers. The OCSD is responsible for the collection, treatment, and disposal of domestic, commercial, and industrial wastewater generated by over 2.5 million people living and working in central and northwestern Orange County. Most of the surrounding developed areas in the City area surrounding the project site are located within the OCSD. Wastewater generated by the proposed Project would be treated at OCSD Reclamation Plant No. 2. OCSD currently has plans to expand its treatment capacity in order to respond to the countywide increased need for sewage treatment. OCSD is proposing to upgrade the level of wastewater treatment at both of its treatment plants to meet secondary treatment standards for the projected 2030 effluent flow of 261 mgd. A portion of the sewage fee charged to developers in the City would be paid to the County for regional facilities improvements. In addition, OCSD's Capital Facilities Capacity Charge is applied to cities and developers for new or expanded residential, commercial, and industrial development and is used for

improving the efficiency and effectiveness of OCSD operations. According to the *GGPWD Letter*, the sewer in this location is capacity sufficient and is adequate to handle the sewage discharge from the Project.

Therefore, development of the proposed Project would not require, nor would it result in, the construction of new water or wastewater treatment or collection facilities or expansion of existing facilities other than those facilities to be constructed on site. Project impacts are incremental, yet less than significant. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(c) Would the Project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects*?*

Less Than Significant Impact

The City is served by the Orange County Flood Control District (OCFCD), which operates and maintains regional and municipal storm drainage facilities. As discussed further in Section 3.9, Hydrology and Water Quality of this Initial Study, the proposed Project would permanently increase the on-site impervious surface area. The projected storm water runoff is not anticipated to significantly increase, however, due to the Project's inclusion of on-site infiltration that would collect and treat runoff and minimize erosion and siltation. Storm water infiltration Best Management Practices (BMPs) and catch basins would increase infiltration and reduce the rate and amount of surface runoff from the Project site.

Therefore, the proposed Project would not contribute additional runoff to the downstream storm water drainage facilities or cause the expansion of existing facilities. Any impacts are considered less than significant. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

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

Less Than Significant Impact

Refer to discussion in Section 3.18(b), above. Delivery of domestic water service in the City is provided by the Water Services Division of the City's Public Works Department. The Water Services Division is responsible for maintaining the wells, reservoirs, import water connections, and the distribution systems that deliver water throughout the City. To meet its infrastructure needs, the Water Services Division collaborates with other jurisdictions, agencies, and service providers, as required. According to the *GGPWD Letter*, the water system in the Project area is adequate for domestic water supply and fire protection. Therefore, incremental water demand increases from the proposed Project would have sufficient water

supplies available to serve the Project from existing entitlements and resources and would not require new or expanded entitlements. Impacts related to water supplies would be incremental, yet less than significant. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

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

Less Than Significant Impact

Refer to discussion in Section 3.18(b), above. The Garden Grove Sanitary District is responsible for installation and maintenance of local wastewater collection facilities, which convey wastewater to OCSD trunk sewers. The OCSD is responsible for the collection, treatment, and disposal of domestic, commercial, and industrial wastewater generated by over 2.5 million people living and working in central and northwestern Orange County. Most of the surrounding developed areas in the City area surrounding the project site are located within the OCSD. Wastewater generated by the proposed Project would be treated at OCSD Reclamation Plant No. 2. OCSD currently has plans to expand its treatment capacity in order to respond to the countywide increased need for sewage treatment. OCSD is proposing to upgrade the level of wastewater treatment at both of its treatment plants to meet secondary treatment standards for the projected 2030 effluent flow of 261 mgd. A portion of the sewage fee charged to developers in the City would be paid to the County for regional facilities improvements. In addition, OCSD's Capital Facilities Capacity Charge is applied to cities and developers for new or expanded residential, commercial, and industrial development and is used for improving the efficiency and effectiveness of OCSD operations. According to the *GGPWD Letter*, the sewer in this location is capacity sufficient and is adequate to handle the sewage discharge from the Project.

Therefore, development of the proposed Project would not require, nor would it result in, the construction of new *water or* wastewater treatment or collection facilities or expansion of existing facilities other than those facilities to be constructed on site. Project impacts incremental, yet less than significant. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(f) Would the Project be served by a landfill with insufficient permitted capacity to accommodate the Project's solid waste disposal needs?

Less Than Significant Impact

The Project site is located within Orange County Waste & Recycling's (OCWR) service area. OCWR

administers the countywide Integrated Waste Management Plan. OCWR owns and operates three active landfills (i.e., Olinda Alpha Landfill in Brea, Frank R. Bowerman Landfill in Irvine, and Prima Deshecha Landfill in San Juan Capistrano), as well as four household hazardous waste collection centers. All three landfills are permitted as Class III landfills. Class III landfills accept all types of nonhazardous municipal solid waste for disposal.

Within the City, collection of solid waste is contracted to Republic Services. According to the Republic Services website, the company collects solid waste, green waste (grass clippings, tree and shrub clippings), and items for recycling. The company provides three different carts for automated collection of trash, recyclables, and green waste. By providing these three carts, the City aims to encourage residents and businesses to reduce the amount of solid wastes that enter the aforementioned regional landfills.

