ECONOMIC DEVELOPMENT DEPARTMENT
PLANNING DIVISION

City Hall West
11333 Valley Boulevard
El Monte, CA. 91731-3293

FINAL

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

FOR

VALLEY & RAMONA RESIDENTIAL PROJECT AT 11127 RAMONA BOULEVARD

Zoning Change (ZC) 01-15, Tentative Tract Map (TTM) 73528,
Variance 03-15, Design Review (DR) 05-15

Prepared for:

City of El Monte

Contact: Tony Bu, Assistant Planner
City Hall West
11333 Valley Boulevard
El Monte, CA. 91731-3293
Phone: (626) 258-8626
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March 21, 2016

Final Initial Study/Mitigated Negative Declaration
for Valley & Ramona Residential Project at 11127 Ramona Boulevard

The Final Initial Study/Mitigated Negative Declaration for the Valley & Ramona Residential project consists of the following documents:

1. Revised CEQA Compliance Related to Various Changes in the Project and Errata, dated March 7, 2016. This letter assesses potential changes to the February 9, 2016 Mitigated Negative Declaration (MND) analysis and findings related to the following issues:

   a) Modification to the Valley & Ramona Residential project requiring only one vehicular access point from Valley Boulevard;
   b) Deletion of Zoning Map Change for the Adjacent Property at 11105 and 11107 Ramona Boulevard;
   c) Addition of 0.04 acre property between the project site and Ramona Boulevard.

   An attachment from Kunzman Associates, Inc., dated February 26, 2016, relative to the modification to the Valley & Ramona Residential project requiring only one vehicular access point from Valley Boulevard is included.

   This letter also adds an errata updating Table 8 "Fire Station Resources" of the MND pursuant to correspondence from the County of Los Angeles Fire Department to the City of El Monte, dated March 2, 2016.

2. Initial Study/Mitigated Negative Declaration for the Valley & Ramona Residential Project at 11127 Ramona Boulevard And Zoning Map Change For Adjacent Property At 11105 And 11107 Ramona Boulevard, dated February 9, 2016. This document was distributed for public review and reviewed and recommended for approval by the Planning Commission on March 8, 2016.

3. Technical Appendices to the Initial Study/Mitigated Negative Declaration for the Valley & Ramona Residential Project at 11127 Ramona Boulevard And Zoning Map Change For Adjacent Property At 11105 And 11107 Ramona Boulevard, dated February 9, 2016, including:

   a) Air Quality Study
   b) Health Risk Assessment
   c) Noise Study
   d) Traffic Study
   e) Parking Study.

4. Mitigation Monitoring Report for Valley & Ramona Residential Project at 11127 Ramona Boulevard, Zoning Change (ZC) 01-15, Tentative Tract Map (TTM) 73528, Variance 03-15, Design Review (DR) 05-15, dated March 7, 2016.

5. Comments Received and Responses to Comments for the Initial Study/Mitigated Negative Declaration for the Valley & Ramona Residential Project at 11127 Ramona Boulevard And Zoning Map Change For Adjacent Property At 11105 And 11107 Ramona Boulevard, dated February 9, 2016. Comments were received from the following parties:

   a) Kevin T. Johnson, Acting Chief, Forestry Division Prevention Services Bureau, County of Los Angeles Fire Department
   b) Jillian Wong, Ph.D., Program Supervisor, Planning, Rule Development & Area Sources, South Coast Air Quality Management District
   c) Elizabeth Carvajal, Transportation Planning Manager, Metro, Los Angeles County Metropolitan Transportation Authority
   d) Ron Mathieu, Sr. Public Projects Specialist, Southern California Regional Rail Authority (SCRRA), Metrolink
   e) Robert Torres.

Comprehensive Planning Services

March 7, 2016

Jason Mikaelian, AICP, LEED AP
City Planner
Economic Development Department
City of El Monte
11333 Valley Boulevard
El Monte, California 91731

Re: **Valley & Ramona Residential Project at 11127 Ramona Boulevard Mitigated Negative Declaration**

Revised CEQA Compliance Related to Various Changes in the Project and Errata

Dear Mr. Mikaelian:

This letter assesses potential changes to the February 9, 2016 Mitigated Negative Declaration (MND) analysis and findings related to the following issues:

1. Modification to the Valley & Ramona Residential project requiring only one vehicular access point from Valley Boulevard;
2. Deletion of Zoning Map Change for the Adjacent Property at 11105 and 11107 Ramona Boulevard;
3. Addition of 0.04 acre property between the project site and Ramona Boulevard.

This letter also adds an errata updating Table 8 "Fire Station Resources" of the MND pursuant to correspondence from the County of Los Angeles Fire Department to the City of El Monte, dated March 2, 2016.

<u>Single Point of Access Modification</u>

The MND for the Project was distributed for public review on February 10, 2016. The Project considered in the MND consists of two components:

(1) The Olson Company initiated application to develop the Valley & Ramona Residential project, which consists of a 62 single family attached residential community, located at 11127 Ramona Boulevard; and

(2) The City of El Monte initiated application to rezone the adjacent property located at 11105 and 11107 Ramona Boulevard to Mixed/Multiuse (MMU) similar to the rezoning required for the Valley & Ramona Residential project.

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The MND considered two access scenarios for the Valley & Ramona Residential project: (1) Alternative 1 which provides access on Valley Boulevard and an emergency access only on Ramona Boulevard; (2) Alternative 2 which provides access on Valley Boulevard and an access on Ramona Boulevard. Both alternatives were found not to have significant impacts on the study area intersections for Opening Year (2017) With Project traffic conditions and would provide for adequate emergency access.

Kunzman Associates, Inc. (Kunzman), the traffic consultant that prepared the Traffic Impact Analysis (TIA) of the Project for the MND assessed the potential impacts on traffic and emergency access should the Valley & Ramona Residential project have only on access point. As summarized in the attached February 26, 2016 letter from Kunzman, a project scenario with one access only on Valley Boulevard would not have significant impacts on the study area intersections for Opening Year (2017) With Project traffic conditions as this project scenario is identical to the Alternative 1 scenario in terms of trip generation and distribution as analyzed in the TIA. In addition, an emergency vehicle situated on either Valley Boulevard or Ramona Boulevard can reach the farthest point of the project site in less than 1,000 feet. This ensures that adequate emergency access is provided for this project scenario.

The findings presented in the MND Transportation/Traffic Section XVI would not change with a one access only alternative for the Valley & Ramona Residential project. Specifically, the findings under Checklist Item #XVI.a, which state that Project traffic impacts for would be less than significant remains accurate. Checklist Item #XVI.d recommends Mitigation Measure TR-1 which outlines improvements for Valley Boulevard and Ramona Boulevard. This mitigation would remain under the one access only alternative and potential roadway hazards from Project development would remain at less than significant levels. Because an emergency vehicle situated on either Valley Boulevard or Ramona Boulevard could reach the farthest point of the project site in less than 1,000 feet, the findings under Checklist Item XVI.e that the Project will have adequate emergency access remains unchanged.

<u>Deletion of Zoning Map Change for the Adjacent Property at 11105 and 11107 Ramona Boulevard</u>

The MND included analysis of a project part #2, identified as a City initiated rezoning of the adjacent property (project site #2) located at 11105 and 11107 Ramona Boulevard to MMU zone. The property consists of approximately 11,000 square feet. No other entitlements or construction were proposed for project part #2. The property owner for this site has requested that the City withdraw this rezoning application at this time. Consequently, all references to the project part #2 and the 11105 and 11107 Ramona Boulevard site will be deleted from the MND, including Mitigation Measure HAZ-3 which was added to require a Phase I Environmental Assessment and applicable follow-up prior to development of the site.

Deletion of the property located at 11105 and 11107 Ramona Boulevard from the Project reduces the size and potential impacts associated with the Project. Consequently, potential impacts identified in the MND would be less with the 11105 and 11107 Ramona Boulevard property removed.

<u>Addition of 0.04 acre property between the Project site and Ramona Boulevard</u>

The 0.04 acre property is located between the southern boundary of the Valley & Ramona Residential project site and the Ramona Boulevard right of way. This property is known as the ACE property (APN: 8568-032-911). This site is a remnant parcel from the railroad underpass project and is still owned by ACE. It is used exclusively for landscaping and slope purposes. The City is requesting that this remnant parcel be rezoned as part of the Valley & Ramona Residential project from C3-D to MMU consistent with the City of El Monte General Plan.

The rezoning of this remnant parcel avoids a potential island between the Valley & Ramona Residential project site and the Ramona Boulevard right of way. Because this parcel is only 0.04 acres and is physically sloped and configured as a triangular-shaped sliver, no additional dwelling unit or development could occur on this parcel. Consequently, because the addition of the remnant parcel would not result in any additional development, no additional potential impacts would occur and the analysis within the MND would not change.

Errata related to MND Table 8

The City of El Monte received a March 2, 2016 correspondence from the County of Los Angeles Fire Department regarding the proposed Project and the MND. Included in the correspondence is a correction to Table 8 "Fire Station Resources" of the MND, which corrected the address of Station 166, added Station 168 and updated information regarding station equipment and staffing. This corrected and updated information is presented in the table below. No other changes to the MND are required as a result of the comments made by the Fire Department's correspondence.

TABLE 8. FIRE STATION RESOURCES

Name and Location	Equipment	Daily Firefighter Staffing
Fire Stations in El Monte		
Station 166 at 3615 Santa Anita Ave.	1 quint[1]	4
Station 167 at 11567 Bryant Road	1 engine and 1 paramedic squad	5
Station 168 at 3207 Cogswell Road	1 engine	3
Station 169 at 5112 N. Peck Road	1 engine	3
Fire Stations within One Mile of El Monte City Limits		
Station 42 at 9319 Valley Boulevard in City of Rosemead, about 0.2 mile west of El Monte city limits	1 engine	4
Station 90 at 10115 E. Rush Street in City of South El Monte, about 0.5 mile south of El Monte city limits	1 engine and 1 paramedic squad	5

[1] A quint is a combination fire engine and ladder truck

Findings

Pursuant to Section 15073.5 of the California Environmental Quality Act (CEQA) Guidelines, a lead agency is required to recirculate a negative declaration when the document must be substantially revised after public notice of its availability has been previously given. A "substantial revision" is defined as: (1) a new, avoidable significant effect is identified and mitigation measures or project revisions must be added in order to reduce the effect to insignificance; or (2) the lead agency determines that the proposed mitigation measures or project revisions will not reduce potential effects to less than significance and new measures or revisions must be required.

As summarized in this letter and the attached Kunzman letter, the one access only alternative for the Valley & Ramona Residential project does not change the findings or mitigation measures presented in the MND, and no revisions or recirculation of the MND is required.

Deletion of the property located at 11105 and 11107 Ramona Boulevard (project site #2) from the Project reduces the size and potential impacts associated with the Project. This deletion does not change the findings presented in the MND, and results in deletion of Mitigation Measure HAZ-3 which relates solely to the future development of the project site #2. This deletion reduces potentially significant impacts and does not create any new impacts from that currently addressed within the MND. Consequently, this change does not require the recirculation of the MND.

The addition of rezoning for the remnant ACE parcel would not result in any additional development. This addition does not create any new impacts from that currently addressed within the MND. Consequently, this change does not require the recirculation of the MND.

Changes to Table 8 of the MND will be incorporated in the final adopted MND. These changes clarify information but do not alter the analysis or findings of the MND. Consequently, recirculation of the MND is not required.

Please let me know if you have any questions.

Yours truly,

Joann Lombardo

Joann Lombardo
Principal Consultant

attachment: February 26, 2016 correspondence from Kunzman Associates, Inc.

KUNZMAN ASSOCIATES, INC.
OVER 40 YEARS OF EXCELLENT SERVICE

February 26, 2016

Ms. Joann Lombardo, Principal
COMPREHENSIVE PLANNING SERVICES
P.O. Box 15592
Newport Beach, CA 92659

Dear Ms. Lombardo:

INTRODUCTION

The firm of Kunzman Associates, Inc. is pleased to provide this memorandum regarding the Valley & Ramona Traffic Impact Analysis prepared by Kunzman Associates Inc. (October 8, 2016). The project site is located at 11127 Ramona Boulevard in the City of El Monte. The Valley & Ramona project consists of 62 townhome dwelling units with 4 live/work units utilizing 1,750 square feet of specialty retail.

TRAFFIC IMPACT ANALYSIS FINDINGS

The traffic impact analysis considered two access alternatives. Alternative 1 consists of a project access on Valley Boulevard and an emergency access only on Ramona Boulevard. Alternative 2 consists of an access on Valley Boulevard and an access on Ramona Boulevard.

As shown in Table 11 of the traffic impact analysis, there are no significant impacts at the study area intersections for Opening Year (2017) With Project traffic conditions for Alternative 1. As shown in Table 12 of the traffic impact analysis, there are no significant impacts at the study area intersections for Opening Year (2017) With Project traffic conditions for Alternative 2. Therefore, neither alternative is projected to have significant impacts on the study area intersections for Opening Year (2017) With Project traffic conditions.

With Alternative 1 having a project access on Valley Boulevard and an emergency access on Ramona Boulevard, this access alternative provides one point of access, with the second access being accessible for emergency situations only. With Alternative 2 having an access on both Valley Boulevard and on Ramona Boulevard, this access alternative provides two points of access for the project site. In addition, an emergency vehicle situated on either Valley Boulevard or Ramona Boulevard can reach the farthest point of the project site in less than 1,000 feet. This ensures that adequate emergency access is provided for both alternatives.

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CONCLUSIONS

Alternative 1 providing one access on Valley Boulevard would not have significant impacts on the study area intersections for Opening Year (2017) With Project traffic conditions and would provide for adequate emergency access.

Alternative 2 providing one access on Valley Boulevard and one access on Ramona Boulevard would not have significant impacts on the study area intersections for Opening Year (2017) With Project traffic conditions and would provide for adequate emergency access.

A project scenario with one access only on Valley Boulevard would not have significant impacts on the study area intersections for Opening Year (2017) With Project traffic conditions as this project scenario is identical to the Alternative 1 scenario in terms of trip generation and distribution as analyzed in the traffic impact analysis. In addition, an emergency vehicle situated on either Valley Boulevard or Ramona Boulevard can reach the farthest point of the project site in less than 1,000 feet. This ensures that adequate emergency access is provided for this project scenario.

All three of these scenarios would not have significant impacts on the study area intersections for Opening Year (2017) With Project traffic conditions and would provide for adequate emergency access.

It has been a pleasure to service your needs on this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 973-8383.

Sincerely,

KUNZMAN ASSOCIATES , INC.

Bryan Crawford
Associate

#6208a

REGISTERED PROFESSIONAL ENGINEER
WILLIAM A. KUNZMAN
No. TR0056
TRAFFIC
STATE OF CALIFORNIA

KUNZMAN ASSOCIATES, INC.

William Kunzman

William Kunzman, P.E.
Principal

ECONOMIC DEVELOPMENT DEPARTMENT
PLANNING DIVISION

City Hall West
11333 Valley Boulevard
El Monte, CA. 91731-3293

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

FOR

VALLEY & RAMONA RESIDENTIAL PROJECT AT 11127 RAMONA BOULEVARD AND ZONING MAP CHANGE FOR ADJACENT PROPERTY AT 11105 AND 11107 RAMONA BOULEVARD

Zoning Change (ZC) 01-15, Tentative Tract Map (TTM) 73528,
Variance 03-15, Design Review (DR) 05-15

Prepared for:

City of El Monte

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February 9, 2016

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APPENDICES

A. Valley & Ramona Residential/Mixed Use Project and Zoning Map Change for Adjacent Property Located at the Northeast Corner of Valley Boulevard and Ramona Boulevard in the City of El Monte Focused Air Quality and Greenhouse Gas Analysis, prepared by Synectecology, January 2016.

B. Valley & Ramona Residential Project Health Risk Assessment", prepared by Tin Cheung & Associates, August 2015.

C. Noise Impact Analysis, Valley & Ramona Residential Project", prepared by Giroux and Associates, October 2015.

D. Valley & Ramona Traffic Impact Analysis, prepared by Kunzman Associates October 2015; Supplemental information provided by Kunzman Associates, December 2015.

E. Valley & Ramona Parking Analysis, prepared by Kunzman Associates October 2015.

F. Valley & Ramona Trip Generation Comparison Analysis to Assess Traffic Impacts Associated with Zoning Map Change for Adjacent Property Located at the Northeast Corner of Valley Boulevard and Ramona Boulevard in the City of El Monte, prepared by Kunzman Associates January 2016.

EXECUTIVE SUMMARY

This Initial Study assesses the potential environmental impacts of a proposal by The Olson Company to construct and operate the Valley & Ramona Residential project, which consists of a 62 single family attached residential community, located at 11127 Ramona Boulevard in the City of El Monte. This project is referred to within this document as the Valley & Ramona Residential project (or project part # 1), and the site as project site #1.

This Initial Study also assesses the potential environmental impacts associated with a City initiated Zoning Map change for the adjacent property at 11105 and 11107 Ramona Boulevard. This project is referred to within this document as project part # 2, and the site as project site #2.

Project parts #1 and #2 are related because of their adjacency and their mutual requirement for a zone change to Mixed/Multiuse (MMU), consistent with the City of El Monte General Plan. Both parts #1 and #2 comprise the Project and all references in this document to the Project refer to both parts. Similarly, all references in this document to the Project site refer to both project sites #1 and #2.

This Initial Study finds with the imposition of mitigation measures related to Air Quality, Biological Resources, Cultural Resources, Hazards and Hazardous Materials, Noise and Transportation/Traffic delineated herein, all potentially significant impacts associated with the Project would be reduced to less than significant levels. Consequently, a Mitigated Negative Declaration will be prepared for the Project.