Olinda Alpha Landfill, located at 1942 North Valencia Avenue, Brea, is the closest OCWR landfill to the Project site (approximately 16 miles northeast) and would provide waste disposal for the proposed Project once operational. According to Orange County Waste & Recycling's website, this landfill is permitted to accept up to 8,000 tons of solid waste per day (tpd) and currently accepts a daily average of approximately 6,000 tpd. The anticipated closure date for the landfill is 2021. OC Waste and Recycling evaluates solid waste generation at a rate of 13 lbs./residential unit per day. Average daily solid waste generation would be about 221 lbs per day (0.1105 tons). Annual average solid waste generation would be about 80,665 lbs or about 40.3325 tons per year. CalRecycle requires a mandatory 50% recycling rate and daily solid waste generation is forecast to be about 0.05525 tons per day for disposal at the Olinda Alpha Landfill. This is approximately a 0.0014 percent increase in tpd. Thus, the proposed Project will consume some capacity of the existing landfill, but the level of impact is considered less than significant. There is adequate capacity at the area landfill to accommodate the solid waste generated by the proposed Project, and the Project will comply with all laws and regulations in managing solid waste.

Therefore, solid waste generated by the proposed project would not cause the capacity of the Olinda Alpha Landfill to be exceeded. The proposed Project would result in an incremental impact to solid waste and landfill facilities; however, these impacts are considered less than significant. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

(f) Would the Project comply with federal, state, and local statutes andregulations related to solid wastes?

Less Than Significant Impact

The California Integrated Waste Management Act [Assembly Bill (AB) 939] changed the focus of solid waste management from landfill to diversion strategies such as source reduction, recycling, and composting. The purpose of the diversion strategies is to reduce dependence on landfills for solid waste disposal. AB 939 established mandatory diversion goals of 25% by 1995 and 50% by 2000. According to the City's General Plan Conservation Element, in 2005, approximately 199,737 tons of waste produced by the City was disposed in a landfill while 64 tons were burned at a waste-to-energy facility. Of this, household disposal consisted of 52% of waste disposal while business disposal consisted of 48%. The City provides curbside

recycling for both residential and commercial uses, which counts toward the City's solid waste diversion rate. The City also collects curbside residential green waste, which also counts toward the City's diversion rate. In addition, the City currently offers free recycling to all businesses within the City.

The proposed Project would comply with existing and future statutes and regulations, including waste diversion programs mandated by City, State, or federal law. In addition, as discussed above, the proposed Project would not result in an excessive production of solid waste that would exceed the capacity of the existing landfill serving the Project site. Therefore, the proposed Project would not result in an impact related to federal, State, and local statutes and regulations related to solid wastes. No mitigation is required.

STANDARD CONDITIONS AND REQUIREMENTS: No standard conditions are required.

MITIGATION MEASURES: No mitigation measures are required.

3.19 MANDATORY FINDINGS OF SIGNIFICANCE.

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

Source(s): Project Description, and Sections 3.1 through 3.18 of the Initial Study.

Findings of Fact:

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

Less Than Significant Impact with Mitigation Incorporated

Implementation of the Project does not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self- sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare, or endangered plant or animal. The Project does not have the potential to eliminate important examples of the major periods of California history or prehistory.

Impacts will be reduced to a less than significant level with adherence to **Mitigation Measures MM-BIO-1**, and **MM-CUL-1 through MM-CUL-3**.

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

Source(s): Project Description, and Sections 3.1 through 3.18 of the Initial Study.

Findings of Fact:

Less Than Significant Impact with Mitigation Incorporated

As demonstrated in Sections 3.1 – 3.18 of this Initial Study, the Project does not have impacts which are individually limited, but cumulatively considerable. The Project will comply with mitigation measures and standard conditions, as applicable.

Aesthetics

Implementation of the Project would not contribute to cumulative visual resource or aesthetic impacts. The Project proposes several design measures to minimize light pollution. With approval of the Project applications, the Project is in compliance with the City's zoning and design standards and guidelines, which regulate building design, mass, bulk, height, color, and compatibility with surrounding uses. Thus, the Project would have a less than cumulatively considerable impact to aesthetics.

Agricultural Resources

Implementation of the Project would not result in any impacts to agricultural or forestry resources and would therefore not contribute to cumulative impacts to these resources.

Air Quality

The South Coast Air Quality Management District's (SCAQMD) approach for assessing cumulative impacts is based on the Air Quality Management Plan forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and California Clean Air Acts. The SCAQMD considers projects that are consistent with the AQMP, which is intended to bring the basin into attainment for all criteria pollutants, to also have less than significant cumulative impacts. The discussion under Issue a) in Section 3.3, Air Quality, describes the SCAQMD criteria for determining consistency with the AQMP and further demonstrates that the Project would be consistent with the Plan. As such, the Project would have a less than cumulatively considerable impact on air quality.

Biological Resources

The Project is not anticipated to impact Biological Resources. However, existing ornamental landscaping and trees on the Project site may provide suitable habitat for nesting birds. Disturbing or destroying active nests is a violation of the Migratory Bird Treaty Act (MBTA). In addition, nests and eggs are protected under Fish and Game Code Section 3503. With implementation of **Mitigation Measure MM-BIO-1**, potentially

significant impacts to nesting birds would be reduced to a less than significant level. Therefore, the Project would have a less than cumulatively considerable impact on biological resources.

Cultural Resources

Development of the Project site would contribute to a cumulative increase in potential impacts to cultural archaeological, and paleontological resources. However, **Mitigation Measures MM-CUL-1, MM-CUL-2** and **MM-CUL-3** would reduce the potential impacts associated with development on the Project site. Thus, the Project would have a less than cumulatively considerable impact.

Geology and Soils

Project-related impacts on geology and soils associated with development on the Project site are site-specific, and development on the site would not contribute to seismic hazards or soil erosion. Compliance with the California Building Code (CBC) requirements and the Project-specific Geotechnical Report (as mitigated through **Mitigation Measure MM-GEO-1**) would result in decreased exposure to the risks associated with seismic activity. Therefore, the Project is anticipated to have no impact on cumulative geophysical conditions in the region.

Greenhouse Gas Emissions

The greenhouse gas analysis provided in Section 3.7, Greenhouse Gas Emissions, analyzed the Project's cumulative contribution to global climate change and determined that the Project would not create a cumulatively considerable environmental impact resulting from greenhouse gas emissions.

Hazards and Hazardous Materials

The Project is not expected to utilize or contribute to hazards associated with the accidental release of hazardous materials. Furthermore, compliance with federal, state, and local regulations and implementation of Project-specific **Mitigation Measures MM-HAZ-1**, and **MM-HAZ-2** will ensure that cumulative hazard conditions are less than cumulatively considerable.

Hydrology and Water Quality

Water quality measures included in the Project and the WQMP and SWPPP prepared for the Project would protect the quality of water discharged from the site during both construction and operational activities. Therefore, the Project would have a less than cumulatively considerable impact on water quality. The site is not located within a flood hazard zone. Therefore, the Project would have a less than cumulatively considerable impact related to hydrology.

Land Use and Planning

The Project will be consistent with existing General Plan Land Use Plan designation of MDR with the approval of the General Plan Amendment. The current zoning classification for the Project site is R-3. The

General Plan will be consistent with the existing zoning. Therefore, the Project would have a less than cumulatively considerable impact related to land use and planning.

Mineral Resources

The Project would have no impact related to mineral resources and would therefore not contribute to any cumulative impacts to such resources.

Noise

As discussed in Section 3.12, Noise, operation of the Project would comply with all applicable noise standards and would have less than significant direct impacts related to noise and vibrations. Project construction could result in some noise disturbance; however, these impacts would be temporary and would be restricted to conform to the City Noise Ordinance standards. In addition, best management practices shall be implemented to reduce construction related noise. Vibrational impacts are below the established thresholds for vibration. When the Project noise sources are added to the ambient noise sources in the Project area, any cumulative impacts will remain below established noise thresholds for construction and operation.

Population and Housing

No housing units or people would be displaced and the construction of replacement housing is not required. The Project would not displace any houses or people requiring the construction of new housing elsewhere. The development of 17 housing units is anticipated to slightly increase the residential population in the City. According to the California Department of Finance City/County Population and Housing Estimates, the average number of persons per dwelling unit in the City is 3.74 persons. Based on the City's average occupancy rate of 3.74 persons per unit, the proposed Project would introduce approximately 64 persons into the City. However, the addition of 64 new residents would be approximately 0.037 percent of the City's population of 170,883 persons in 2010, 0.036 percent of the City's population of 175,953 in 2014, and 0.035 percent of the City's projected population of 179,400 in 2020 (the closest year to Project build out for which projections are available). As such, the Project-related increase in population would represent a less than significant portion of the City's current and projected population. Therefore, the Project would have a less than cumulatively considerable impact related to population and housing.

Public Services and Recreation

Implementation of the Project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development in the immediate area, may increase the demand for public services such as fire and police protection. Adequate staffing exists to support the Project, while not impacting response times or service levels. Therefore, the Project would have a less than cumulatively considerable impact on public services.

Transportation/Traffic

The CEQA Guidelines require that other reasonably foreseeable development projects which are either approved or being processed concurrently in the study area also be included as part of a cumulative analysis scenario. The cumulative setting for the Project includes the nearby development for opening year traffic conditions provided by City Traffic Engineering Staff. Cumulative traffic impacts are created as a result of a combination of the Project and other future developments contributing to the overall traffic impacts and requiring additional improvements to maintain acceptable level of service operations with or without the Project. The Proejct does not exceed any level of service requirements at Opening Year . Therefore, the Project's contribution to a cumulatively significant impact is considered less than significant.