1. INTRODUCTION

This Initial Study has been prepared in accordance with relevant provisions of the California Environmental Quality Act (CEQA) of 1970, as amended, and the CEQA Guidelines. Section 15063(c) of the CEQA Guidelines indicates that the purposes of an Initial Study are to:

1. Provide the Lead Agency (i.e. the City of El Monte) with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR) or Negative Declaration;

2. Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the Project to quality for a Negative Declaration or Mitigated Negative Declaration ;

3. Assist the preparation of an EIR, if one is required, by:
   - Focusing the EIR on the effects determined to be significant;
   - Identifying the effects determined not to be significant;
   - Explaining the reasons why potentially significant effects would not be significant; and
   - Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects;

4. Facilitate environmental assessment early in the design of a project;

5. Provide documentation of the factual basis for the findings in a Negative Declaration or Mitigated Negative Declaration that a project will not have a significant effect on the environment;

6. Eliminate unnecessary EIRs; and

7. Determine whether a previously prepared EIR could be used with the project.

INCORPORATION BY REFERENCE

The information contained in this document is based, in part, on the following documents that include the Project site or provide information addressing the general project area or use:

- **City of El Monte Vision El Monte General Plan** (General Plan)**.** The General Plan, adopted June 2011, is a policy document designed to provide long-range guidance for decision-making affecting the future character of El Monte. It represents the official statement of the community's physical development, as well as its economic, social, and environmental goals. The Plan was used throughout this Initial Study as the fundamental planning document governing development on the Project site.

- **The Final City of El Monte General Plan and Zoning Update Environmental Impact Report** (State Clearinghouse No. 2008071012), (General Plan EIR). The General Plan EIR was prepared in support of the General Plan and in accordance with the California Environmental Quality Act (CEQA) as amended (Public Resources Code Section 21000 et seq.) and CEQA Guidelines (California Administrative Code Section 15000 et seq.). The General Plan EIR identifies baseline conditions for the City, potential impacts associated with implementing the General Plan and mitigation measures necessary to reduce potential impacts to less than significant levels.

- **City of El Monte Zoning Code.** Chapter 17 of the City of El Monte Municipal Code establishes the basic zoning regulations under which land is developed and utilized and by which the General Plan is systematically implemented. This includes allowable uses, building setback and height requirements, and other development standards. The basic intent of the El Monte Zoning Code is to promote and protect the public health, safety, convenience, and welfare of present and future citizens of the City.

2. PROJECT DESCRIPTION

The Project consists of project part #1, which is the Valley & Ramona Residential project that proposes to create a sixty-two (62) unit residential community with six common areas at 11127 Ramona Boulevard (project site #1) in the City of El Monte. The project site #1 is 3.08 acres (134,035 square feet) in size, currently undeveloped and covered with paving and scattered vegetation. Removal of the paving and vegetation and the filling of the site with 3600 cubic yards of imported soil is part of the Valley & Ramona Residential project (project part #1). Its development requires a rezoning to Mixed/Multiuse (MMU) zone which is intended to provide opportunities for new mixed/multiuse housing along major corridors, and would be consistent with the pending Downtown Specific Plan.[1] Project part #1 entitlement also includes:

- Environmental Compliance: To ensure consistency with CEQA
- Design Review: For review of new commercial units
- Tentative Tract Map: To subdivide the lot for ownership units
- Variance or Modification to zoning: To allow for a variation from the MMU zone, including:
  a) Modification for the wall height on Ramona Boulevard and along the railroad tracks; also a modification for the wall setback on Ramona Boulevard
  b) Modification to the density

[1] The City of El Monte is in the process of preparing a transit oriented development specific plan for the City's downtown area. A draft of the Specific Plan document is currently available. It contains proposed development and design standards to ensure the consistent development of the downtown, inclusive of the Project site. An EIR for the Specific Plan is currently being prepared. http://elmonteca.gov/Government/EconomicDevelopment/Planning/PlanningDocuments.aspx; accessed January 29, 2016.

c) Modification to the distance between buildings
d) Modification to the ground floor interior height for the live-work units.
e) Variance to provide individual trash carts

The Project also consists of project part #2 is a City initiated rezoning of the adjacent property (project site #2) to MMU zone. No other entitlements or construction are proposed for project part #2. Project site #2 is located at 11105 and 11107 Ramona Boulevard in the City of El Monte and consists of approximately 11,000 square feet.

Location

The Project site is northeast of Ramona Boulevard and Valley Boulevard in the City of El Monte, and addressed as 11127, 11105 and 11107 Ramona Boulevard. Figure 1 shows the Project's regional location and Figure 2 shows the Project location aerial map with surrounding land uses. Figure 3 shows project sites #1 and #2 locations on an aerial map.

Concept Site Plan

Figure 4, Conceptual Site Plan for the Valley & Ramona Residential project, presents the concept site plan for project part #1 which includes 62 detached dwelling units with common landscape and amenity areas. As outlined in Table 1, Valley & Ramona Land Use Summary, the 62 dwelling units on site are divided into 7 floor plans. The style of the units includes the Live/Work Units, Townhome and narrow lot Townhome. The Live/Work units include office or retail space on the first floor.

As proposed, the project part #1 maximum building height is 3 stories and 40 feet. Proposed minimum building separation is 10 feet; and proposed minimum setbacks are 1-14 feet at the front, 8-15 feet at the side and 10 feet at the rear. Proposed private open spaces consist of either front yard patios, decks, courtyards or porches. Total private open space proposed for the Project is 8,035 square feet. Proposed Common Open Space consists of 232 square feet per unit, for a total common open space for the Project of 14,411 square feet. Total proposed building coverage is 46,067 square feet or 34% of the Project site area, and Project gross density is 20 units per acre and net density is 23 units per acre.

Table 1: Valley & Ramona Project Land Use Summary

Plan Type	Number of Units	Total Living Area Square Feet (SF)	Floor Plan	Private Parking
Carriage Unit	9	1,195	2-bedroom 2.5-bath	2-car garage
Single Aspect Home	13	1,324	2-bedroom 2.5-bath	2-car garage

TABLE 1: VALLEY & RAMONA PROJECT LAND USE SUMMARY				
Plan Type	Number of Units	Total Living Area Square Feet (SF)	Floor Plan	Private Parking
Tandem 16' Wide Units	13	1,552	3-bedroom 3-bath	2 tandem
16' Wide Units	13	1,6651	3-bedroom 3.5-bath	2-car garage
28.5' Wide Units	4	1,689	3-bedroom 2.5-bath	2-car garage
21' Wide Units	6	1,822	4-bedroom 3.5-bath	2-car garage
Live Work Units[1]	4	2,297	3-bedroom 3.5-bath	2-car garage
Totals	62			
[1] Includes approximately 437.5 square feet of office/retail space on the first floor of each Live/Work unit, for a total of 1,750 square feet of office/retail space.				

With each unit receiving 2 garage spaces as shown in Table 1 above, the project part #1 proposes a total of 124 private garage spaces. In addition, it proposes 35 off-street resident guest parking spaces (3 of which are for disabled access), 6 Live/Work off-street guest parking spaces, and 4 off-street driveway spaces. Total parking provided is 169 spaces, which breaks down as 2.73 spaces per unit.

PROJECT ARCHITECTURAL CONCEPT

Each of the 7 plan types in the Valley & Ramona site plan share a similar architectural style that consists of Spanish elements including: tile roofing, light sand colored stucco exterior walls, stucco window sill trim, wrought iron railing, decorative entry doors and decorative lighting, and wood post and corbel. Figure 5 shows the architectural elevations for the Live/Work units.

REQUIRED ENTITLEMENTS

According to the City of El Monte General Plan, the Project site is within El Monte's Downtown, which encompasses 200 acres, bordered by the Rio Hondo River, Interstate 10, and Ramona Boulevard. Current General Plan designation on the Project site is Downtown Core which allows a range of land uses and development types that create a vibrant mixed-income and multiuse environment. To provide for an appropriate mix of land uses within the Downtown, the General Plan specifies that a Downtown Specific Plan shall be created. The City Economic Development Department has initiated the Downtown Specific Plan Process. When complete, the General Plan designation for the Downtown, including the Project site, will be Downtown Specific Plan.

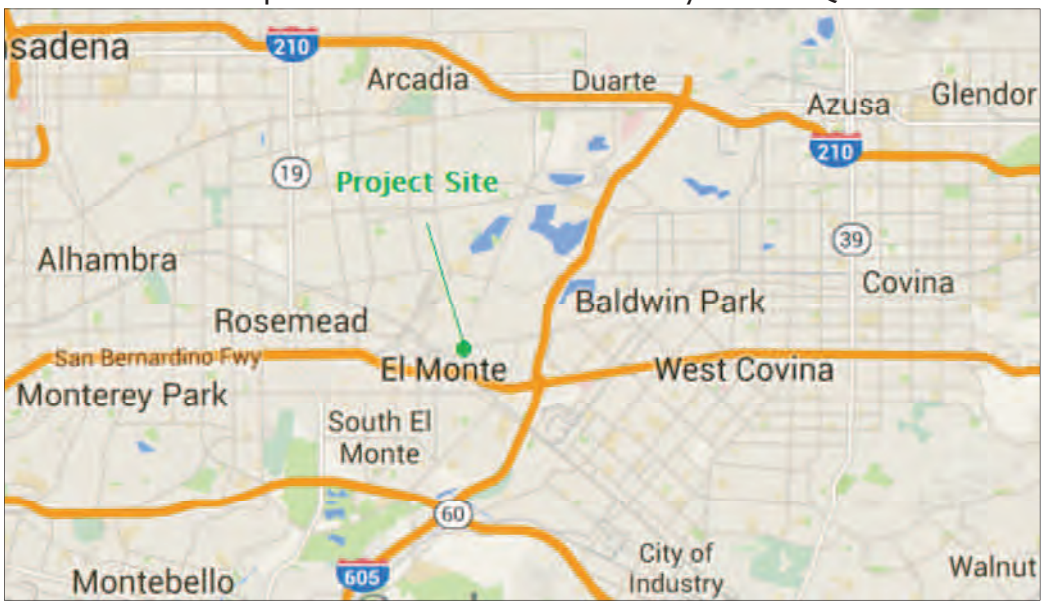
Current zoning for the Project site is C3-D which allows for a wide variety of stores and business. To entitle the Project, both project sites #1 and #2 require rezoning to Mixed/Multiuse (MMU) zone which is intended to provide opportunities for new mixed/multiuse housing along major corridors, and would be consistent with the

Downtown Specific Plan. Entitlement for the project site #1 to facilitate development of the Valley & Ramona Residential project also includes:

- Design Review: For review of new commercial units
- Tentative Tract Map: To subdivide the lot for ownership units
- Variance or Modification to zoning: To allow for a variation from the MMU zone.

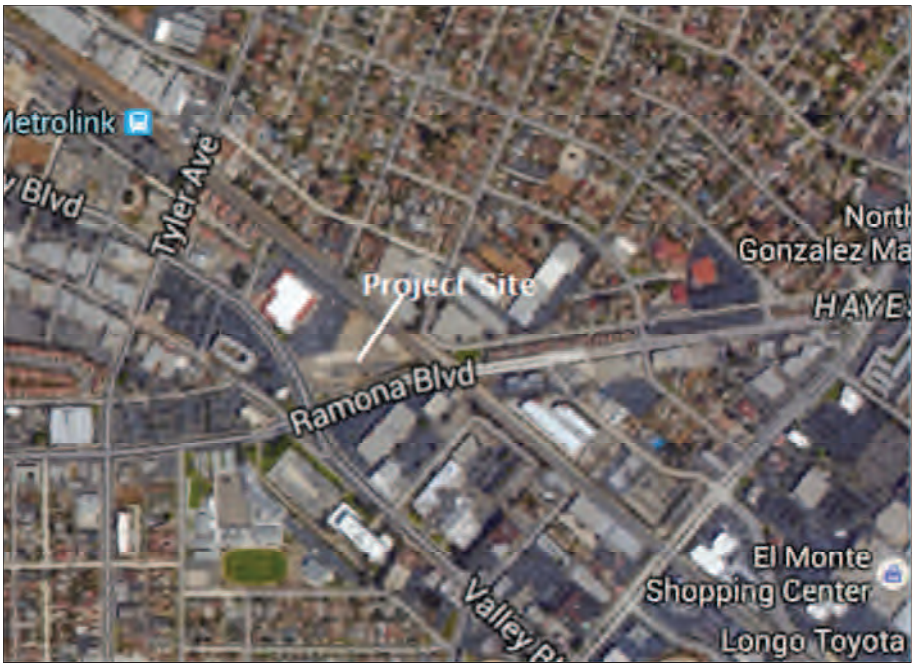
The Project also requires

- Environmental Compliance: To ensure consistency with CEQA.



(SOURCE: GOOGLE MAPS)

FIGURE 1. REGIONAL LOCATION MAP



(SOURCE: GOOGLE MAPS)

FIGURE 2. PROJECT AERIAL LOCATION MAP

FIGURE 3. PROJECT SITES #1 AND #2 AERIAL LOCATION

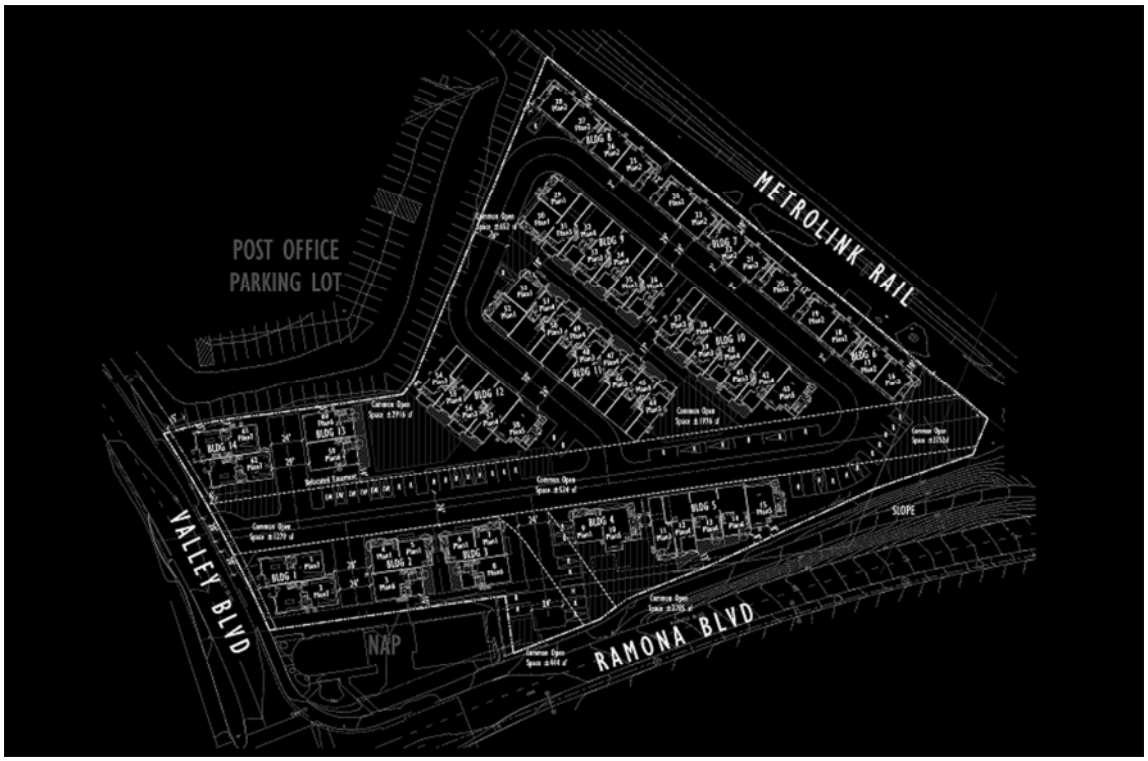


FIGURE 4. PROJECT CONCEPT SITE PLAN FOR THE VALLEY & RAMONA RESIDENTIAL

FIGURE 5. ARCHITECTURAL STYLE – LIVE/WORK

PHASING

Development of the Valley & Ramona Residential project on project site #1 is proposed to occur in six phases and to be completed and occupied in 2017. No development plans for project site #2 are currently proposed.

3. EXISTING PROJECT SITE CONDITIONS

Project site #1 consists of 4 parcels totaling 134,035 square feet or 3.08 acres, near the northeast corner of Ramona Boulevard and Valley Boulevard in the City of El Monte, County of Los Angeles, California. Topography of the site is relatively flat with a slight gradient to the west. Most of the surface of the site is concrete and asphalt, the property is fenced and contains billboards facing out to Valley Boulevard and Ramona Boulevard. There are also two storm drains and a sump in the southern portion, and a concrete pad in the northern portion with several parking spaces labeled as "bus parking only". Currently, the site is accessible from a gate along Valley Boulevard. Past uses on the project site #1 include a dry cleaner, automotive repair building and an El Monte Union High School facility.

Project site #2 is approximately 11,000 square feet or 0.25 acres in size and consists of two retail one-story buildings, one which is 1,612 square feet, and the second which is 1,312 square feet. Both buildings were constructed around 1960 and have been vacant since 2012. Past uses at the buildings include a floral shop, smoke shop, general office and retail. The remainder of project site #2 is paved with some lawn area and scattered shrubs.

The El Monte Legion Stadium once occupied the full Project site as well as the existing El Monte Post Office site immediately to the northwest. Constructed in 1926 by the El Monte Union High School District, the stadium was first used as an auditorium and gymnasium for the high school. During World War II, the school district rented the majority of the stadium building to the Defense Department and Northrup Aircraft, and subsequently sold the building to the El Monte American Legion Post #261. Following the war, the Legion turned the stadium into a boxing and wrestling venue, hosting televised matches including those fought by then famous wrestlers, Gorgeous George and Mr. Moto. In 1950, the stadium was rented out as a western music hall, which ran a televised program called "The Home Town Jamboree". The show was popular and showcased a number of well-known performers, including Tennessee Ernie. In the 1960's, the stadium was turned over to a rock & roll venue, where disc jockey, Art Laboe

hosted dance shows. By 1970, the cost of maintaining the stadium became too costly and the Legion sold the building to the United States Government. The building was subsequently demolished and the northwesterly portion of the property became the site of the El Monte Post office. [2]

Figure 6 shows an aerial of the existing conditions of the Project site. Figure 7 provides a photo key map of the Project site and surrounding areas, and Figures 8, 9 and 10, Photos 1-9, show photos of existing site conditions.