Tribal Cultural Resources

The City did not receive any evidence, from the Gabrieleno Band of Mission Indians - Kizh Nation, or from any Tribes, or other sources, geographically defining the size and scope of any cultural landscape in the Project area. However, to ensure that no significant impacts occur in the event that unknown resources are discovered, **Mitigation Measure MM-CUL-1** will be implemented to reduce potential impacts to a less than significant level. **Mitigation Measure MM-CUL-1** requires that a qualified Native American Monitor be on site during grading and other significant ground-disturbing activities.

Because any potential cultural landscape at the Project site does not meet the definition of a tribal cultural resource as defined in Public Resources Code Section 21074, the Project's impacts on cumulative tribal cultural resources would not be considered cumulatively significant in this regard.

Utilities and Service Systems

Implementation of the Project would increase demand for public utilities. Construction activities related to development of the Project site may result in impacts to utilities and service systems, including solid waste. However, any impacts would be less than cumulatively considerable.

(c) *Does the Project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?*

Source(s): Project Description, and Sections 3.1 through 3.18 of the Initial Study.

Findings of Fact:

Less Than Significant Impact with Mitigation Incorporated

As demonstrated in Sections 3.1 – 3.18 of this Initial Study, the Project does not have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly. Mitigation measures and standard conditions will apply to the Project. Any impacts are considered less than significant with mitigation incorporated.

4.0 MITIGATION MONITORING AND REPORTING PROGRAM

Table 4.A: Mitigation and Monitoring Reporting Program

Mitigation	Responsible Party	Timing
3.1 AESTHETICS		
The proposed Project would not result in significant adverse impacts related to aesthetics. No mitigation would be required.		
3.2 AGRICULTURE AND FOREST RESOURCES		
The proposed Project would not result in significant adverse impacts related to agriculture or forest resources. No mitigation would be required.		
3.3 AIR QUALITY		
The proposed Project would not result in significant adverse impacts related to air quality. No mitigation would be required.		
3.4 BIOLOGICAL RESOURCES		
MM-BIO-1 Compliance with Migratory Bird Treaty Act. In the event that Project construction or grading activities should occur within the active breeding season for birds (i.e., February 15 through August 15), a nesting bird survey shall be conducted by a qualified biologist prior to commencement of grading or construction activities. If active nesting of birds is observed within 100 ft. of the designated construction area prior to construction, the construction crew shall establish an appropriate buffer around the active nest. The designated Project biologist shall determine the buffer distance based on the specific nesting bird species and circumstances involved. Once the Project biologist verifies that the birds have fledged from the nest, the buffer may be removed. Prior to commencement of grading activities and issuance of any building permits, the City of Garden Grove Director of Community Development, or designee, shall verify that all Project grading and construction plans include specific documentation regarding the Migratory Bird Treaty Act (MBTA) requirements for a nesting bird survey should construction or grading occur from February 15 through August 15, that preconstruction surveys have been completed and the results reviewed by staff, and that the appropriate buffers (if needed) are noted on the plans and established in the field with orange snow fencing.	City of Garden Grove Director of Community Development, or designee.	Prior to the commencement of any grading activities.
3.5 CULTURAL RESOURCES		
MM-CUL-1: *Unknown Archeological Resources.* Prior to the issuance of grading permits, the Applicant shall be required to obtain the services of a qualified Native American Monitor (Monitor) during all construction-related ground disturbance activities. The Monitor must be approved by the tribal	City of Garden Grove Director of Community Development, or designee.	Prior to the issuance of any grading activities.

Mitigation	Responsible Party	Timing
representatives and will be present on-site during the construction phases that involve any ground disturbing activities. The Monitor will complete monitoring logs on a daily basis. The logs will provide descriptions of the daily activities, including construction activities, locations, soil, and any cultural materials identified. The Monitor will photo-document the ground disturbing activities. The Monitor must also have Hazardous Waste Operations and Emergency Response (HAZWOPER) certification. In addition, the Monitor will be required to provide insurance certificates, including liability insurance, for any archaeological resource(s) encountered during grading and excavation activities, pertinent to the provisions outlined in the California Environmental Quality Act, California Public Resources Code Division 13, Section 21083.2 (a) through (k). In the event that archaeological resources are discovered during any construction-related ground disturbance activities, the Applicant shall retain, with the approval of the City of Garden Grove (City) Community Development Director, or designee, a qualified archaeological monitor from the Orange County List of Qualified Archaeologists to assist in the assessment of said resources. The on-site monitoring shall end when the Project site grading and excavation activities are completed, or when the Monitor has indicated that the site has a low potential for archeological resources.		
MM-CUL-2: *Paleontological Resources*. In the event that paleontological resources are encountered during Project construction, work in the immediate area of the find shall be ceased in order to allow the Applicant to retain, with the approval of the City's Community Development Director, or designee, a qualified paleontologist from the Orange County List of Qualified Paleontologists to assess the findings for scientific significance. If any fossil remains are discovered in sediments with a Low paleontological sensitivity rating (Young Alluvial Deposits), the paleontologist shall make recommendations as to whether monitoring shall be required in these sediments on a full-time basis, in accordance with Society of Vertebrate Paleontology standards. The property owner and/or applicant on whose land the paleontological fossils are discovered shall provide appropriate funding for monitoring, reporting, delivery and curating the fossils at the institution where the fossils will be placed, and will provide confirmation to the City that such funding has been paid to the institution.	City of Garden Grove Director of Community Development, or designee.	In the event that paleontological resources are encountered during project construction.
MM-CUL-3: *Human Remains.* In the event that human remains are discovered during ground- disturbing or construction activities, the following steps shall be taken: a. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the Orange County Coroner is contacted to determine that no investigation of the cause of death is required. If the Coroner determines the remains to be Native American, then the	City of Garden Grove Director of Community Development, or designee.	In the event of the accidental discovery or recognition of any human remains in any location on the project site during excavation or construction activities.