FIGURE 6. EXISTING PROJECT SITE CONDITIONS

SURROUNDING LAND USES

The Project site is located within a commercial area of El Monte. Surrounding properties include the following:

[2] Information provided by City of El Monte Economic Development staff, January 29, 2016.

- North: United States Postal Service facility
- South: Ramona Boulevard, then the County Courthouse and retail
- East: Railroad tracks followed by several commercial properties
- West: Valley Boulevard followed by a bank and Valley Mall.

Figures 7 and 9, Photos 10-12, show photos of surrounding areas.

Figure 7. Photo Key Map

Figure 8. Existing Condition Photos

Figure 9. Existing Conditions Photos

Figure 10. Existing Conditions Photos

4. INITIAL STUDY ENVIRONMENTAL CHECKLIST FORM

1. **Project Title:** Valley & Ramona Residential project at 11127 Ramona Boulevard and Zoning Map Change for Adjacent Property at 11105 and 11107 Ramona Boulevard (Zoning Change 01-15, Tentative Tract Map 73528, Variance 03-15, Design Review 05-15).

2. **Lead Agency Name and Address:** City of El Monte, 11333 Valley Boulevard, El Monte, California 91731.

3. **Contact Person and Contact Information:** Tony Bu, Assistant Planner; Phone: (626) 258-8626; Email: tbu@ci.el-monte.ca.us.

4. **Project Location:**

   Project site #1: The property is addressed at 11127 Ramona Boulevard, El Monte, California 91731. It consists of 4 parcels near the northeast corner of Ramona Boulevard and Valley Boulevard. The Assessor Parcel Numbers (APNs) are 8568-032-901, 8568-032-907, 8568-032-909 and 8568-032-910. Reference Figures 1 and 2, above.

   Project site #2: The project site consists of two buildings, one addressed at 11105 Ramona Boulevard and the other at 11107 Ramona Boulevard, El Monte, California 91731. It consists of one parcel at the northeast corner of Ramona Boulevard and Valley Boulevard. The APN is 8568-032-005. Reference Figures 1, 2 and 3, above.

5. **Project Applicant Name and Address:**

   Project site #1: The Olson Company, 3010 Old Ranch Parkway, Suite 100, Seal Beach, CA 90740-2751; Attention: Doris Nguyen.

   Project site #2: City of El Monte, 11333 Valley Boulevard, El Monte, California 91731; Attention: Tony Bu.

6. **Project Site Owner Name and Address:**

   Project site #1: El Monte Union High School, 3537 Johnson Avenue, El Monte, CA 91731.

   Project site #2: Ramona Valley, LLC, 1517 Sepulveda Boulevard, Los Angeles, CA 90025-331.

7. **General Plan Designation(s):** The Project site is designated on the General Plan Land Use Map as "Downtown Core".

8. **Zoning:** The City's current zoning for the Project site area is C3-D.

9. **Description of Project:** The proposed Project consists of two parts. Reference Section 2, Project Description, above:

Project part #1: The Olson Company proposes to construct and operate the Valley & Ramona Residential project, which consists of a 62 single family attached residential community, located at 11127 Ramona Boulevard in the City of El Monte.

Project part #2: The City of El Monte proposes a Zoning Map change for 11105 and 11107 Ramona Boulevard.

10. **Surrounding Land Uses and Setting:** North: United States Postal Service facility; South: Ramona Boulevard, then the County Courthouse and retail; East: Railroad tracks followed by several commercial properties; West: Valley Boulevard followed by a bank and Valley Mall. Reference Section 3, Existing Project Site Conditions, above.

11. **Existing Site Conditions:** Reference Section 3, Existing Project Site Conditions, above.

    Project site #1: Project site #1 site is currently vacant with the surface covered by concrete and asphalt. The property is fenced with chain link and contains billboards facing out to Valley Boulevard and Ramona Boulevard.

12. Project site #2: Project site #2 has two abandoned buildings, paving and scattered vegetation.

13. **Other agencies whose approval is required (e.g. permits, financing approval, or participating agreement):** No approval from other agencies is required.

5. 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. Mitigation Measures are recommended in this document that would reduce each of these identified potentially significant impacts to less than significant levels.

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

6. DETERMINATION

ON THE BASIS OF THIS INITIAL EVALUATION: (To be completed by the City of El Monte)

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a 'Potentially Significant Impact' or 'Potentially Significant Unless Mitigated' Impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation 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.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or Mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature:	Date:
Jason Mikaelian, City Planner	**City of El Monte Economic Development Department**
Printed name	For

7. 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 will 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 Section XVII, 'Earlier Analyses,' may be cross-referenced).

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 identify 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 significance.

8. ENVIRONMENTAL IMPACTS

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
I. AESTHETICS –Would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
Less Than Significant. The General Plan identifies views of the San Gabriel Mountains as a scenic resource for the community. General Plan policy CD-6.6 calls for the placement of buildings to preserve views of the Mountains, of which the foothills are located approximately 7 miles north and the ridgelines are located approximately 20 miles north of the Project site. In the area of the Project site, the closest view sensitive land uses are single family residential located on Clark Avenue, approximately 100 feet north of the Project site; on Iris Lane, approximately 300 feet east of the site and also separated by the rail line; on Encanto Way, approximately 300 feet west of the site and separated by the post office; and on California Avenue and Oak Street, approximately 1,000 feet south and southwest of the site and located behind Columbia School, the courthouse and other institutional and retail buildings. Of these nearby residential areas, only those situated south and southwest of the site could have their views of the mountains affected by the Project. Views can be protected by providing open spaces (or view windows) between buildings and a distance equal to at least two times the height of the tallest adjacent structure to the view sensitive land use. The project part #1 proposes a maximum building height of 3 stories and 40 feet, and a site plan with groupings of buildings separated by setbacks, local streets and common open space. The residential properties south and southwest of the site are separated by approximately 1,000 feet, buildings ranging in height from 30 to over 50 feet, and trees. There is no current development proposed as part of project part #2. However the proposed rezoning to MMU would result in future buildings that would comply with the development standards of the zone, which would be similar to that proposed from project part #1. Consequently views from these residential properties would not be blocked by the Project, and impacts to scenic vistas would be less than significant.				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
No Impact. There are no California designated scenic highways within or adjacent to the City of El Monte. The Project site consists of concrete and asphalt paving, abandoned buildings and scattered vegetation. There are a few scattered non-native trees on the periphery of the site, no rock outcroppings and no buildings on the site that could be considered a scenic resource. Consequently, the Project would not substantially damage a scenic resource.				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				X

No Impact. As shown in Figures 6-9, the Project site contains a vacant lot, abandoned buildings, asphalt and concrete paving, chain link fencing, and billboards. Properties surrounding the site are largely retail or institutional in nature, with the closest adjacent residential land use located approximately 100 feet north of the Project site on Clark Avenue. As proposed, the project part #1 would construct a 62-unit residential community, designed with a consistent Spanish architectural theme, common open spaces and landscape. Project part #2 would be rezoned and is expected to develop in a similar manner consistent with the MMU and pending Downtown Specific Plan. By improving the Project site with well-designed buildings and landscape, the Project would enhance the visual character of the area. The Project would not degrade the visual character or quality of the surrounding properties.

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

Less Than Significant. Street lights and lighting from adjacent retail uses currently exist in the vicinity of the Project site. Other existing light sources include headlights from vehicles travelling on adjacent streets. As a residential use, the light generated from the Valley & Ramona Residential (project part #1) would be similar to that of nearby residential uses, with closest being approximately 100 feet north on Clark Avenue. Exterior surfaces of the residences would be finished with stucco which is not glare creating material. The project part #1 would be conditioned to provide a photometric plan to ensure all exterior lighting in the common areas is arranged to prevent glare or direct illumination in any adjacent public right of way. Similar uses, design elements and conditions are expected to apply for the project site #2 at the time site specific development is proposed. Consequently, the Project impacts would be less than significant relative to a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

II. AGRICULTURE AND FOREST RESOURCES – Would the project:

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

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

No Impact. According to the State of California Los Angeles County Important Farmland Map 2010, the Project site is designated as "urban land", which consists of urban development with a density of at least

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
1 unit to 1.5 acres or greater. The Project site does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland). Consequently, the Project would not convert Farmland to a non-agricultural use.				
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
No Impact. There are no agricultural uses currently on the Project site or on adjacent properties. The Project site is currently zoned C3-D which allows for a wide variety of stores and business. No agriculture zoning occurs in the City of El Monte, and consequently, there are no Williams Act contracts, which were established by the California Land Conservation Act of 1965 to enable local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. The Project would not conflict with existing zoning for agricultural use or a Williamson Act contract.				
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526)				X
No Impact. The Project site is currently zoned C3-D and is surrounded by other C3-D properties. It is located within the City Downtown Core which, as noted in the General Plan, allows a range of land uses and development types that create a vibrant mixed-income and multiuse environment. No forest zoning occurs within the City of El Monte. Consequently, the Project would not conflict with existing zoning for, or cause rezoning of forest land.				
d) Result in loss of forest land or conversion of forest land to non-forest use?				X
No Impact. As discussed in Section 3, Existing Project Site Conditions, above, the Project site is surrounded by urban development. No forest lands occur in the vicinity of the Project site. Consequently, the Project would not result in a loss of forest land or conversion of forest land.				
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X
No Impact. No Farmland or forest land occurs in the vicinity of the Project site. No agriculture or forest zoning occur in the City. Consequently, the Project would not result in the conversion from Farmland to a non-agricultural use or from forest to a non-forest use.				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
III. AIR QUALITY – Would the project:				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.				
Data presented in this Air Quality section is based on a "Valley & Ramona Residential Project and Zoning Map Change for Adjacent Property Located at the Northeast Corner of Valley Boulevard and Ramona Boulevard in the City of El Monte Focused Air Quality Analysis", prepared by Synectecology, January 26, 2016 and contained as Appendix A.				
a) Conflict with or obstruct implementation of the applicable air quality plan?				X

No Impact. Applicable Air Quality Policies: The City of El Monte is within the South Coast Air Basin (SCAB), which is bounded by the Pacific Ocean to the south and west and mountains to the north and east. Air quality in the South Coast Air Basin is managed by the South Coast Air Quality Management District (SCAQMD). The SCAQMD and the Southern California Association of Governments (SCAG) are the agencies responsible for preparing the Air Quality Management Plan (AQMP) for the SCAB. Since 1979, a number of AQMPs have been prepared. The AQMP was designed to comply with State and federal requirements, reduce the high level of pollutant emissions in the SCAB, and ensure clean air for the region through various control measures.

On December 7, 2012, the SCAQMD adopted the 2012 Air Quality Management Plan. The purposes of the 2012 AQMP for the Basin are to set forth in a comprehensive and integrated program that will lead the Basin into compliance with the federal 24-hour (most fine particulate matter) PM2.5 air quality standard, to satisfy the planning requirements of the federal Clean Air Act, and to provide an update to the Basin's commitments towards meeting the federal 8- hour ozone standards. The 2012 AQMP incorporates the most recent planning assumptions and the best available information including: revised stationary point and area source emissions inventories; on-road and off-road mobile source emissions inventories; the use of new meteorological episodes for ozone and expanded air quality modeling analysis; and the latest demographic growth forecasts based on the approved 2012 Regional Transportation Plan (2012 RTP) developed by the Southern California Association of Governments (SCAG).

Project Compliance with Air Quality Plan: CEQA requires that projects be consistent with the AQMP. A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the AQMP in the following ways: (1) it fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are fully addressed; and (2) it provides the local agency with ongoing information assuring local decision-makers that they are making real contributions to clean air goals contained in the AQMP.

Only new or amended general plan elements, specific plans, and regionally significant projects need to

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

undergo a consistency review. This is because the AQMP strategy is based on projections from local general plans. Projects that are consistent with the local general plan are, therefore, considered consistent with the air quality management plan.

While the Project site is currently vacant, the General Plan designates the Project site Downtown Core which allows a range of land uses and development types that create a vibrant mixed-income and multiuse environment, including housing. The Project is consistent with the General Plan designation. Neither the construction (Table 2) nor the operation (Table 3) emissions of the Project, presented below in Checklist Item #III.b, would exceed the daily threshold values suggested by the SCAQMD. Additionally, the Project would not result in significant localized air quality impacts (reference Checklist Item #III.d. As such, the Project is consistent with the goals of 2012 AQMP.

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

Less Than Significant with Mitigation Incorporated. A violation of an air quality standard could occur over the short-term during construction, or over the long-term during its subsequent operation. Each is addressed below.

Short-Term Impacts: Project construction raises localized ambient pollutant concentrations. Construction air quality impacts are considered significant if they exceed any of the following thresholds that have been established by SCAQMD to measure construction emissions. Each of the thresholds represents a daily maximum of acceptable pollutant emissions during the construction period[3]:

- 75 pounds per day for ROG (reactive organic gases)
- 100 pounds per day for NOx (oxides of nitrogen)
- 550 pounds per day for CO (carbon monoxide)
- 150 pounds per day for PM10 (respirable 10-micron diameter particulate matter)
- 55 pounds per day for PM2.5 (respirable 2.5-micron diameter particulate matter)
- 150 pounds per day of SOx (oxides of sulfur)

Air quality impacts may occur during demolition, site preparation, and construction activities associated with the project. Major sources of emissions during construction include exhaust emissions, fugitive dust generated as a result of soil and material disturbance during site preparation, and grading activities, and the emission of ROGs during the painting of the structures.

Grading for the Valley & Ramona residential project would require the import of approximately 3600

[3] ROG (reactive organic gases); NOx (oxides of nitrogen); CO (carbon monoxide); PM-10 (respirable 10-micron diameter particulate matter); PM-2.5 (respirable 2.5-micron diameter particulate matter; SOx (oxides of sulfur).

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

cubic yards of soil to create the pads for each of the buildings and compensate for the loss of volume from the demolition of the existing pavement and slabs. Although the import of soils to the site would be limited to a few weeks during construction, the transport of the soils could add to truck emissions and dust during the grading phase. Mitigation Measure AQ-1 is added to the Valley & Ramona project to reduce the added emissions of dust and vehicle exhaust associated with transport of imported soil to less than significant levels.

Mitigation Measure

AQ-1. During the grading phase for the Valley & Ramona project, trucks transporting soils to the site shall not travel during peak hour, and their number and route to and from the site shall be managed by a truck traffic control plan subject to review and approval of the City Economic Development Department and Public Works Department.

SCAQMD's Rule 403 governs fugitive dust emissions from construction projects. This rule sets forth a list of control measures that must be undertaken for all construction projects to ensure that no dust emissions from the Project are visible beyond the property boundaries. These measures include: (1) soil stabilizers shall be applied to unpaved roads; (2) ground cover shall be quickly applied in all disturbed areas; and (3) the active construction site shall be watered twice daily. Adherence to Rule 403 is mandatory. The Project is a relatively small, under 5 acres, infill development. Construction of the Project would involve standard grading, trenching, paving, building and coatings, typical of construction activities that occur in residential area.

To evaluate Project air quality impacts, the Air Quality Analysis assumed development of the entire Project site that would rezone 3.33 acres of land (3.08 for project site #1 and 0.25 for project site #2) to MMU. Project site #1 was assigned its proposed 62 unit Valley & Ramona Residential project inclusive of four Live/Work units. For project site #2, four alternative development scenarios were considered: Alternative 1 consisting of 2,500 square feet of commercial retail; Alternative 2 consisting of 3,000 square feet of office space; Alternative 3 consisting of 2,000 square feet of non-residential (office) and three multi-family attached residential units, with each unit being a studio to one-bedroom (residential condominium/townhouses); Alternative 4 consisting of three multi-family attached residential units with each dwelling unit being one to two bedrooms (residential condominium/townhomes). The Air Quality Analysis assumed the most conservative scenario for project site #2, which includes the 124 daily vehicle trips that would be generated by Alternative 1 consisting of 2,500 square feet of commercial retail, and the stationary emissions from heating and ventilation of Alternative 3 that includes three residential units and 2,000 square feet of office space.[4] Based on these development assumptions, Table 2 presents the

[4] Reference Section XVI.a, Transportation/Traffic and the Traffic Impact Analysis (TIA) for the Project, Appendices D and F for a discussion of vehicle trip generation.

daily emissions projected for Project site construction and demonstrates that all Project construction emissions would be below their respective thresholds and the impact is less than significant. Consequently, with inclusion of Mitigation Measure AQ-1, short-term air quality impacts would be less than significant.

Long-Term Impacts: Long-term or operational Project emissions are caused by mobile emissions from truck and passenger vehicle traffic, and stationary source emissions from Project building heating and electrical systems. These air quality impacts are considered significant if they exceed any of the following thresholds that have been established by SCAQMD to measure long-term or operational emissions. Each of the thresholds represents a daily maximum of acceptable pollutant emissions:

- 55 pounds per day of ROG
- 55 pounds per day of NOx
- 550 pounds per day of CO
- 150 pounds per day of PM10
- 55 pounds per day of PM2.5
- 150 pounds per day of Sox

TABLE 2: COMPARISON OF PROJECT CONSTRUCTION EMISSIONS AND DAILY CRITERIA VALUES (POUNDS/DAY)

Source	ROG	NOx	CO	SO_2	PM_{10} Dust	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Dust	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total
Demolition										
Off Road Diesel	4.29	45.66	35.03	0.04	1.12	2.29	3.41	0.17	2.14	2.31
On Road Diesel	0.48	7.41	5.89	0.02	0.44	0.11	0.55	0.12	0.10	0.22
Worker Trips	0.07	0.09	1.04	0.00	0.17	0.00	0.17	0.04	0.00	0.05
Totals	4.84	53.16	41.96	0.06	1.73	2.40	4.13	0.33	2.24	2.58
Site Preparation										
Off Road Diesel	5.07	54.63	41.11	0.04	3.66	2.94	6.60	2.01	2.70	4.71
Worker Trips	0.08	0.11	1.25	0.00	0.20	0.00	0.20	0.05	0.00	0.06
Totals	5.15	54.74	42.36	0.04	3.86	2.94	6.80	2.06	2.70	4.77

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

TABLE 2: COMPARISON OF PROJECT CONSTRUCTION EMISSIONS AND DAILY CRITERIA VALUES (POUNDS/DAY) - CONTINUED

Source	ROG	NOx	CO	SO_2	PM_{10} Dust	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Dust	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total
Off Road Diesel	3.67	38.45	26.08	0.03	1.33	2.20	3.53	0.68	2.02	2.70
Grading										
Worker Trips	0.07	0.09	1.04	0.00	0.17	0.00	0.17	0.04	0.00	0.05
Totals	3.74	38.54	27.12	0.03	1.50	2.20	3.70	0.72	2.02	2.75
Building Construction										
Off Road Diesel	3.41	28.51	18.51	0.03	0.00	1.97	1.97	0.00	1.85	1.85
	0.07	0.71	0.99	0.00	0.05	0.01	0.06	0.01	0.01	0.02
Vendor Trips	0.22	0.30	3.33	0.01	0.54	0.00	0.54	0.14	0.00	0.14
Worker Trips	3.70	29.52	22.83	0.04	0.59	1.98	2.57	0.15	1.86	2.01
Totals	3.41	28.51	18.51	0.03	0.00	1.97	1.97	0.00	1.85	1.85
Asphalt Paving										
Off Road Diesel	1.66	16.80	12.48	0.02	0.00	1.01	1.01	0.00	0.93	0.93
Worker Trips	0.08	0.11	1.26	0.00	0.22	0.00	0.23	0.06	0.00	0.06
Asphalt Totals	1.74	16.91	13.74	0.02	0.22	1.01	1.24	0.06	0.93	0.99
Coating										
Off-Gas	46.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off Road Diesel	0.33	2.19	1.87	0.00	0.00	0.17	0.17	0.00	0.17	0.17
Worker Trips	0.04	0.05	0.57	0.00	0.10	0.00	0.10	0.03	0.00	0.03
Coating Totals	46.41	2.24	2.44	0.00	0.10	0.17	0.27	0.03	0.17	0.20
Daily Threshold	75	100	550	150	→	→	150	→	→	55
Exceeds Threshold?	No	No	No	No			No			No

Notes: The CalEEMod model projects summer and winter emissions and the higher of the two values is included in the table.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Mobile Source Emissions: The major source of long-term air quality impacts for criteria pollutants is that associated with the emissions produced from project-generated vehicle trips, though stationary sources add to the total. The Traffic Impact Analysis (TIA) for the Project, Appendices D and F, estimates traffic for the 62 dwelling units and the 1,750 square feet of retail space in the Live/Work units. Although the Live/Work space could include office as well as retail, the TIA assumes all retail as the traffic generation for retail is higher than office. Combined, the dwelling units and retail square footage for the Project would generate 396 average daily vehicle trips (ADT), 27 vehicles per hour during the weekday morning peak and 35 vehicles per hour during the weekday evening peak hour. Adding the 124 daily trips for project site #2 Alternative 1, the Project would generate approximately 520 ADT on a weekday. While Kunzman does not report Saturday and Sunday trip rates, these are derived from the CalEEMod Model and include 538 ADT on a Saturday and 403 ADT on a Sunday. Because the model is reported to present the highest day's emissions, the reported daily emissions are actually those produced on a Saturday. Applying Saturday ADT, which is the highest (or worst case), emissions associated with Project-related trips are presented in Table 3. All Project operational mobile source emissions are below their respective threshold values and the impact is less than significant. *Stationary Source Emissions:* With regards to stationary source emissions, in addition to vehicle trips, the occupants would produce emissions from on-site sources, including the combustion of natural gas for space and water heating. Additionally, the structures would be maintained and this requires repainting over time, thus resulting in the release of additional Volatile Organic Compounds (VOCs) emissions.[5] Also, the use of consumer aerosol products, such as cleaners, is associated with the Project. Finally, the landscape would require maintenance and this equipment produces emissions. Project stationary source emissions are presented in Table 3. All Project stationary source emissions are below their respective threshold values and the impact is less than significant.				

[5] Volatile Organic Compounds (VOCs) are a large group of carbon-based chemicals that easily evaporate at room temperature. While most people can smell high levels of some VOCs, other VOCs have no odor. Odor does not indicate the level of risk from inhalation of this group of chemicals. There are thousands of different VOCs produced and used in our daily lives. Some common examples include: Acetone, Benzene, Ethylene glycol, Formaldehyde, Methylene, chloride, Perchloroethylene, Toluene, Xylene, 1,3-butadiene.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

TABLE 3: COMPARISON OF PROJECT DAILY OPERATIONAL EMISSIONS AND DAILY CRITERIA VALUES (POUNDS/DAY)

Source	ROG	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Mobile Sources	2.03	5.86	22.59	0.06	3.82	1.08
Natural Gas	0.03	0.24	0.11	0.00	0.02	0.02
Structural Maintenance	0.23	0.00	0.00	0.00	0.00	0.00
Consumer Products	1.95	0.00	0.00	0.00	0.00	0.00
Hearth	17.03	0.43	32.67	0.05	4.97	4.97
Landscape Maintenance	0.17	0.06	5.42	0.00	0.03	0.03
Operational Total	21.44	6.59	60.79	0.11	8.84	6.10
Threshold	(0.48)	(0.87)	(3.65)	(0.01)	(0.52)	(0.45)
Exceeds Threshold?	20.96	5.72	57.14	0.10	8.32	5.65

Notes: The CalEEMod model projects summer and winter emissions. These can differ for mobile sources and the higher of the two values were included in the table.

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

Less Than Significant. In accordance with SCAQMD methodology, projects that do not exceed or can be mitigated to less than the daily threshold values do not add significantly to a cumulative impact. Because, as shown in Tables 2 and 3, the Project generated air quality impacts would be less than significant, cumulative air quality impacts would be less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations?			X	

Less Than Significant. Short-Term Impacts: In addition to the mass daily threshold standards discussed above, Project construction has the potential to raise localized ambient pollutant concentrations. This could present a significant impact if these concentrations were to exceed the State or federal ambient air quality standards at receptor locations.

The Project is estimated to disturb about 3.33 acres. Dozers, graders, and tractors are estimated to

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

disturb an area of 0.5 acre while scrapers are estimated to disturb 1.0 acre over an 8-hour work day. The site preparation phase is estimated to use a scraper (1 acre) and a grader (0.5 acre) during each of the three days for a disturbance of 1.5 acres per day. The grading phase would use grader (0.5 acre) and a rubber-tired dozer (0.5 acre) for a disturbance of 1 acre per day for a period of 6 days. While other equipment is used in the construction effort on a daily basis, it is considered to work within these areas and do not add to the total area of disturbance.

The Air Quality Analysis (Appendix A), evaluates CO, NOx, PM10 and PM2.5 emissions from Project construction to the nearest sensitive receptors which are the residents residing northeast of the Project site at the end of Clark Avenue at a distance of about 115 feet (35 meters). As presented in Appendix A, CO, NOx, PM10 and PM2.5 emissions from Project construction would be well below SCAQMD levels when measured to the closest residential uses. Consequently short term localized impacts to sensitive receptors would be less than significant.

Long-Term Localized Impacts: Long-term effects of the Project could be significant if they exceed the State or federal ambient air quality standards. As noted for construction, these criteria only apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. CO and NO_2 would be significant if the Project were to raise existing levels above those values included in the standards. Because the Basin is a non-attainment area for particulate matter, the operational thresholds for both PM_{10} and $PM_{2.5}$ are set at a measurable increase of 2.5 $\mu g/m^3$.[6]

Unlike construction equipment that generates exhaust and dust in a set area, the primary source of emissions from Project operations is due to the addition of vehicles on the roadway system. These emissions are then spread over a vast area and do not result in localized concentrations in proximity to the Project site. As such, localized modeling for the Project operations is not prepared for residential, limited commercial, or light industrial development that does not include a truck terminal.

CO is the criteria pollutant that is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere. In the past, areas of vehicle congestion had the potential to create "pockets" of CO called "hot spots." However, the SCAB has now been designated as an Attainment area of both the State and federal CO standards, and no hot spots have been reported in the Project area in more than the last 5 years. CO is no longer a localized pollutant of concern near roadways and as such a formal analysis is no longer necessary. Emissions calculated from proposed Project vehicle trips would not add measurably to local CO levels in the Project area. Similarly, NOx, PM10 and PM2.5 emissions would also be below levels of significance.

The Project site is located adjacent to the Metrolink Railroad easement and a Health/Risk Assessment

[6] Micrograms (one-millionth of a gram) per cubic meter air or µg/m3.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
(HRA), as discussed in Checklist Item #VIII below, was conducted to determine if there is a potential impact to site occupants from exposure to diesel particulate matter from the proximate Metrolink operations. The HRA quantified the estimated emissions of several Toxic Air Contaminants (TAC) from the operation of Metrolink railway and applied an air dispersion model to quantify cancer risks and non-cancer hazards from the TAC emissions to the residents of the project. The HRA concludes that the TAC emissions from the Metrolink locomotive operations would not result in an exceedance of the cancer risk significance thresholds adopted by the South Coast Air Quality Management District's (SCAQMD's) at any residential receptor located within the project. Additionally, the assessment finds that the TAC emissions from the Metrolink locomotive operations would not result in an exceedance of the non-cancer hazard index significance thresholds adopted by the SCAQMD at any residential receptor located within the project. Any impact from these emissions would be less than significant.				
e) Create objectionable odors affecting a substantial number of people?		X		
Less Than Significant with Mitigation Incorporated. Project construction would involve the use of heavy equipment creating exhaust pollutants from on-site earth movement and from equipment bringing concrete and other building materials to the site. With regards to nuisance odors, any air quality impacts would be confined to the immediate vicinity of the equipment itself. By the time such emissions reach neighboring residential properties, they would be diluted to well below any level of air quality concern. Any exposure of the general public to common construction odors would be of short duration and not significant. Operational odors associated with residential uses typically include cooking and vehicle use. These odors would be nominal, and consistent with existing site uses. The commercial components of the Live/Work units proposed by the Valley & Ramona Residential are expected to be occupied by home occupation or office uses, neither of which produce significant objectionable odors. However to ensure that odor producing businesses do not locate in the Live/Work units, Mitigation AQ-2 is added to the Project. With inclusion of the measure, potential impacts associated with objectionable odors would be reduced to less than significant levels. <u>Mitigation Measure</u> AQ-2: Commercial uses in the Live/Work units of the Valley & Ramona Residential (project part #1) shall be limited to those that do not generate odors discernibly greater than those associated with a typical residential use. This provision shall be included in the Project Covenants, Conditions and Restrictions (CC&R's).				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				X
No Impact. As discussed in the General Plan, El Monte was originally known as the wooded place between the Rio Hondo and San Gabriel Rivers that provided habitat for plant and animal life. With postwar suburbanization, these biological resources were replaced with urban development. Although the General Plan establishes policies to restore habitat around the Emerald Necklace[7], the General Plan EIR does not identify any significant sensitive species or habitats within the City. The Project site is a previously developed vacant lot with abandoned buildings and surrounded by urban land uses. No sensitive species as identified by the U.S. Fish and Wildlife Service (USFWS) or the California Department of Fish and Wildlife (CDFW) are found on the Project site or surrounding properties. Consequently, the Project would not cause a substantial adverse effect, either directly or through habitat modifications, on a sensitive species.				
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 US Fish and Wildlife Service?				X
No Impact. As discussed in Checklist Item #IV.a, above, the Project site is not within the vicinity of identified natural resources that have the potential to contain riparian habitat or other natural communities. Riparian habitat refers to the trees, other vegetation, and physical features normally found on the banks and floodplains of rivers, streams, and other bodies of fresh water. The Project site is vacant, with abandoned buildings, asphalt and concrete paving, and sparse vegetation. There are no natural occurring water sources or native plant habitats on the site. Additionally the site is surrounded by urban land uses. Consequently, the Project would not cause a substantial adverse effect on a USFWS or CDFW regulated riparian habitat or other sensitive natural community identified in local or regional plans or policies.				
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				X

[7] The Emerald Necklace is described in the General Plan Policy CD-1.8 as multiuse trails and parks around the as Rio Hondo and San Gabriel Rivers.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
other means?				
No Impact. As discussed in Checklist Item #IV.a, above, the Project site is not within the vicinity of identified natural resources that have the potential to contain riparian habitat or natural water courses. Wetlands are defined under the federal Clean Water Act as land that is flooded or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that normally does support, a prevalence of vegetation adapted to life in saturated soils. Wetlands include areas such as swamps, marshes, streams, lakes, and bogs. According to the USFWS National Wetlands Mapper[8], there are lakes at the northern and southern edges of the City, and the Rio Hondo River which runs along the western portion of the City and the San Gabriel River which runs immediately east of the City. No wetlands are within the vicinity of the Project site. Consequently, the Project would not cause a substantial adverse effect on federally protected wetlands.				
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		
Less Than Significant with Mitigation Incorporated. As discussed in Checklist Item #IV.a, above, the Project site is surrounded by urban land uses and does not contain identified native or sensitive species, riparian or sensitive habitats or wetlands. There are 8 scattered non-native trees on the periphery of the Project site, but because they are surrounded by asphalt, concrete and buildings, the trees are unlikely to provide suitable habitat, including nesting habitat, for migratory birds under the federal Migratory Bird Treaty Act (MBTA) and under Section 3513 et. seq. of the CDFW Code.[9] The Project site is graded and covered with paved surface, with no evidence of dirt for burrows or rodent populations to support burrowing owls. However, because there is some possibility that a migratory bird could nest in one of the existing trees on the Project site, Mitigation Measure BIO-1 is added to the Project. With inclusion of this measure, potential impacts relative to interference with a wildlife nursery, area or corridor would be reduced to less than significant levels.				

[8] http://www.fws.gov/wetlands/data/mapper.HTML; accessed August 14, 2015.

[9] Migratory birds include all native birds in the United States, as listed in 50 CFR (Code of Federal Regulations) 10.13 (List of Migratory Birds).

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Mitigation Measure BIO-1: Removal of any trees or vegetation shall occur outside the bird nesting season, which occurs between January 1st to September 15th (which accommodates the nesting period for passerine birds and raptors). If the nesting season cannot be avoided and tree or vegetation removal occurs between January 1st to September 15th, the Applicant shall retain a qualified biologist subject to the review and approval of the City Economic Development Department to verify the presence of nesting birds and to develop a plan for avoidance. The Applicant shall comply with the plan for avoidance if required.				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		X		
Less Than Significant with Mitigation Incorporated. Chapter 14.03 of the El Monte Municipal Code establishes polices for the protection and preservation of trees. The Code protects native and heritage trees. Native trees include several species of oak, cottonwood, walnut, willow, sycamore, and redwood. Heritage trees include any woody plant having a single trunk circumference of 36 inches or 35 feet in height, and exclude palm trees. The Code requires a permit before any protected tree can be removed. For projects subject to a discretionary land use entitlement, the permit shall be granted upon the issuance of building permits for the improvements requiring the removal of the protected tree. The issuance of a tree removal permit is subject to review and approval of the City arborist and subject to mitigation at a ratio of two replacement trees for every one protected tree removed. There are approximately eight non-native trees, including palm trees, mostly on the periphery of the Project site. None of the trees are native, but a few could be as tall as 35 feet and could be considered heritage trees. To ensure that the status of these trees is confirmed and, if warranted, replacement trees planted, Mitigation Measure BIO-2 is added to the Project. With inclusion of this measure, potential Project impacts regarding conflicts with a tree protection ordinance would be reduced to less than significant levels. Mitigation Measure: BIO-2: Prior to issuance of building permits, the Applicant shall provide to the City arborist all required application materials to ensure compliance with Chapter 14.03 of the El Monte Municipal Code.				
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

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
No Impact. The Project site is not within the vicinity of this area or any other local, regional or state conservation plan area. Consequently, the Project would not conflict with provisions of an adopted Habitat Conservation Plan or Natural Community Conservation Plan.				
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				X

No Impact. The CEQA Guidelines, Section 15064.5, define "historic resources" as resources listed in the California Register of Historical Resources, or determined to be eligible by the California Historical Resources Commission for listing in the California Register of Historic Resources.[10] The criteria for eligibility are generally set by the Historic Sites Act of 1935, which established the National Register which recognizes properties that are significant at the national, state and local levels. To be eligible for listing in the National Register, a district, site, building, structure, or object that must possess integrity of location, design, setting, materials, workmanship, feeling and association relative to American history, architecture, archaeology, engineering, or culture.[11] In addition, unless the property possesses exceptional significance, it must be at least 45 years old to be eligible.

The General Plan identifies a number of historic resources within the City, including Santa Fe Trail Park and the Osmond house. The Downtown area in which the Project site is located contains the site of the original El Monte settlement. The City's Historic Resource Identification Report, February 2015, identified a number of buildings that could be eligible for the National Register of Historic Places within the Downtown. These include the old U.S. Post Office, the old JC Penny's department store, old Thrifty's drug store and old Bank of America building generally located along Valley Mall, the old Main Street for El Monte, located approximately 500 feet west of the Project site.

The proposed Valley & Ramona Residential on project site #1 would construct a 62-unit residential community, designed with a consistent Spanish Mediterranean architectural theme, common open spaces and landscape. By improving the Project site with well-designed buildings and landscape, the Project would enhance the overall character of the area. It would not adversely impact potential historical resources located in the Downtown.

The abandoned buildings on project site #2 were constructed around 1960 and have been vacant since 2012. Although these buildings are over 45 years old, they do not possess integrity of location, design, setting, materials, workmanship, feeling and association relative to American history, architecture,

[10] California Public Resources Code Section 5020.1(k), Section 5024.1(g).

[11] Guidelines for Completing National Register Forms, National Register Bulletin 16, U.S. Department of the Interior, National Park Service, September 30, 1986 ("National Register Bulletin 16").