Mitigation	Responsible Party	Timing
Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the most likely descendant from the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98; or b. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the property in a location not subject to further subsurface disturbance: 1. The NAHC is unable to identify a most likely descendant, or the most likely descendant failed to make a recommendation within 48 hours after being notified by the NAHC; 2. The identified descendant fails to make a recommendation; or 3. The landowner or his/her authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.		
3.6 GEOLOGY AND SOILS		
MM-GEO-1 The Project Applicant shall comply with the recommendations of the *Preliminary Geotechnical Investigation*, the most current California Building Code (CBC), and the Structural Engineer Association of California Guidelines, which stipulates appropriate seismic design provisions that shall be implemented with Project design and construction. *Geotechnical Observations and Testing.* Prior to the start of grading, a meeting should be held at the site with the owner, developer, city inspector, grading contractor, civil engineer, and geotechnical consultant to discuss the work schedule and geotechnical aspects relative to rough and precise grading. Rough grading, which includes clearing and grubbing, overexcavation, scarification/processing, and fill placement should be accomplished under the full-time observation and testing of the geotechnical consultant. Fills should not be placed without prior approval from the	City of Garden Grove Building Official, or designee.	Prior to the start of grading.

Mitigation	Responsible Party	Timing
geotechnical consultant. *Clearing and Grubbing.* Weeds, grasses, and trees in areas to be graded should be stripped and hauled offsite. Trees to be removed should be grubbed so that their stumps and major-root systems are also removed and the organic materials hauled offsite. During site grading, laborers should clear from fills, roots, tree branches and other deleterious materials missed during clearing and grubbing operations. The Project geotechnical consultant, or his qualified representative, should be notified at the appropriate times to provide observation and testing services during clearing and grubbing operations to observe and document compliance with the above recommendations. In addition, buried structures and unusual or adverse soil conditions encountered that are not described or anticipated herein, should be brought to the immediate attention of the geotechnical consultant. *Overexcavation and Ground Preparation.* The site is generally underlain by approximately 2 feet to 7 feet of potentially compressible soils (topsoil and the upper alluvium) which may be prone to future settlement under the surcharge of foundation and/or fill loads. These materials should be overexcavated to underlying competent alluvium or older alluvium within proposed building areas and competent alluvium within areas of proposed pavement areas and improvements outside building areas then replaced with compacted fill soils. Within the proposed building areas overexcavations should also extend at least 5 feet below proposed pad grade or 3 feet below the lowest proposed footings, whichever is deeper and at least 5 feet outside proposed footings. Within proposed wall areas, outside of the proposed building areas overexcavations should also extend at least 5 feet below proposed grade or 2 feet below the lowest proposed footings, whichever is deeper. Therefore, overexcavations are anticipated to be approximately 4 feet to 7 feet within the proposed building areas and 2 feet to 4 feet within areas of proposed pavement and improvements outside building areas. However, localized, deeper overexcavation should be anticipated where deemed necessary by the geotechnical consultant based on observations during grading as well as by proposed depths of footings or structural loads. Actual depths of overexcavation should be evaluated upon review of final grading and foundation plans, on the basis of observations and testing during grading by the Project geotechnical consultant. Prior to placing engineered fill, exposed bottom surfaces in each overexcavated area should first be scarified to a depth of approximately 6 inches, watered or air-dried as necessary to achieve a uniform moisture content of optimum or higher, and then compacted in place to a relative compaction of 90 percent or more (based on American Standard of Testing and Materials [ASTM] Test Method D1557). The estimated locations, extent and approximate depths for overexcavation of unsuitable materials		