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
archaeology, engineering, or culture. Consequently, these buildings do not qualify as a historical resource. As discussed in Section 3, above, the El Monte Legion Stadium was once located on the Project site. The stadium was first a school gymnasium, then bought by Northrop Aviation before becoming an American Legion Hall, then a venue for sporting events and live music. Although the building has long been demolished and the City has no Historical Preservation Ordinance, the American Legion Stadium is included in the General Plan as a famous or unique place in El Monte's history. The Project will be conditioned to incorporate an art feature or similar amenity to commemorate the past activities on the site. Consequently, the Project would not result in a substantial adverse change in the significance of a historical resource.				
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		X		
Less than Significant with Mitigation Incorporated. The General Plan EIR identified no significant archaeological resources within the City. AB52 which became effective July 1, 2015, requires public agencies to respond to Native American tribal representative requests by providing formal notification of proposed projects within the geographic area that is traditionally and culturally affiliated with the tribe. Andrew Salas, the representative from the Gabrieleno Band of Mission Indians/ Kizh Nation contacted the City of El Monte requesting notification and information regarding projects within the City which Mr. Salas identified as part of his tribal bands historic territory. To comply with Mr. Salas' request, an AB52 notification was sent to him via certified mail and email on July 13, 2015. A follow-up email to Mr. Salas was sent on September 10, 2015 to request his response to the AB52 notification. No response from Mr. Salas has been received to date. However, because of the City, inclusive of the Project site, is within the tribal band's historic territory, Mitigation Measure CR-1 is added to the Project to ensure any Native American resources that may be found on the site are properly identified and protected. With inclusion of this measure, potential Project impacts regarding archaeological resources would be reduced to less than significant levels. <u>Mitigation Measure:</u> CR-1: If potential Native American resources are uncovered during grading, the Applicant shall be required to halt work in the immediate area of the find, inform the Economic Development Department immediately and retain a qualified professional archaeologist and an experienced and certified Native American monitor acceptable to the City to examine the material to determine whether it is a "unique cultural resource" as defined in Section 21083.2 (g) of the State CEQA Statues. If this determination is positive, the scientifically consequential information shall be fully recovered by the archaeologist. Work may continue outside the area of the find. However, no further work shall occur in the immediate location of the find until all information recovery has been completed and a report concerning same filed with the City, a designated repository as				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
appropriate and made available to interested representatives of Native American tribes that are traditionally and culturally affiliated with the Project area.				
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
No Impact. The General Plan EIR found that the City is fully developed with minimal vacant land. The geology of the City, located within the San Gabriel Basin, consists primarily of recent, unconsolidated alluvial materials, which have a low probability of containing paleontological resources. The Project site is already graded and development of the project site #1 does not include subsurface excavation such as that necessary to accommodate a subterranean garage or basement. No development on the project site #2 is proposed at this time. Consequently, it is unlikely that the Project would encounter or destroy a paleontological resource, and potential Project impacts to paleontological resources would not be significant.				
d) Disturb any human remains, including those interred outside of formal cemeteries?				X
No Impact. As discussed in Checklist Item #V(c), above, the Project site is not within the vicinity of identified archaeological resources, has already been graded, and does not include subsurface excavation such as that necessary to accommodate a subterranean garage or basement. Pursuant to state of California Health and Safety Code provisions (notably § 7050.5-7055), should any human remains be uncovered, all construction activities must cease and the Los Angeles County Coroner, City Economic Development Department and Police Department be immediately contacted. With this legal requirement in place and the already disturbed nature of the Project site, the Project's potential to encounter or disturb any human remains would not be significant.				
VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
Less Than Significant Impact. As noted in the General Plan EIR, there are no active or inactive faults within the City of El Monte and no Alquist-Priolo delineated fault. However the City is within the seismically active Southern California region that includes nearby faults, including San Andreas, San Gabriel, Newport-Inglewood, Palos Verdes, Whittier and Puente Hills. As required by the California Building Code				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
(CBC), the Project would be required to provide a geotechnical study for review and approval by the City prior to issuance of a building permit. Project construction must then comply with the requirements of the approved geotechnical report and CBC. Compliance with these measures would mitigate potential adverse impacts from regional seismic activity. Consequently, Project impacts related to rupture of a known earthquake fault would be less than significant.				
ii) Strong seismic ground shaking?			X	
Less Than Significant. As discussed in Checklist Item #VI.a(i), above, although there are no faults in El Monte, the City and the Project site is in a seismically active region. Consequently, the Project could be affected by a future seismic event. Compliance with the requirements of an approved geotechnical report as required by the CBC would mitigate potential adverse impacts from an earthquake. Consequently, Project impacts related to strong seismic ground shaking would be less than significant.				
iii) Seismic-related ground failure, including liquefaction?			X	
Less Than Significant. According the General Plan Figure PHS-1, the majority of El Monte, including the Project site, is within a liquefaction hazard area. Liquefaction occurs during moderate to great earthquakes, when ground shaking causes water-saturated soils to become fluid and loose strength, much like quicksand. If the liquefied layer is in the subsurface, the material above it may slide laterally depending on the confinement of the unstable mass. As discussed in Checklist Item #VI.a(i), above, the Project would be required to provide a geotechnical study for review and approval by the City, and to comply with the requirements of the approved geotechnical report. Compliance with these measures would mitigate potential adverse impacts associated with seismic-related ground failure including liquefaction. Consequently, Project impacts from seismic related ground failure would be less than significant.				
iv) Landslides				X
No Impact. Landslides often occur during or after strong earthquakes typically involving hillside or canyon land. As discussed in the General Plan, El Monte is mostly built out, relatively flat, and with no hillsides that would be subject to substantial soil erosion, landslides, and mudslides. The Project site is relatively flat, with elevations generally between 285 feet Mean Sea Level (MSL) and 297 feet MSL, and not susceptible to landslides. Consequently, the Project would not expose people or structures to substantial adverse risks associated with landslides.				
b) Result in substantial soil erosion or the loss of topsoil?			X	
Less Than Significant. As noted in Checklist Item #VI.a(iv), above, the City inclusive of the Project site is not susceptible to soil erosion. The General Plan describes soil erosion as a natural process driven by				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
water and wind, with the rate and magnitude of soil erosion controlled by rainfall intensity and runoff. The Project site is currently covered with paving. Grading for the Valley & Ramona residential project would require the import of approximately 3600 cubic yards of soil to create the pads for each of the buildings and compensate for the loss of volume from the demolition of the existing pavements and slabs. During grading and other construction activities when soils are exposed and/or stockpiled, temporary soil erosion may occur which could be exacerbated by rainfall. Potential erosion related to grading and stockpiling would be managed through the preparation of a Stormwater Pollution Prevention Plan (SWPPP) as required by State Water Resources Control Board. In addition, Los Angeles Regional Water Quality Control Board (LARWQCB) requires that all post development stormwater runoff shall not exceed the predevelopment peak flow. With compliance with the SWPPP and LARWQCB requirements, Project impacts related to substantial soil erosion would be less than significant.				
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
Less Than Significant. As discussed above, compliance with the requirements of an approved geotechnical report as required by the CBC would mitigate potential adverse impacts from geologic events related to seismic activities. Consequently, Project impacts related to unstable soils, including landslide, lateral spreading, subsidence, liquefaction or collapse liquefaction, would be less than significant.				
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	
Less Than Significant. The Project site is a 3.33 acre infill site, relatively flat and surrounded by urban development. As discussed in the General Plan, expansive soils swell when wet and shrink when dry and, if located on a slope, can cause soil to creep downhill or a landslide. Because the Project site is relatively flat, it is not susceptible to potential impacts associated with expansive soils such as downhill creep or landslide. However, compliance with the requirements of an approved geotechnical report as required by the CBC would ensure protection of structures and occupants should expansive soils be found on site. Consequently, Project impacts related to expansive soils would be less than significant.				
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
No Impact. An existing City sanitary sewer line runs along Valley Boulevard adjacent to the Project site.				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

The Project proposes to connect to the existing line. The Project would not use septic tanks or an alternative waste water disposal system.

VII. GREENHOUSE GAS EMISSIONS –

Would the project:

Data presented in this Greenhouse Gas section is based on a "Valley & Ramona Residential Project and Zoning Map Change for Adjacent Property Located at the Northeast Corner of Valley Boulevard and Ramona Boulevard in the City of El Monte Focused Air Quality Analysis", prepared by Synectecology, January 26, 2016 and contained as Appendix A.

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

Less Than Significant. To provide guidance to local lead agencies on determining significance for greenhouse gas (GHG) emissions in their CEQA documents, the SCAQMD has convened a GHG CEQA Significance Threshold Working Group. The SCAQMD is in the process of establishing a threshold for GHG emissions to determine a project's regional contribution toward global climate change impacts for California. On December 5, 2008, SCAQMD adopted a threshold of 3,000 metric tons (Mtons) of CO2e per year for residential and commercial projects for which it is the lead agency under CEQA.

Construction: As presented in Appendix A, the default greenhouse gas modelling (CalEEMod model) estimates that construction would take approximately 299 working days to complete with construction estimated to begin in summer 2016 and continue for a year. Although no development is currently proposed for project site #2, the Air Quality Analysis assumes the development scenario described in Item #IIIb, above. Construction activities would consume fuel and result in the generation of greenhouse gases. Construction CO_2e emissions are as projected using the CalEEMod computer model and included in Table 4, which demonstrates that even if construction were to be completed in a single calendar year, the total emissions (i.e., 452.64 Mtons of CO_2e), would remain well within the 3,000 Mtons threshold, below a level of significance.

TABLE 4: PROJECT CONSTRUCTION-RELATED GREENHOUSE GAS EMISSIONS BY YEAR (MTONS/YEAR)

Year	CO_2	CH_4	N_2O	Total CO_2e[1]
2016	229.31	0.05	0.00	230.30
2017	221.38	0.05	0.00	222.34
Total	450.69	0.10	0.00	452.64

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

TABLE 4: PROJECT CONSTRUCTION-RELATED GREENHOUSE GAS EMISSIONS BY YEAR (MTONS/YEAR) - CONTINUED

Year	Year	Year	Year	Year
Total per Year[2]	15.02	0.00	0.00	15.09

Notes:
[1] Because different gases have different conversion factors, totals may not equal.
[2] Averaged over a period of 30 years.

Site Operations: In the case of site operations, the majority of greenhouse gas emissions, and specifically CO_2, is due to vehicle travel and energy consumption. As shown in Table 5, combined, mobile, area source, energy, waste, and water conveyance would generate 975.81 Mtons of CO2e on an annual basis. When the construction emissions are amortized over 30 years and added to this value, the total (i.e., 990.39 Mtons of CO2e) is under the suggested threshold of 3,000 Mtons per year and the impact is less than significant. With removal of potential use of the two existing buildings on project site #2, this value to 876.45 generate 876.45 Mtons of CO2e on an annual basis, and the impact remains less than significant.

TABLE 5: PROJECT YEARLY OPERATIONAL GREENHOUSE GAS EMISSIONS MTONS/YEAR)

Source	CO_2	CH_4	N_2O	Total CO_2e[1]
Mobile Sources	754.49	0.03	0.00	755.14
Electricity	98.50	0.00	0.00	98.99
Natural Gas	51.23	0.00	0.00	51.54
Hearth	20.17	0.02	0.00	20.75
Landscape Maintenance	1.10	0.00	0.00	1.12
Water Use	28.52	0.16	0.00	32.98
Waste Disposal	6.82	0.40	0.00	15.29
Proposed Land Use Sub-Total	960.83	0.61	0.00	975.81
Construction Amortization	14.52	0.10	0.00	14.58
Amended Sub-Total	975.35	0.71	0.00	990.39
(Existing Land Use Emissions)	(112.82)	(0.38)	(0.00)	(113.94)
Overall Net Total	864.53	0.33	0.00	876.45
Threshold	---	---	---	3,000
Exceeds Threshold?				No

Notes:
[1] Because different gases have different conversion factors, totals may not equal.

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

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Less than Significant Impact. In 2006, California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500, et seq.), which requires the California Air Resources Board (CARB) to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide greenhouse gas emissions are reduced to 1990 levels by 2020 (representing an approximate 25 percent reduction in emissions). Statewide strategies to reduce GHG emissions include reduced building emission requirements specified in the 2013 Building and Energy Efficiency Standards and California Green Building Standards Code. Title 15 of the City of El Monte Municipal Code adopts the California Green Building Code. Like air quality impacts, projects that generate de minimus levels (i.e., less than 3,000 Mtons of CO_2e per year) and don't result in a significant impact or can be mitigated to less than significant would be deemed to be in compliance of the local policies with respect to GHG. Additionally, the California legislature passed Senate Bill (SB) 375 to connect regional transportation planning to land use decisions made at a local level. SB 375 requires the metropolitan planning organizations to prepare a Sustainable Communities Strategy (SCS) in their regional transportation plans to achieve the per capita GHG reduction targets. For the Southern California Association of Governments (SCAG) region, the SCS was adopted in April 2012 (SCAG 2012) which includes infill development as a strategy for achieving SB375 compliance. The City of El Monte does not have an adopted action plan for the purpose of reducing the emissions of greenhouse gases. As an infill project, the Project would be consistent with the regional SCS policies and would be constructed in accordance with the Green Building Code. Consequently, the Project would not conflict with policies ore regulations aimed at reducing greenhouse gas.				
VIII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
Data presented in this Hazards and Hazardous Materials section is based on a "Valley & Ramona Residential Project Health Risk Assessment", prepared by Tin Cheung & Associates, August 24, 2015 and contained as Appendix B. Additional data is from the following environmental site assessment documents prepared on behalf of The Olson Company by Stantec Consulting Services Inc. and available at the City of El Monte Economic Development Department offices: Phase I Environmental Site Assessment, prepared by Stantec Consulting Services Inc., dated September 10, 2014; Phase II Environmental Site Assessment, prepared by Stantec Consulting Services Inc., dated November 25, 2014; Additional Phase II Environmental Site Assessment, prepared by Stantec Consulting Services Inc., dated February 13, 2015; Summary Letter from Stantec Consulting Services Inc. to The Olson Company, dated October 1, 2015.				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous		X		

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
materials?				

Less Than Significant with Mitigation Incorporated. The proposed residential Valley & Ramona project is not associated with the transport or use of hazardous materials. Future uses on project site #2 would consist of commercial, office and or residential, none of which are associated with the transport or use of hazardous materials. However past uses on the Project site and its proximity to the Metrolink rail line could create existing on-site hazards that could require removal and disposal prior to Project development.

The health risk assessment (HRA) contained in Appendix B was prepared to evaluate whether the potential health risk impacts resulting from emissions of toxic air contaminants (TACs) from Metrolink locomotive exhaust would significantly impact the residents of the proposed Project. The California Air Resources Board (ARB) has identified toxic air contaminants, including diesel particulate matter (DPM), as carcinogenic substances, based on their potential to cause cancer, premature death, and other health problems. Those most vulnerable are children whose lungs are still developing and the elderly who may have other serious health problems.

Results of the HRA study found that the highest concentrations of DPM on the Project site occur adjacent to the rail line, with future residents of the Project residing adjacent to the rail line exposed to DPM concentrations as high as 0.00146. These concentration levels are below SCAQMD thresholds as summarized below:

- The TAC emissions from the Metrolink locomotive operations would not result in an exceedance of the cancer risk significance threshold of 10 in 1 million adopted by the South Coast Air Quality Management District (SCAQMD) at any residential receptor located within the Project.
- The TAC emissions from the Metrolink locomotive operations would not result in an exceedance of the non-cancer hazard index of significance thresholds of 1 or greater adopted by the SCAQMD at any residential receptor located within the Project.

Results from the Phase I Environmental Site Assessment (Phase I) for project site #1 found evidence of three recognized environmental conditions (RECs) for the site: (1) the fact that a portion of the site lies within the National Priority List (NPL) for remediation, (2) the historical presence of a dry cleaner on the Site, and (3) the historical presence of three underground storage tanks (USTs) and one former above ground storage tank (AST) on the site.[12] The NPL is established by the United States Environmental

[12] Phase I Environmental Site Assessment, prepared by Stantec Consulting Services Inc., dated September 10, 2014; Phase II Environmental Site Assessment, prepared by Stantec Consulting Services Inc., dated November 25, 2014; Additional Phase II Environmental Site Assessment, prepared by Stantec Consulting

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

Protection Agency (EPA) to identify sites that are uncontrolled or abandoned places where hazardous waste is located, possibly affecting local ecosystems or people.[13] Historically dry cleaners used tetrachloroethylene (PCE) as a cleaning solvent. Use of PCE, which is now an expected carcinogen, is now restricted. The USTs are associated with the former El Monte Union High School facility and include two (2) 500 gallon unleaded gasoline tanks and one (1) 1,000 gallon regular gasoline tank. The AST was formerly located at the concrete pad in the northern portion of the site adjacent to the several parking spaces labeled as "bus parking only".

The Phase I identified three other potential sources of concerns: (1) the heavy metals from a former railroad spur (which traversed the southern portion of the site and from the adjacent railroad tracks, (2) an oil well located on the property adjacent approximately 200 feet northeast of the site, which is listed as plugged (DOGGR, 2014), and (3) previous automobile repair facilities and a sump.

To further investigate potential project site #1 impacts associated with the REC's and the other areas of concerns, a Phase II Environmental Site Assessment (Phase II) was prepared. Based on the results of soil sampling and analysis, the Phase II found elevated levels of arsenic in the southern portion of the site where the former railroad spur was located. Levels of identified arsenic were found to potentially exceed California Human Health Screening Levels (CHHSLs) for residential use, and could require remedial action. Elevated levels of arsenic and lead were also detected in the former AST location. PCE-impacted soil vapor was found subsurface at levels above the CHHSLs for residential use across portions of the site.

Based on the results of the Phase II study, additional Phase II subsurface analysis was conducted. PCE was detected in the additional soil samples at 10 foot intervals to 60 feet in depth. Peak levels of PCE were found at 10 and 50 feet in depth, with concentrations decreasing at 60 feet. All detected PCE concentrations were found by the additional Phase II analysis to be low and are not concentrations that would warrant remedial action, or concern for impact to groundwater. Stantec has clarified that this finding the vapor concentrations are not at high enough concentrations that require active removal or remediation.[14]

An October 1, 2015 letter from Stantec to The Olson Company summarized these completed environmental assessments, and concluded that two general environmental issues require further

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Services Inc., dated February 13, 2015; Summary Letter from Stantec Consulting Services Inc. to The Olson Company, dated October 1, 2015; all of which are available at the City of El Monte Economic Development Department offices.

[13] http://www.epa.gov/superfund/sites/; accessed September 11, 2015.

[14] Email communication from Kyle Emerson, P.G., C.E.G. Management Principal Geologist, Stantec, December 8, 2015.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

analysis. Neither of these impacts are connected to the regional groundwater plume, but are from a detected release from the former on-site dry cleaner and the spraying of herbicides along a form rail line spur:

- Impact to soil by lead and arsenic along a former rail spur located in the southern portion of the Site.
- Impact in soil vapor by tetrachloroethylene (PCE) primarily in the western portion of the property related to a release from a former dry cleaner and automotive repair activities.

Stantec is continuing to assess the two above listed issues and has essentially defined the vertical and lateral limits of arsenic and lead in soil along the former rail spur and at the former automotive repair facility in the eastern portion of the project site #1. All ongoing assessments are being overseen and approved by the Los Angeles County Fire Department, Hazardous Material Division (LACFD). The LACFD approved a remedial action plan (RAP) for the site on January 21, 2016. The RAP presents a method to excavate and remove the lead and arsenic impacted soil from the site to specified cleanup goals suitable for human habitation. After confirmation that all impacted soil is removed to the site cleanup level, the LACFD will issue a "No Further Action" letter for the lead and arsenic issue at the site.

As noted above, the detected concentrations of PCE in soil vapor are not at levels that require removal from the subsurface by excavation or other means by the LACFD. Stantec will complete a human health risk assessment (HHRA) to establish at what concentration the detected PCE soil vapors are not acceptable for unrestricted residential development. Where concentrations of PCE are detected above the established thresholds, it will be necessary to place a vapor barrier below the residences to prevent intrusion of the soil vapor into the overlying structure. Those structures that require vapor barriers will require a deed notification and restriction to ensure protection of the barrier over time. With the proper installation of the barrier, the safe development and occupancy of the structures can occur. After placement and inspection, the LACFD will issue final closure for the Site.

Mitigation Measures HAZ-1 and HAZ-2 are added to project site #1 to ensure all required environmental assessments and remedial action are taken prior to its development. The detected soil vapors are below the thresholds established by the South Coast Air Quality Management District (SCAQMD) for protection during earth movement. A soil management plan (SMP) would be required to be in place and approved by the LACFD providing specific procedures for the movement, monitoring, and placement of impacted soil to ensure worker and neighbor protection due to air emissions and direct exposure. The SMP would be designed to mitigate risks to all sensitive receptors.[15]

[15] Ibid.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Mitigation Measures HAZ-1 and HAZ-2 specifically address the known conditions on project site #1. Although similar conditions could exist on project site #2, a Phase I Environmental Assessment has not been conducted on that site. To address potential hazards on project site #2, HAZ-3 is added to require a Phase I Environmental Assessment and required follow-up prior to development of project site #2. With inclusion of these measures, potential Project impacts regarding significant hazards from the disposal of hazardous materials would be reduced to less than significant levels. <u>Mitigation Measures:</u> HAZ-1: During grading activities on the Valley & Ramona Residential project site #1, the Applicant shall provide evidence to the City Economic Development Department that a soil management plan (SMP) is in place and all lead and arsenic impacted soil has been excavated and removed pursuant to the approved Los Angeles County Fire Department, Hazardous Material Division (LACFD) remedial action plan (RAP) and LACFD has issued a "No Further Action" letter for the lead and arsenic issue at the site. HAZ-2: After grading activities on the Valley & Ramona Residential project site #1, the Applicant shall provide evidence to the City Economic Development Department that a human health risk assessment (HHRA) has been completed that established concentration of detected PCE soil vapors. Where concentrations of PCE are detected above the established thresholds, the Applicant shall ensure placement of a vapor barrier below the residences to prevent intrusion of the soil vapor into the overlying structure. Those structures that require vapor barriers will require a deed notification and restriction to ensure protection of the barrier over time. No certificate of occupancy shall be issued for the Project until these measures are completed and LACFD has inspected and provided concurrence placement for each affected unit on the Project Site. HAZ-3: Prior to approval of any development proposal for project site #2, a Phase I Environmental Site Assessment shall be conducted to identify existing hazardous site conditions and required remediation. Required remediation shall be completed prior to construction on project site #2.				
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
Less Than Significant with Mitigation Incorporated. As discussed above, the proposed residential Project is not associated with the transport or use of hazardous materials. However past uses on the site and its proximity to the Metrolink rail line could create existing on-site hazards that could require removal and disposal prior to Project development. Based on a health risk assessment prepared by Tin Cheung & Associates and several environmental site assessments prepared by Stantec Consulting Services Inc.,				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
there are two general environmental issues on the Project site that require further analysis: • Impact to soil by lead and arsenic along a former rail spur located in the southern portion of the Site. • Impact in soil vapor by tetrachloroethylene (PCE) primarily in the western portion of the property related to a release from a former dry cleaner and automotive repair activities. Mitigation Measures HAZ-1, HAZ-2 and HAZ-3 are added to the Project to ensure all required environmental assessments and remedial action are taken prior to Project development. With inclusion of HAZ-1, HAZ-2 and HAZ-3, potential Project impacts regarding significant hazards from the release of hazardous materials would be reduced to less than significant levels.				
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		
Less Than Significant with Mitigation Incorporated. The closest school to the Project site is Columbia, a public elementary school located 0.2 miles south of the site. As discussed above, the proposed residential Project is not associated with the transport or use of hazardous materials. However past uses on the site and its proximity to the Metrolink rail line could create existing on-site hazards that could require removal and disposal prior to Project development. Mitigation Measures HAZ-1, HAZ-2 and HAZ-3 are added to the Project to ensure all required environmental assessments and remedial action are taken prior to Project development. These measures would reduce levels of lead, arsenic and PCE vapor within the Project soils to less than significant levels. With inclusion of these measures, no hazardous levels of these substances would occur and potential hazardous emissions would not impact future Project residents or existing sensitive receptors surrounding the site. Consequently, potential Project impacts regarding significant hazards from the release of hazardous materials within one quarter mile of a school would be reduced to less than significant levels.				
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X	
Less Than Significant. Section 65962.5 requires that state of California Department of Toxic Substances Control (DTSC) shall compile and update as appropriate a list of all hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code ("HSC")." The list contains one active site in El Monte which is San Gabriel Valley Area 1, located at Peck Road in El Monte, is an area of contaminated groundwater over 4 miles long and 1½ miles wide located in the San Gabriel Valley. [16]				

[16] http://www.envirostor.dtsc.ca.gov/public/search.asp; accessed October 9, 2015.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
The San Gabriel Valley Area 1 is currently registered as an Active NPL superfund site by the EPA. Because it is on the NPL, San Gabriel Valley Area 1 is considered one of the worst hazardous waste sites identified by the EPA. As discussed above, results from the Phase I Environmental Site Assessment (Phase I) for project site #1 identified the fact that a portion of the site lies within the National Priority List (NPL) for remediation. The Phase II and subsequent environmental site assessments conducted on the site did not find evidence of groundwater contamination on the Project site from the NPL hazardous waste site. Consequently potential Project impacts associated with a NPL or Section 65962.5 are less than significant.				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?				X
No Impact. The El Monte Airport is located at 4233 Santa Anita Avenue in El Monte, approximately 1.4 miles north of the Project site. El Monte Airport is under the jurisdiction of the County of Los Angeles Airport Land Use Commission which oversees implementation of an airport land use plan (ALUP) for each of its airport. The ALUP provides for the orderly growth of public-use airports over a 20-year span in a manner that minimizes land use conflicts with the surrounding area. The County adopted the El Monte ALUP in 1983 and the City's General Plan is in compliance with the adopted restrictions. Because the Project is consistent with the Downtown Core designation provided in the General Plan, it would not conflict with the El Monte Airport ALUP. Further the Project site is not within an approach or departure flight corridor for the El Monte Airport, and consequently would not result in an airport related safety hazard for future Project residents.				
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
No Impact. There is no private airstrip within the vicinity of the Project site. Consequently, the Project would not result in a safety hazard related to proximity to an airstrip.				
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
No Impact. The City's adopted 2004 Natural Hazard Mitigation Plan (NHMP) designates potential evacuation routes; east-west routes include Interstate 10, Ramona Boulevard, and Valley Boulevard, and north-south routes include Peck Road and Santa Anita Avenue. The Valley & Ramona residential project proposes one full access driveway at Valley Boulevard on the west end of the site. The driveway would loop around Buildings 9, 10 and 11 in the center of the site, providing full access to all areas of the site.				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
(Reference Figure 4, Conceptual Site Plan for the Valley & Ramona Residential.) Project access has been designed pursuant to City of El Monte Public Works Department direction and would accommodate adequate emergency access, and would not interfere with the NHMP designation of Valley and Ramona Boulevards as potential evacuation routes. Further any Project construction activities that would impact Valley or Ramona Boulevard would require an encroachment permit from the City, which would include a plan for ensuring safe access and flow on the boulevards. Future development of project site #2 would require similar review and approval by the City of El Monte Public Works Department to ensure emergency routes are not impacts. Consequently, the Project would not interfere with the adopted emergency response plan or evacuation plan.				
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X
No Impact. The City is fully urbanized and does not contain wildfire hazard areas. Consequently, the Project would not expose people or structures to risks from wildland fires.				
IX. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?				X
No Impact. Pursuant to the federal Water Pollution Control Act (also known as the Clean Water Act [CWA]), all developments in the City that are to implemented in accordance with the General Plan Update are required to include the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) for the construction phase of a project, and a Water Quality Management Plan (WQMP) for the operation phase of a project.[17] These requirements were further clarified by the Los Angeles Regional Water Quality Control Board (LARWQCB) latest Municipal Separate Storm Sewer System (MS4) NPDES Permit in December 2012. The MS4 permit requires new development and redevelopment projects to incorporate storm water mitigation measures. Under the conditions of the permit, the Project applicant would be required to eliminate or reduce non-storm water discharges to waters of the nation, develop and implement a Storm Water Pollution Prevention Plan (SWPPP) for the Project construction activities, and perform inspections of the storm water pollution prevention measures and control practices to ensure conformance with the site SWPPP. The state permit prohibits the discharge of materials other than storm water discharges, and prohibits all discharges that contain a hazardous substance in excess of reportable quantities established by federal regulations. The state permit also specifies that construction				

[17] General Plan EIR Impact 5.6-3.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
activities must meet all applicable provisions of Sections 30 and 402 of the Clean Water Act (CWA). Conformance with Section 402 of the CWA would ensure that the proposed Project does not violate any water quality standards or waste discharge requirements. The City of El Monte requires a Stormwater Low Impact Development (LID) Plan that serves as the WQMP for development projects. The LID prescribes structural, operations, and maintenance best management practices (BMPs) to minimize water pollution and erosion during the operation phase of each development. Pursuant to these requirements, the proposed LID for the Valley and Ramona project part #1 includes a retention based BMP system that uses a Maxwell plus Drywell system to capture and infiltrate stormwater runoff. Drainage from the Valley & Ramona residential project would be directed via private street gutters and storm drain pipe to the drywell located at the southwestern corner of the property. The drywell utilizes a dual-chambered infiltration BMP that pre-treats the stormwater twice for constituent removal prior to infiltration. Both of the dual-chambers are equipped with hydrocarbon capture pillows that capture a wide range of hydrocarbons and liquid organic compounds. Specifically, during the pre-treatment process, the drywell traps out suspended solids and debris and wicks away petroleum-based organic compounds. The runoff is then infiltrated before being released into the public storm drain system. According to the engineer Valley & Ramona residential project, a project Home Owner's Association (HOA) would be responsible for the maintenance of all on-site storm drain facilities, including implementation of a routine maintenance and cleaning program to ensure that the drainage system is protected and in proper operating condition. The proposed drainage system is designed to require a minimal amount of maintenance and draw down standing water within 48 hours of the end of a storm as required by the County of Los Angeles to prevent vector breeding.[18] Future development of project site #2 would be subject to City review and approval of a LID study and its prescribed BMPs. Compliance with the County's MS4 and LID standards would ensure that County water quality and waste discharge standards are met. Consequently, the Project would not cause significant impacts relative to violation of water quality and waste discharge standards levels.				
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				X

[18] Email correspondence from Peter Gambino, PE, PLS, QSD, Associate Principal, IDS Engineers; received January 8, 2016.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
have been granted)?				

No Impact. The Project site was previously developed but is currently vacant with most of the surface paved. Water in El Monte is derived almost entirely from groundwater extracted from the Main San Gabriel Groundwater Basin. The City of El Monte Water Department operates six production wells throughout the City to extract water, including two within the Downtown area in which the Project site is located. Use of San Gabriel Groundwater Basin is adjudicated by decree through Superior Court Judgments, which limits groundwater pumping to safe yield amounts (safe yield based upon a calculation of rate of groundwater replenishment). The City of El Monte has water rights to approximately 1.4% of the safe yield, or approximately 2,395 acre-feet per year.[19] The Project is designated Downtown in the General Plan which allows for a mix of uses including residential and commercial uses, and would be consistent with General Plan EIR findings that water supply and distribution systems are adequate to accommodate General Plan buildout. The Project would not tap into groundwater underneath or adjacent to the site.

Further, to ensure adequate water supply throughout the state, the governor of California has mandated a 28% overall reduction in water consumption by significantly restricting outdoor irrigation. Current code requires the use of water efficient plumbing fixtures and landscape plants that require little irrigation. The Project would be required to comply with these water efficiency standards. Consequently, the Project would not substantially impact groundwater supplies or recharge.

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 substantial erosion or siltation on- or off-site?				X

No Impact. The site is relatively flat and drains westerly. Proposed Valley & Ramona project part #1 LID plans specify that drainage would be captured in private street gutters, a storm drain pipe and into a drywell infiltration well, before being released into the public storm drain system. The post development storm water runoff will be greatly reduced due to a reduction in the impervious area by approximately fourteen thousand square feet. The existing site is 100 percent impervious and the proposed plans call for the site to be 84 percent impervious. As discussed above, future development of project site #2 would be subject to City review and approval of an LID and its prescribed BMPs.

In addition, the Los Angeles County MS4 permit requires that all post development stormwater runoff shall not exceed the predevelopment peak flow. No modifications to the City public storm drain system

[19] Downtown El Monte Main Street Transit Oriented Development (TOD) Specific Plan and Master Plan Initial Study, July 15; available at the City of El Monte Economic Development Department offices.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
would occur as a result of the Project, and the Project would not substantially alter the existing drainage pattern of the site or area or cause substantial erosion.				
d) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
No Impact. As discussed in Checklist Item #IX.a and c, above, the Valley & Ramona project proposes a series of onsite drainage facilities that would allow for storm drainage to be captured and filtered before entering the storm drain system. The Valley & Ramona project would substantially reduce the impervious area of the site as well as allow for the percolation of a portion of storm water, thereby greatly reducing the flow of storm water from the site into the existing public storm drain system which already has plenty of capacity. Future development of project site #2 would be subject to City review and approval of an on-site drainage system including a LID study and its prescribed BMPs. The Project would not create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.				
e) Otherwise substantially degrade water quality?				X
No Impact. As discussed in Item #IX.a and c, above, required compliance with the County's MS4 and LID standards would ensure that County water quality and waste discharge standards are met. Currently, the site is entirely impervious with no storm water treatment measure which allow for the anticipated pollutants such as oil, grease, and hydrocarbons from the parking lot to wash directly into the public storm drain. The Project would implement best management practices that require percolation of ground water as well as restricting the use of pesticides and landscape nutrients. Consequently, the Project would not degrade water quality.				
f) 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
No Impact. Pursuant to the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973, the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) identify areas subject to flooding during the 100-year storm event.[20] All of the City of El Monte is located within FEMA flood zone X (areas of less than 1 percent annual chance of Flood) and D (areas where flood hazards are underdetermined but possible).				

[20] The term "100-year" is a measure of the size of the flood. The "100-year flood" is a flooding event that has a one percent chance of occurring in any given year.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
The Project site is located in Zone X which is outside the 100 year storm flooding area. Consequently, the Project would not place housing within a 100-year flood hazard area or other delineated flood hazard area.				
g) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
No Impact. As discussed in Checklist Item #IX.f, above, the Project site is relatively flat and located within a fully urbanized area of the City not susceptible to flooding. Consequently, the Project would not place structures within a 100-year flood hazard area which would impede or redirect flood flows.				
h) 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	
Less Than Significant. The City of El Monte is within the inundation area for the Santa Fe dam. As discussed in Section 5.7 of the General Plan EIR, the Santa Fe Dam is used for flood control and for spreading water for ground recharge, and does not normally impound water. The dam's maximum water storage capacity is 30,887 acre-feet, and the capacity is controlled by spreading basins that accept surplus waters from the dam. Because the dam doesn't impound excess water, there is only limited likelihood that the dam would cause a substantial risk of flooding. Consequently, the Project would cause less than significant level impacts relative to exposure people or structures to a significant risk of loss, injury, or death as a result of flooding due to dam inundation.				
i) Inundation by seiche, tsunami, or mudflow?			X	
Less Than Significant. A seiche is a surface wave created when an inland body of water is shaken. A tsunami is a series of ocean waves caused by a sudden displacement of the ocean floor, most often due to earthquakes. A mudflow is a landslide composed of saturated rock debris and soil with a consistency of wet cement. Although there are no bodies of water within the City that would pose a threat of substantial inundation due to a seiche, the General Plan EIR identifies are bodies of water that are near the City limits that could pose a potential risk of inundation due to seiches to portions of the City: spreading basin in Peck Road County Park, adjacent to the northern city boundary, gravel pit in Irwindale and adjacent to the northern city boundary, a gravel pit in a portion of the city of Baldwin Park situated west of the San Gabriel River and east of the northeastern city limits of El Monte. The Project site is not within the vicinity of these bodies of water. The City of El Monte is located 23 miles inland from the Pacific Ocean and is therefore not at risk of inundation from tsunamis. Because the City is generally flat and developed with urban land uses, the City is at very low risk from mudflows. Consequently, the Project would cause less than significant level				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
impacts relative to exposure to impacts from seiche, tsunami, or mudflow.				
X. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?				X

No Impact. Current General Plan land use designation for the Project site is Downtown Core and current zoning designation is C3-D which allows for a wide variety of stores and business. The Project requires a rezoning to Mixed/Multiuse zone which is intended to provide opportunities for new mixed/multiuse housing along major corridors. As shown in Figure 2, Project Location Aerial Map, above, surrounding land uses are varied and include: United States Postal Service facility, commercial properties and the Metrolink rail line. Nearby residential uses include single family detached housing located approximately 100 feet north on Clark Avenue and approximately 300 feet east on Iris Lane.