Mitigation	Responsible Party	Timing
are indicated on the Geotechnical Map (Plate 1) included in the *Preliminary Geotechnical Investigation*. The geotechnical consultant should be provided with appropriate survey staking during grading to document that depths and/or locations of recommended overexcavation are adequate. Sidewalls for overexcavations greater than 5 feet in height should be no steeper than 1:1 (H:V) and should be periodically slope-boarded during their excavation to remove loose surficial debris and facilitate mapping. Flatter excavations may be necessary for stability. The grading contractor will need to consider appropriate measures necessary to excavate adjacent existing improvements adjacent to the site without endangering them due to caving or sloughing. *Fill* Suitability. Soil materials excavated during grading are generally considered suitable for use as compacted fill provided they do not contain significant amounts of trash, vegetation, construction debris and oversize material. *Oversized* Material. Oversized material greater than 8 inches that may be encountered during grading should be reduced in size or removed from the site. Benching. Where compacted fills are to be placed on natural slope surfaces inclining at 5:1 (H:V) or greater, the ground should be excavated to create a series of level benches, which are at least a minimum height of 4 feet, excavated into competent bedrock. *Import Soils for* Grading. In the event import soils are needed to achieve final design grades, all potential import materials should be free of deleterious/oversize materials, very low in expansion, and approved by the project geotechnical consultant prior to commencement of delivery onsite. *Cut/Fill Transitions and Differential Fill* Thicknesses. To mitigate distress to structures and walls, related to the detrimental effect of differential settlement, the cut portions should be eliminated from cut/fill transition areas in order that the entire structure or wall is founded on a uniform bearing material. This should be accomplished by overexcavating the "cut" portions and shallow fill portions 4 feet or more below proposed pad grade or 3 feet below proposed footings, whichever is deeper, and replacing the excavated materials as properly compacted fill. Recommended depths of overexcavation are provided in the *Preliminary Geotechnical Investigation.* *Fill Placement.* Fills should be placed in lifts no greater than 8 inches in uncompacted thickness, watered or air-dried as necessary to achieve a uniform moisture content of at least optimum		

Mitigation	Responsible Party	Timing
moisture content, and then compacted in place to relative compaction of 90 percent or more. Fills should be maintained in a relatively level condition. The laboratory maximum dry density and optimum moisture content for each change in soil type should be determined in accordance with ASTM Test Method D1557. *Shrinkage/Bulking and* Subsidence. Volumetric changes in earth quantities will occur when excavated onsite soils are replaced as properly compacted fill. The *Preliminary Geotechnical Investigation* includes a table containing an estimate of the shrinkage and bulking factors for the various geologic units present onsite. These estimates are based on in-place densities of the various materials and on the estimated average degree of relative compaction that will be achieved during grading. Subsidence due to recompaction of the bottom of overexcavations, prior to fill placement and placement of proposed fills, is estimated to be approximately 0.15 feet to 0.25 feet. The estimates of shrinkage/bulking and subsidence included in the *Preliminary Geotechnical Investigation* are intended as an aid for Project engineers in determining earthwork quantities. These are preliminary rough estimates which may vary with depth of removal, stripping losses, field conditions at the time of grading, etc. However, these estimates should be used with some caution since they are not absolute values. Contingencies should be made for balancing earthwork quantities based on actual shrinkage/bulking and subsidence that occurs during the grading operations. *Slope* Stability. No grading plans has been developed and provided for review, however, based on the *Preliminary Geotechnical Investigation* review of the 40-scale site plan, the existing site topography, and current knowledge of the existing area of the proposed development, cut slopes and fill slopes may not be necessary in the final design. *Temporary* Excavations. Temporary excavations varying up to a height of approximately 7 feet below existing grades will be necessary to accommodate the recommended overexcavation of the unsuitable soil materials. Based on the physical properties of the onsite soils, temporary excavations exceeding 5 feet in height should be cut back at a ratio of 1:1 (H:V) or flatter, for the duration of the overexcavation and recompaction of unsuitable soil material. Temporary slopes excavated at the above slope configurations are expected to remain stable during grading operations. However, the temporary excavations should be observed by a representative of the Project geotechnical consultant for any evidence of potential instability. Depending on the results of these observations, revised slope configurations may be necessary. Other factors which should be considered with respect to the stability of the temporary slopes		