To provide for an appropriate mix of land uses within the Downtown area inclusive of the Project site, the General Plan specifies that a Downtown Specific Plan (Specific Plan) shall be created. The City Economic Development Department is in the process of preparing the Downtown Specific Plan. Boundaries of the Specific Plan area encompass an approximately 115-acre triangular-like area bounded by the railroad tracks to the north, Santa Anita Avenue to the west, and Ramona Boulevard to the south. (Reference shown in Figure 11, below.)

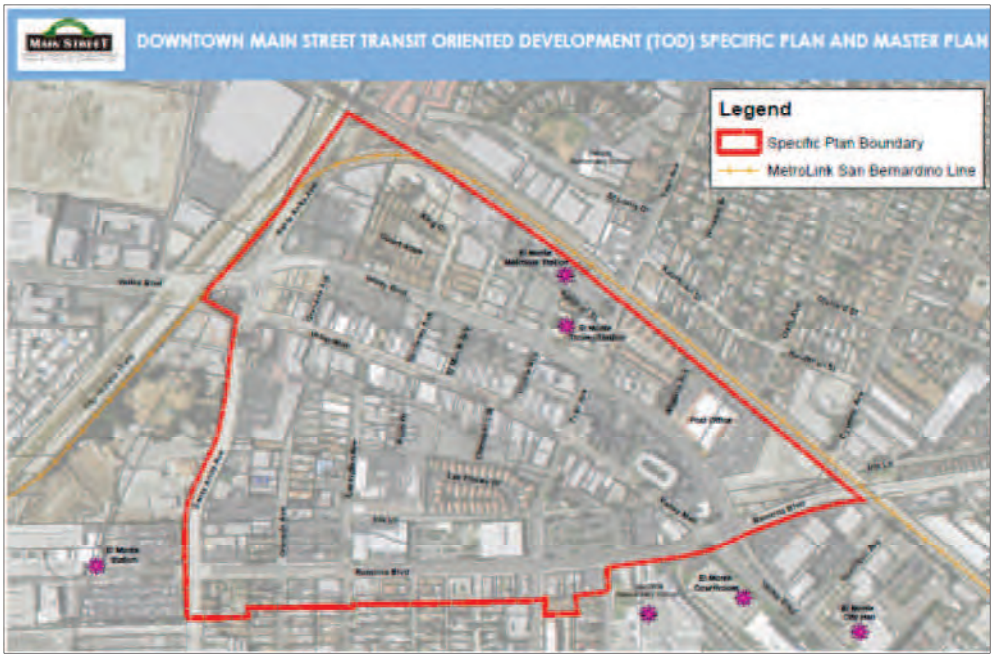

FIGURE 11. DOWNTOWN SPECIFIC PLAN BOUNDARY MAP

The purpose of the Specific Plan is to provide sufficient housing, retail, commercial, entertainment, dining, and recreational uses to create a critical mass of development sufficient to function as a true

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Transit Oriented Downtown for the City of El Monte to implement regional planning policies and create the synergies needed for a more active urban experience in Downtown El Monte. When complete, the General Plan designation for the Downtown, including the Project site, will be Downtown Specific Plan. The varied residential products proposed by the Valley & Ramona Residential on project site #1, including narrow lots and Live/Work concepts, are consistent with the Specific Plan objectives for residential and commercial uses adjacent to transit. Future uses for project site #2 are expected to be either retail, office or housing consistent with the Downtown General Plan designation and pending Downtown Specific Plan. Prior to completion of the Specific Plan, the Project site would be rezoned to Mixed/Multiuse zone which provides for residential and nonresidential uses to be integrated vertically, including live/work opportunities. Areas of the City currently designated Mixed/Multiuse are located east of the Project site along Peck Road and south of the site along Garvey and Durfee Avenues. The Project would redevelop an infill site in a manner that would blend with the General Plan and proposed Specific Plan vision for an integrated residential and commercial area, and bring a planned development to the existing mix of varied surrounding uses. The Project would not divide an established community.				
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
Less Than Significant. Applicable land use plans include the General Plan and Municipal Code. <u>General Plan</u>: The General Plan establishes a Downtown Vision, which states: *Downtown El Monte is a mixed-use, mixed-income, and cultural heart of El Monte that epitomizes pride and opportunity. As the center of the community, its historical role is augmented by new housing, retail, office, parks, and cultural facilities. The Downtown takes advantage of transit-oriented development. The population is diverse, the architecture is human scaled, and the character is authentic to El Monte.* This Vision is supported by General Plan Goal LU-5, which states: *Establish the Downtown as the mixed-use, mixed-income, and cultural heart of El Monte. Its historical role is augmented by new housing, business, parks, cultural facilities, and transit-oriented development. The population is diverse, the architecture is human scaled, and the character authentic.* Policies of Goal LU-5 relevant to the Project include: *LU-5.1 Land Use Mix. Accommodate retail commercial, office, restaurant, entertainment, civic, cultural, and housing land uses in accordance with the Land Use Plan's designations and subdistrict boundaries as may be more defined by a specific plan.* *LU-5.3 Housing. Facilitate development of mixed/multiuse housing, including transit-oriented development that provides housing options for persons of all ages and income levels that enhances the customer base for downtown business and activities.*				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

By proposing rezone the Project site to MMU which allows for a mix of residential and commercial uses, the Project supports mixed-use, mixed-income residential and retail/office development adjacent to transit consistent with General Plan policies for the Downtown Core.

Municipal Code: Although the Project site will be part of the Downtown Specific Plan when adopted, it will be rezoned to the Mixed/Multiuse (MMU) zone. Multifamily dwellings (which includes single family attached housing products), live/work and a variety of commercial uses are permitted by right within the MMU zone.[21]

Table 6 below compares the MMU zone development standards to the proposed Valley & Ramona Residential development. No development is currently proposed for project site #2, but future development of that site would be subject to the standards outlined in Table 6. As shown in the Table, the Valley & Ramona Residential project would comply with most applicable requirements of the MMU zone, with the exception of minimum density. In addition, the Project proposes to provide each residential unit with individual trash containers, which deviates from Section 17.45.100. E of the MMU Zone, which requires a trash enclosure.

TABLE 6: COMPARISON OF THE VALLEY & RAMONA RESIDENTIAL PROJECT TO MIXED/MULTIUSE DEVELOPMENT REGULATIONS

Development Regulation	Table 17.45.030A MMU Development Regulations	Project Proposed	Comparison [Meets MMU Regulations: Yes/No]
1. Minimum density (residential uses)	25 du/ac	20 du/ac gross 23 du/ac net	No. Slightly lower than minimum density.
2. Maximum density (residential uses)	35 du/ac	20 du/ac gross 23 du/ac net	Yes. Below maximum.
3. Maximum intensity (nonresidential uses)	1.0 FAR	1.0 FAR	Yes.
3. Minimum lot area	22,000 s.f.	136,034 s.f.	Yes.
4. Minimum dwelling unit size	Studio: 500 s.f. 1-bdrm: 650 s.f. 2-bdrm: 800 s.f. 3-bdrm: 1,000 s.f.	2-bdrm: 1,173 s.f. 3-bdrm: 1,438 s.f. 4-bdrm: 1,807 s.f.	Yes.
5. Maximum building height	4 stories/50 ft.	3 stories/40 ft.	Yes.

[21] Single family attached products are multifamily housing in that they include common walls, common guest parking and common amenities.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

TABLE 6: COMPARISON OF VALLEY & RAMONA RESIDENTIAL PROJECT TO MIXED/MULTIUSE DEVELOPMENT REGULATIONS - CONTINUED

Development Regulation	Development Regulation	Development Regulation	Development Regulation
6. Distance between buildings (minimum)	10 ft.	10 ft.	Yes.
7. Front yard setback	5 ft. (min); 15 ft. (max)	5 ft. (min); 15 ft. (max)	Yes.
8. Street side setback	5 ft. (min); 15 ft. (max)	8 ft. (min); 13 ft. (max)	Yes.
9. Interior side setback	5 ft. (min); No max	5 ft.	Yes.
10. Rear yard setback	10 ft. (min) for residential portion, no requirement for commercial portion	10 ft.	Yes.
11. Permitted setback encroachments	6 ft. into setbacks	Not specified	Not applicable.
12. Maximum lot coverage	None	34%	Yes. Exceeds minimum.
13. Trash enclosures	Trash Enclosures be required for refuse and recycling bins.	Individual trash containers	No. Deviates from trash enclosure standard.
Landscape/open space standards			
13. Publicly accessible open space (nonresidential)	15% of net lot area	15% of net lot area	Yes.
14. Private open space (multi-family residential)	1st floor-150 s.f. per unit Upper floor-100 s.f. per unit	1st floor-150 s.f. per unit Upper floor-100 s.f. per unit	Yes.
15. Common open space (multi-family residential)	200 s.f. per unit	231 s.f. per unit	Yes. Exceeds minimum.
Parking Standards			
16. Surface parking	20 ft. min setback from front lot; 15 ft. min setback from side lot line	75 ft. min setback from Valley Boulevard; 15 ft. min setback from Ramona Avenue	Yes.
17. Garage/tuck-under parking	Prohibited along front and street side lot lines	No garages along front and side property lines. No tuck-under parking	Yes.
18. Underground/podium parking	Allowed beneath building footprint	Private garage space on first floor	Not applicable.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

TABLE 6: COMPARISON OF VALLEY & RAMONA RESIDENTIAL PROJECT TO MIXED/MULTIUSE DEVELOPMENT REGULATIONS - CONTINUED

Development Regulation	Development Regulation	Development Regulation	Development Regulation
19. Above-ground parking structure	Permitted if screened from views from public right-of-way and adjacent single-family residential districts	No parking structure	Not applicable
20. Multi-family residential and condominiums	Studio - 1 space per unit 1 bedroom - 1.7 spaces per unit 2 bedrooms - 2 spaces per unit 3 or more bedrooms - 2.5 spaces per unit in common parking areas; 3 spaces per unit if private and enclosed. Additional guest parking - ¼ space per unit Total Parking Required: 165 spaces	Total Parking provided: 169 spaces	Yes. Exceeds minimum.

The City may consider approving the Valley & Ramona Residential project with the deviations relative to minimum density and trash enclosure subject to a Variance or Modification, as specified in Chapter 17.20 of the El Monte Municipal Code. The required findings for a Variance are as follows:

A. There are exceptional or extraordinary circumstances or conditions applicable to the property involved, or to the intended use of the property, that do not apply generally to the property or class of use in the same zone or vicinity;
B. The granting of such variance will not be materially detrimental to the public health or welfare or injurious to the property or improvements in such zone or vicinity in which the property is located;
C. Because of special circumstances applicable to subject property, including size, shape, topography, location or surroundings, the strict application of the zoning ordinance is found to deprive subject property of privileges enjoyed by other properties in the vicinity and under the identical zone classifications;
D. The granting of such variance will not adversely affect the comprehensive general plan.

The special circumstances applicable to project site #1 include its unusual hexagonal shape; its narrow frontage on Valley Boulevard frontage which creates an acute angle in which to site Buildings 4 and 5; the V configuration of the site's northwest property line; 15 on-site easements; and adjacency to the rail line. All of these special circumstances constrain site design. The City must also find that the proposed parking for the Valley & Ramona Residential project, which consists of 169 spaces or 2.73 spaces per each of the 62 units, is adequate and will not adversely impact surrounding areas. To evaluate the adequacy of the proposed parking given the mix of residential units, a Parking Analysis (Appendix E) was conducted which compared the parking ratios of several existing townhome developments with the

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

proposed 62-unit development.[22] The Parking Analysis determined that the 169 parking spaces adequately provides for resident and guest parking.

The Valley & Ramona Residential project also will require a Design Review which requires the City to make the following findings consistent with Section 17.22 of the El Monte Municipal Code:

A. The granting of the design review request will not be detrimental to the public health or welfare or injurious to the property or improvements in such zone or vicinity;
B. The design of the proposed project would provide a desirable environment for its occupants and visiting public as well as its neighbors through good aesthetic use of materials, textures, and colors that will remain appealing and will retain a reasonably adequate level of maintenance;
C. The design and layout of the proposed project will not unreasonably interfere with the use and enjoyment of neighboring existing or future development, and will not result in vehicular and/or pedestrian hazards;
D. The architectural design of the proposed project is compatible with the character of the surrounding neighborhood and will maintain the harmonious, orderly and attractive development contemplated by the provisions of this chapter and the general plan; and
E. The landscape considerations including the location, type, size and coverage of plant materials, provisions for irrigation, maintenance and protection of landscaped areas, have been provided to insure visual relief, to complement buildings and structures and to provide an attractive environment.
F. The architectural design, layout and site configuration is consistent with the City's adopted "comprehensive design guidelines."

The Valley & Ramona Residential project proposes 7 plan types, each which share a similar architectural style that consists of Spanish elements including: tile roofing, light sand colored stucco exterior walls, stucco window sill trim, wrought iron railing, decorative entry doors and decorative lighting, and wood post and corbel. (Reference Figure 4, above.) The conceptual site plan provides common open spaces and landscape. By improving project site #1 with well-designed buildings and landscape, the Valley & Ramona Residential project would enhance the visual character of the area.

Chapter 17.04.20 of the El Monte Municipal Code defines "Mixed use development" as an area of development containing two (2) or more of the following uses: office, commercial, residential, restaurant, rapid transit facility, hotel or entertainment". Permitted uses within the MMU zone include "Dwelling, multifamily" and "Live/Work".

As discussed above, the Project is consistent with the Downtown Core General Plan designation and upon the granting of a modification for Valley & Ramona Residential project would be consistent with standards of the MMU Zone. Project conflicts with applicable land use plans would be less than significant.

[22] Valley & Ramona Parking Impact Analysis prepared by Kunzman Associates October 26, 2015; contained in Appendix E.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
No Impact. As discussed in Checklist Item #IV.f, the Project site is not within the vicinity of a local, regional or state conservation plan area. Consequently, the Project would not conflict with a habitat or natural community conservation plan.				
XI. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
No Impact. The Project site and surrounding areas are fully developed. Neither the General Plan nor the General Plan EIR identify significant mineral resources within the City inclusive of the Project site. Consequently, the Project would not impact a known mineral resource.				
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
No Impact. As noted above, there are no identified mineral resources on the Project site or in the City of El Monte. Consequently, the Project would not result in a loss of availability of a locally important mineral resource.				
XII. NOISE – Would the Project result in:				
Data presented in this Noise section is based on a "Noise Impact Analysis, The Valley & Ramona Residential Project", prepared by Giroux and Associates, October 2, 2015 and contained as Appendix C.				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
Less Than Significant with Mitigation Incorporated. Noise Regulations: Since the human ear is not equally sensitive to all sound frequencies within the entire auditory spectrum, human response is factored into sound descriptions by weighting sounds within the range of maximum human sensitivity more heavily in a process called "A-weighting," written as dB(A). Any further reference in this discussion to decibels written as "dB" should be understood to be A-weighted. Time variations in noise exposure are typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called LEQ), or alternately, as a statistical description of the sound pressure level that is exceeded over some fraction of a given observation period. Finally, because community receptors are more sensitive to				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Ldn (day-night) or the Community Noise Equivalent Level (CNEL). The CNEL metric has gradually replaced the Ldn factor, but the two descriptors are essentially identical.

The City of El Monte land use noise compatibility standards recommend an exterior noise exposure of less than 60 dB CNEL in usable outdoor space for residential noise sensitive uses as "normally acceptable" and up to 70 dB CNEL are considered "conditionally acceptable" and may be permitted if noise mitigation is included in the design. Although the El Monte guidelines allows exterior noise levels of up to 70 dB CNEL, a noise level of 65 dB is the level at which ambient noise begins to interfere with one's ability to carry on a normal conversation at reasonable separation without raising one's voice. A noise exposure of 65 dB CNEL is typically recommended as the exterior noise land use compatibility guideline for new residential dwellings in California. CNEL-based standards generally apply to usable outdoor recreational space at backyards, patios or balconies. Interior exposures of noise-sensitive uses are controlled through adequate structural attenuation.

An interior CNEL of 45 dB is mandated by the State of California Noise Insulation Standards (CCR, Title 24, Part 6, Section T25-28) for multiple family dwellings and hotel and motel rooms. In 1988, the State Building Standards Commission expanded that standard to include all habitable rooms in any residential use, included single-family dwelling units. Since normal noise attenuation within residential structures with closed windows is 25-30 dB, an exterior noise exposure of 70-75 dB CNEL allows the interior standard to be met without any specialized structural attenuation (dual paned windows, etc.), but with closed windows and fresh air supply systems or air conditioning in order to maintain a comfortable living environment.

The City of El Monte noise standards also restricts hours of construction to 6 a.m. to 7 p.m. during the week and on 8 a.m. to 7 p.m. on Saturdays and Sundays. Construction is not permitted on federal Holidays.