Mitigation	Responsible Party	Timing
include construction traffic and storage of materials on or near the tops of the slopes, landscaping irrigation, construction scheduling, presence of nearby walls or structures on adjacent properties, and weather conditions at the time of construction. Applicable requirements of the California Construction and General Industry Safety Orders, the Occupational Safety and Health Act of 1970, and the Construction Safety Act should also be followed. Additional site testing and final design evaluation shall be conducted by the Project geotechnical consultant to refine and enhance these requirements. The Applicant shall require the Project geotechnical consultant to assess whether the requirements in the *Preliminary Geotechnical Investigation* need to be modified or refined to address any changes in the Project that occur prior to the start of grading. If the Project geotechnical consultant identifies modifications or refinements to the requirements, the Project Applicant shall require appropriate changes to the final Project design and specifications and shall submit any revised geotechnical reports to the Land Development Section of the Engineering Division, or designee, for approval prior to issuance of any grading or construction permits. The Land Development Section of the Engineering Division, or designee, shall review grading plans prior to the start of grading to verify that the requirements developed during the geotechnical design evaluation have been appropriately incorporated into the Project plans. Design, grading, and construction shall be performed in accordance with the requirements of the City' Building Code and the California Building Code (CBC) applicable at the time of grading, as well as the recommendations of the Project geotechnical consultant as summarized in a final report subject to review by the City's Building Official, or designee, prior to the start of grading activities. On-site inspection during grading shall be conducted by the Project geotechnical consultant and the Land Development Section of the Engineering Division to ensure compliance with geotechnical specifications as incorporated into Project plans.		
3.7 GREENHOUSE GAS EMISSIONS		
The proposed Project would not result in significant adverse impacts related to greenhouse gas emissions. No mitigation would be required.		
3.8 HAZARDS AND HAZARDOUS MATERIALS		
MM-HAZ 1: *Predemolition Surveys*. Prior to commencement of demolition activities, the City of Garden Grove (City) Building Official, or designee, shall verify that predemolition surveys for asbestos-containing materials (ACMs) and lead-based paints (LBPs) (including sampling and analysis of all suspected building materials) and inspections for polychlorinated biphenyl (PCB)-containing electrical fixtures and other suspect hazardous building materials have been performed. All inspections, surveys, and analyses shall be performed by appropriately licensed and qualified individuals in accordance with applicable regulations (i.e., American Society for Testing and Materials [ASTM] E 1527-05, and 40 Code	City of Garden Grove Building Official, or designee.	Prior to issuance of demolition activities.

Mitigation	Responsible Party	Timing
of Federal Regulations [CFR], Subchapter R, Toxic Substances Control Act [TSCA], Part 716). If the predemolition surveys do not find ACMs, LBPs, PCB-containing electrical fixtures, or other hazardous building materials, the inspectors shall provide documentation of the inspection and its results to the City Building Official, or designee, to confirm that no further abatement actions are required. If the predemolition surveys find evidence of ACMs, LBPs, or PCB- containing electrical fixtures, or other hazardous building materials, all such materials shall be removed, handled, and properly disposed of by appropriately licensed contractors according to all applicable regulations during demolition of structures (40 CFR, Subchapter R, TSCA, Parts 745, 761, and 763). Air monitoring during these predemolition surveys shall be completed, as applicable, by appropriately licensed and qualified individuals in accordance with applicable regulations both to ensure adherence to applicable regulations (e.g., South Coast Air Quality Management District [SCAQMD]) and to provide safety to workers and the adjacent community. The City shall provide documentation (e.g., all required waste manifests, sampling, and air monitoring analytical results) to the County of Orange (County) Environmental Health Division showing that abatement of any ACMs, LBPs, PCB-containing electrical fixtures, or other hazardous building materials identified in these structures has been completed in full compliance with all applicable regulations and approved by the appropriate regulatory agency(ies) (40 CFR, Subchapter R, TSCA, Parts 716, 745, 761, 763, and 795 and California Code of Regulations [CCR] Title 8, Article 2.6). An Operating & Maintenance (O&M) Plan shall be prepared for any ACM, LBP, PCB-containing fixtures, or other hazardous building materials to remain in place and will be reviewed and approved by the County Environmental Health Division. **MM-HAZ-2:** *Contingency Plan*. Prior to commencement of grading activities, the Director of the County Environmental Health Division, or designee, shall review and approve a contingency plan that addresses the procedures to be followed should on-site unknown hazards or hazardous substances be encountered during demolition and construction activities. The plan shall indicate that if construction workers encounter underground tanks, gases, odors, uncontained spills, or other unidentified substances, the contractor shall stop work, cordon off the affected area, and notify the Garden Grove Fire Department (GGFD). The GGFD responder shall determine the next steps regarding possible site evacuation, sampling, and disposal of the substance consistent with local, State, and federal regulations.	Director of the Orange County Environmental Health Division, or designee.	Prior to the commencement of grading activities.
3.9 HYDROLOGY AND WATER QUALITY		
The proposed Project would not result in significant adverse impacts related to hydrology and water quality. No mitigation would be required.		
3.10 LAND USE/PLANNING		

Mitigation	Responsible Party	Timing
The proposed Project would not result in significant adverse impacts related to land use/planning. No mitigation would be required.		
3.11 MINERAL RESOURCES		
The proposed Project would not result in significant adverse impacts related to mineral resources. No mitigation would be required.		
3.12 NOISE		
MM- NOI-1: During grading and construction, the City of Garden Grove (City) Building Official, or designee, shall verify that the following measures are implemented to reduce construction noise and vibrations, emanating from the proposed Project: • During all Project site demolition, excavation and grading on-site, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer standards. • The contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site. • Equipment shall be shut off and not left to idle when not in use. • The contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the Project site during all Project construction. • The contractor shall limit the use of heavy equipment or vibratory rollers and soil compressors along the Project boundaries to the greatest degree possible.	City of Garden Grove Building Official, or designee.	During grading and construction activities.
3.13 POPULATION AND HOUSING		
The proposed Project would not result in significant adverse impacts related to population or housing. No mitigation would be required.		
3.14 PUBLIC SERVICE		
The proposed Project would not result in significant adverse impacts related to public services. No mitigation would be required.		
3.15 RECREATION		
The proposed Project would not result in significant adverse impacts related to recreation. No mitigation would be required.		
3.16 TRANSPORTATION/TRAFFIC		
The proposed Project would not result in significant adverse impacts related to transportation or traffic. No mitigation would be required.		
3.17 TRIBAL CULTURAL RESOURCES		
The proposed Project would not result in significant adverse impacts related to tribal cultural resources. No mitigation would be required.		
3.18 UTILITIES/SERVICE SYSTEMS		
The proposed Project would not result in significant adverse impacts related to utilities/service systems. No mitigation would be required.		

5.0 REFERENCES

All Technical Appendices are referenced in the Table of Contents

Assembly Bill (AB) 52
http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB52

Assembly Bill (AB) 939
http://www.calrecycle.ca.gov/laws/legislation/calhist/1985to1989.htm

California Building Code
http://www.bsc.ca.gov/Home/Current2013Codes.aspx

California Department of Finance
http://www.dof.ca.gov/

California Department of Finance. E-5 City/County Population and Housing Estimates, May 2014
http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/

California Department of Fish and Wildlife's California Natural Diversity Database
https://www.wildlife.ca.gov/Data/CNDDB

California Geological Survey Liquefaction Hazard Zone
http://maps.conservation.ca.gov/cgs/informationwarehouse/

CalRecycle
http://www.calrecycle.ca.gov/

City of Garden Grove, Urban Water Management Plan (2010)
http://www.water.ca.gov/urbanwatermanagement/2010uwmps/Garden%20Grove,%20City%20of/Garden%20Grove%20Final%202010%20UWMP.pdf

Department of Conservation Regional Wildcat District W1-6 Map
ftp://ftp.consrv.ca.gov/pub/oil/maps/dist1/w1-6/Mapw1-6.pdf

Expansive soils defined
http://web.mst.edu/~rogersda/expansive_soils/Various%20Aspects%20of%20Expansive%20Soils.pdf

Farmland Mapping and Monitoring Program of the California Resources Agency
ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/regional/2014/so_cal_urban_change_8414.pdf

Garden Grove Fire Department (GGFD)
http://www.ci.garden-grove.ca.us/fire

City of Garden Grove Parks & Facilities
http://www.ci.garden-grove.ca.us/commserv/parksfacilities

Garden Grove Sanitary District
http://www.ci.garden-grove.ca.us/pw/sanitarymap

National Recreation and Park Association
http://www.nrpa.org/

OCTA BUS
http://www.octa.net/ebusbook/routePdf/WCCounty.pdf

OC Waste & Recycling
http://www.oclandfills.com/landfill/active/olindalandfill

Orange County Central Coastal Natural Communities Conservation Plan (NCCP)/ Habitat Conservation Plan (HCP)
https://www.wildlife.ca.gov/Conservation/Planning/NCCP/Plans/Orange-Coastal

Orange County CMP
http://www.octa.net/pdf/Final%202015%20CMP.pdf

Orange County Flood Control District (OCFCD)
http://www.ocflood.com/

Orange County Sanitation District (OCSD)
https://www.ocsd.com/

Republic Services
https://www.republicservices.com/

Senate Bill (SB) 18
http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200320040SB18

Significant Mineral Aggregate Resource Area (SMARA)
http://www.conservation.ca.gov/cgs/information/publications/ms/Documents/MS_52_2012.pdf

Southern California Association of Governments, Integrated Growth Forecast, Regional Transportation Plan 2012
http://rtpscs.scag.ca.gov/Documents/2012/final/f2012RTPSCS.pdf

State of California Department of Conservation, Orange County Tsunami Inundation Maps
http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=tsunami

United States Census Bureau, 2010 Census
https://www.census.gov/2010census/

6.0 PREPARERS

This Initial Study was prepared for the City of Garden Grove by Matthew Fagan Consulting Services, Inc. The following professionals contributed information for its preparation:

CITY OF ORANGE COUNTY – Erin Webb, Senior Planner; Public Works Department.

MATTHEW FAGAN CONSULTING SERVICES, INC. – Initial Study: Matthew Fagan, President/Owner; Angie Douvres – Coordination, Research and Editing.

KTGY ARCHITECTURE AND PLANNING – Architectural elevations.

KUNZMAN ASSOCIATES, INC. – Air Quality and Global Climate Change Impact Analysis; Nosie Impact Analysis; and Focused Traffic Analysis.

LGC GEO-ENVIRONMENTAL, INC. – Preliminary Geotechnical Investigation Report and Liquefaction Study.

PARTNER ENGINEERING & SCIENCE, INC. – Phase I Environmental Site Assessment Report.

PROACTIVE ENGINEERING CONSULTANTS, INC. – Water Quality Management Plan; Preliminary Drainage Report; and Project Plans.