<u>Baseline Noise Levels</u>: The Project site is located in a higher noise environment due to background traffic and the adjacent rail line. Relative to the City of El Monte Noise Element goal of 65 dB CNEL for noise-sensitive land uses, noise levels along the train tracks are a severe constraint to residential development as proposed. Close to Valley Boulevard, noise levels are moderately elevated with respect to siting noise sensitive land uses very near the roadway. The Ramona Boulevard is least impacted because of lower traffic volumes and the terrain shielding effect of roadway and train track grade separation. Except close to the tracks, baseline noise levels along the Ramona Boulevard frontage only marginally exceed Noise Element standards for usable outdoor residential space.

To determine existing noise levels in the Project area, the Noise Impact Analysis took baseline noise readings at the locations shown in Figure 12. Baseline noise measurements at these locations are shown

in Table 7, below.

FIGURE 12. NOISE MONITOR LOCATIONS

TABLE 7: NOISE MEASUREMENTS EXISTING HOURLY LEQ'S (DB)

Time Interval	Leqs Meter 1	Leqs Meter 2	Leqs Meter 3	Leqs Meter 4
15:00-16:00	59.8	65.7	67.4	66.8
16:00-17:00	59.4	59.9	62.9	66.7
17:00-18:00	61.4	62.7	66.3	66.2
18:00-19:00	61.9	65.6	68.8	65.6
19:00-20:00	58.9	67.2	61.4	64.6
20:00-21:00	56.9	63.3	59.7	63.7
21:00-22:00	56.8	61.1	58.9	62.4
22:00-23:00	57.6	61.8	59.9	61.2
23:00-24:00	52.5	62.2	52.3	59.6
0:00-1:00	58.9	71.1	66.8	58.9
1:00-2:00	59.9	75.8	71.7	58.3

TABLE 7: NOISE MEASUREMENTS EXISTING HOURLY LEQ'S (DB)- CONTINUED

Time Interval	Time Interval	Time Interval	Time Interval	Time Interval
2:00-3:00	64.1	76.4	71.1	65.3
3:00-4:00	46.6	53.2	45.5	57.2
4:00-5:00	48.3	58.8	47.8	58.3
5:00:6:00	55.7	74.5	69.1	64.2
6:00-7:00	58.5	62.3	66.3	66.3
7:00-8:00	63.6	67.9	79.5	67.1
8:00-9:00	59.1	59.1	59.7	67.3
9:00-10:00	59.4	67.7	65.6	66.3
10:00-11:00	60.5	70.0	65.2	66.5
11:00-12:00	60.6	71.4	69.5	66.2
12:00-13:00	58.4	64.6	60.0	67.8
13:00-14:00	61.9	72.9	69.0	66.5
14:00-15:00	59.4	70.2	62.8	70.0
CNEL	65.4	77.6	74.0	69.9

Construction Noise Impacts: Temporary construction noise impacts vary markedly because the noise strength of construction equipment ranges widely as a function of the equipment used and its activity level. Short-term construction noise impacts tend to occur in discrete phases dominated by large, earth-moving equipment sources for demolition and grading. During construction and paving, equipment is generally less noisy.

Construction noise impacts are minimized by compliance to the allowable hours of operation of 6 a.m. to 7 p.m. during the week and on 8 a.m. to 7 p.m. on Saturdays and Sundays in the Municipal Code. Construction is not permitted on Federal Holidays. The temporary nature of construction noise and reasonable distance set-back from noisiest activities would maintain short-term construction noise impacts at less than significant levels. In addition, the Noise Impact Analysis recommends the following Mitigation Measure for the Valley & Ramona Residential project to further reduce potential construction nuisance noise:

Mitigation Measure:

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

NOI-1: During all grading and construction activities for the Valley & Ramona project, the Applicant shall demonstrate to the satisfaction of the Economic Development Department that: (1) All equipment shall be equipped with properly operating and maintained mufflers. (2) Equipment and materials shall be staged in areas that will create the greatest distance between construction-related noise sources and the noise-sensitive receptors nearest the Project site during all Project construction. (3) All construction-related activities shall be restricted to the construction hours outlined in the City's Noise Ordinance.

Vehicular Noise Impacts: The Noise Impact Analysis measured existing CNEL levels at 50 feet from the centerline of three roads adjacent to the Project site: Valley Boulevard, Ramona Boulevard and Tyler Avenue. Traffic noise levels in the site vicinity at 50 feet from respective road centerlines in the project vicinity are calculated by the Federal Highway Traffic Noise Prediction Model to be as follows (dB CNEL):

Roadway	Existing	Ex. + Proj.	Impact	Cumulative	Impact
Valley Blvd.	70.3	70.4	+0.1	71.3	+1.0
Ramona Blvd.	68.3	68.4	+0.1	68.6	+0.3
Tyler Ave.	67.4	67.5	+0.1	67.9	+0.5

Relative to the adopted significance threshold of +3.0 dB CNEL, individual and cumulative vehicular noise impacts to the Project site are not significant. Although traffic noise along the Ramona Boulevard frontage may exceed the 65 dB CNEL target level by several dB on decks facing the roadway, the Valley & Ramona Residential project proposes decks that will be recessed such that the solid sides would partially shield the full field of view. With the proposed building set-back at Ramona Boulevard and partial screening of the decks, traffic noise at the decks of the closest units to Ramona Boulevard would be 64 dB CNEL and not require any supplemental noise protection.

On Site Noise Impacts from Roads: Along the Valley Boulevard frontage, the ground floor of the work/live units of the Valley & Ramona Residential project would be commercial use with residential use upper levels. The upper level residential uses have balconies/decks fronting Valley Boulevard. These balconies/decks would have a 60 foot setback from the Valley Boulevard centerline, and are not required to meet the open space standards. Habitable residential interior space will be adequately noise protected to achieve 45 dB with only the ability to close windows at perimeter units. Where window closure is needed for policy compliance, supplemental fresh air ventilation will be provided at rates specified in the California Building Code. Consequently, on-site noise impacts from roads would be less than significant.

Interior Noise Roadway Adjacent Dwellings: Noise protection capable of ensuring a 45 dB CNEL interior standard is required for dwellings exposed to traffic noise from adjacent roadways. The calculated noise level based upon future traffic volume is 69 dB CNEL at the proposed Valley & Ramona Residential

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

dwellings adjacent to Valley Boulevard and 67 dB for units adjacent to Ramona Boulevard. For typical wood-framed construction with stucco and gypsum board wall assemblies, the exterior to interior noise level reduction is as follows:

- Partly open windows - 12 dB
- Closed single-paned windows - 20 dB
- Closed dual-paned windows - 30 dB

Use of dual-paned windows is required by the CBC for energy conservation in new residential construction. Interior noise standards would therefore be met with closed windows. Interior standards will be met as long as residents have the option to close their windows. Where window closure is needed to shut out noise, supplemental ventilation is required by the CBC with some specified gradation of fresh air. Central air conditioning with a fresh air inlet on a whole house fan would meet this requirement.

Mitigation Measure NOI-2 is added to the Project to reduce interior roadway noise at the Valley & Ramona Residential project to less than significant levels:

Mitigation Measure:

NOI-2: Prior to the issuance of building permits for the Valley & Ramona Residential project, the Applicant shall provide a supplemental acoustical analysis for review and approval of the Economic Development Department to verify that adequate structural noise protection exists in perimeter residences adjoining the roadways to meet the 45 dBA CNEL interior standard. Supplemental ventilation (most likely air conditioning with a fresh make-up air inlet) is required in any livable space where window closure to shut out transportation noise is needed to meet interior standards.

On Site Noise Impacts from Rail: The Union Pacific Railroad/Metrolink rail line handles commuter rail and freight trains. Of the two, freight rail noise is the more dominant, though a less frequent, noise source. Based on 2015 train schedules, 18 inbound and 18 outbound Metrolink trains traverse the line each day. No precise numbers of daily freight trains was identified. Although the noise metric used to address train noise is a CNEL or a daily average, the single event noise intrusion potential is high.

On-site noise monitoring indicated maximum noise levels of 74-78 dB CNEL at a distance of approximately 30 feet from the track centerline. The amount of trains is not likely to substantially increase in the future. The property line of the Valley & Ramona Residential dwellings adjacent to the railroad would be located approximately 50 feet from the centerline of the tracks. A rear yard depth of 10 feet would result in a 60 foot setback to the nearest residential facade. The anticipated noise loading would be 76 dB at the residential property line and 75 dB CNEL at the closest facade. These noise impacts from the railroad tracks would be significant without noise reduction mitigation. Mitigation Measure NOI-3 is added to the Project to reduce exterior rail noise at the Valley & Ramona Residential project to less than significant levels:

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

Mitigation Measure:

NOI-3: Prior to the issuance of building permits for the Valley & Ramona Residential project, the Applicant shall provide a supplemental acoustical analysis for review and approval of the Economic Development Department to verify that for residential units adjacent to the rail tracks, appropriate noise attenuation measures will be in place to reduce exterior rail noise to 70 dB CNEL which is a conditionally acceptable level. Appropriate measures that can achieve the reduction to 70 dB CNEL include:

- Sound barriers that are (1) high enough and long enough to break the line-of-sight between the sound source and the receiver, (2) of an impervious material, and (3) not have any gaps or holes between the panels or at the bottom.
- A 14-foot high CMU or stucco sound wall at the residential Project property line.
- All windows throughout the Project will be dual-paned glass and all upstairs living and bedrooms of units abutting the tracks shall be equipped with supplemental ventilation supplying at least 30 cubic feet per minute (CFM) of fresh make-up air (CBC requirement), and
- Upstairs side windows of living or bedrooms in units abutting the tracks shall be rated at sound transmission class (STC) =33 or better (single event noise nuisance reduction).

Interior Noise for Railroad Adjacent Dwellings: A main noise concern from railroad noise is the interior noise level. The requirement for habitable interior space is a noise level less than 45 dB CNEL. Units within the Valley & Ramona Residential project adjacent to the track are designed such that only stairwells and bathrooms front the tracks. No habitable rooms will face the track. Bedrooms and living areas are oriented towards the front of the structure. No habitable rooms will have any windows, doors or decks with a clear line-of-sight to the rail line. The residual noise loading for the track adjacent homes is 70 dB. Mitigation of noise levels can typically be achieved with the following upgraded structural features such that reductions up to 25-30 dB are typically attainable while still allowing for discretionary window opening.

- All facades must be constructed with substantial weight and insulation;
- Sound-rated windows providing noise reduction performance similar to that of the façade must be included for habitable rooms;
- Sound-rated doors or storm doors providing noise reduction performance similar to that of the façade must be included for all exterior entries;
- Acoustic baffling of vents is required for chimneys, fans and gable ends;
- Installation of a mechanical ventilation system affording comfort under closed window conditions is required.

Because the exterior tier of development will shield any interior units, the above listed acoustic upgrades are needed on only the front and side faces of the outermost tier of residences. Standard construction including mandatory use of dual-paned windows as required by the CBC, will achieve required interior

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

levels of less than 45 dB CNEL. Because window closure is a necessary condition to meet the noise standard, the code requires the provision of supplemental ventilation, including a fresh air intake that provides 30 CPM of fresh outside air. In order to not compromise acoustic protection integrity of the HVAC systems, the fresh air inlet should be located on the building facades away from the track. Consequently, t impacts related to interior noise for railroad adjacent dwellings within the Valley & Ramona Residential project would be less than significant.

Site Operational Noise: The Valley & Ramona Residential project proposes several Live/Work units with a possible retail/office component being downstairs and residential use upstairs. The intensity of Live/Work development is regulated by the MMU zone that only allows uses that are compatible with the residential nature of a portion of the given unit and of adjacent residences. Activities such as repair of vehicles, adult oriented businesses or entertainment are typically prohibited. Permitted types of retail uses traditionally have strict limits on the anticipated numbers of customer or delivery vehicles. The most common type of Live/Work use is for professional office use of the Live/Work space (accountants, consultants, engineers, etc.). Such uses would not distort the primary residential character of the proposed development while reducing off-site commuting, and would not entail late-night activity. The remaining residential uses are considered passive and not a source of noise disturbance.

With the inclusion of Mitigation Measures NOI-1 through NOI-3, potential noise impacts associated with the Valley & Ramona Residential project would be reduced to less than significant levels. Potential noise impacts related to future uses on project site #2 would be evaluated at the time development on that site proceeds.

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

Less Than Significant Mitigation Incorporated. Vibration is a trembling, quivering, or oscillating motion of the earth. Like noise, vibration is transmitted in waves, but in this case through the earth or solid objects. Unlike noise, vibration is typically of a frequency that is felt rather than heard.

Vibration is most commonly expressed in terms of the root mean square (RMS) velocity of a vibrating object. RMS velocities are expressed in units of vibration decibels. The range of vibration decibels (VdB) is as follows:

- 65 VdB: threshold of human perception
- 72 VdB: annoyance due to frequent events
- 80 VdB: annoyance due to infrequent events
- 100 VdB: minor cosmetic damage.

Project Construction Vibration: The on-site construction equipment that will create the maximum potential vibration is a large bulldozer which typically generates a vibration source level of 81 VdB at 50

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

feet from the source. With typical vibrational energy spreading loss, the vibration annoyance standard is met at 56 feet. The post office is more than 200 feet from the Project site. At this distance, vibrations levels will be less than even the annoyance threshold and well below the damage threshold. Construction activity vibration impacts would be as less-than-significant.

Roadway Vibration: As discussed above, Project implementation will not significantly increase traffic noise. Similarly such, no excessive ground borne vibrations would be created by the Project vehicular traffic. With respect to impacts to future Project site residents, adjacent traffic activity is typical of urban areas and would not result in perceptible vibrations at the Project site. The Federal Manual entitled "Transit Noise and Vibration Assessment" states that if arterial roadways are smooth such as Valley or Ramona Boulevards, the vibration from roadway traffic is rarely perceptible. Consequently, no excessive ground borne vibrations from roadway or Project traffic would be created, and vibrations from roadways would be less than significant.

Rail Vibration: Railroads generate ground-borne vibration that may be perceptible at on-site uses. Residential units in close proximity to railroad tracks can be affected by rattling windows and floors. Ground-borne vibration is generally not a problem for buildings near railroad tracks at- or above-grade, because the airborne noise from trains typically overshadows effects of vibration. According to the El Monte General Plan EIR, Impact Section 5.9-4 9-3 the following requirement applies to the Project:

- Prior to the issuance of building permits, any project that involves a vibration-sensitive use directly adjacent to the Union Pacific Railroad shall retain an acoustical engineer to evaluate potential for trains to create perceptible levels of vibration indoors. If vibration-related impacts are found, mitigation measures, such as use of concrete, iron, steel, or masonry materials to ensure that levels of vibration amplification are within acceptable limits to building occupants, shall be implemented. Pursuant to the Federal Transit Administration vibration-annoyance criteria, these acceptable limits are 78 VdB during the daytime and 72 VdB during the nighttime for residential uses, 84 VdB for office uses, and 90 VdB for workshops.

The Noise Impact Analysis finds that equipping all units of the proposed Valley & Ramona Residential project that face the railroad tracks equipped with dual-paned windows with upgraded seals for noise control would reduce window rattling and other vibration effects to acceptable levels as long as floors are carpeted or have been provided with acoustical underlayment on uncarpeted floors. The residual vibration impact with the application of floor vibration protection is from rattling windows. Consequently adding Mitigation Measure NOI-4 to the Valley & Ramona Residential project will reduce rail vibration impacts at the Project to less than significant levels:

Mitigation Measure:

NOI-4: Prior to the issuance of building permits for the Valley & Ramona Residential project, the Applicant shall provide documentation satisfactory to the Economic Development Department that all units facing the railroad tracks will be equipped with dual-paned windows with upgraded

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
seals for noise control would reduce window rattling and other vibration effects to acceptable levels. With the inclusion of Mitigation Measure NOI-4, potential vibration impacts associated with the Valley & Ramona Residential project would be reduced to less than significant levels. Potential vibration impacts related to future uses on project site #2 would be evaluated at the time development on that site proceeds.				
c) A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the project?			X	
Less Than Significant. The Valley & Ramona Residential project will add 62 houses to an undeveloped infill site plus a total of 1,750 square feet of office/retail space within the 4 Live/Work units. Noise associated with the residential uses will be similar to existing residential development located north and east of the Project site. Noise associated with the non-residential use of the Live/Work unit would consist of periodic vehicle trips from clients or deliveries, and would be generally consistent with a residential home business, and less than adjacent commercial and institutional use that often has parking lot and truck delivery noise. Adjacent commercial uses include banks, retail and restaurant; and adjacent institutional uses include the El Monte maintenance yard and a United States post office. Future uses on project site #2 would develop pursuant to the MMU zone and would be of a residential or commercial character similar to Valley & Ramona Residential project and surrounding uses. Consequently, Project impacts associated with increases in ambient noise would be less than significant.				
d) A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the project?			X	
Less Than Significant. Construction of the Project would not involve substantial grading, blasting operations, pile drivers or large-scale demolition. As discussed in Checklist Items XII a) and b), above, construction noise and associated vibration will be temporary and would be less than significant. Implementation of Mitigation Measure NOI-1 for the Valley & Ramona Residential project would further reduce construction noise impacts on nearby sensitive uses.				
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
No Impact. El Monte Airport is located along the Rio Hondo River 1.4 miles from the Project site. The				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
General Plan Public Health and Safety Element notes that no residential uses, even those much closer to the airport than the proposed Valley and Ramona Project site, fall within the 65 dB CNEL airport noise contour. Aircraft noise is not considered a siting constraint for the proposed Project. Consequently, no significant impacts relative to airport noise would result from the implementation of the Project.				
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
No Impact. The Project site is not located within the immediate vicinity of any private airstrip. Consequently, no significant impacts relative to noise from a private airstrip would result from the implementation of the proposed project.				
XIII. POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
Less Than Significant. According to the State of California Department of Finance Table 2: E-5 City/County Population and Housing Estimates, 1/1/2015, the average household size in the City of El Monte is 4.12 persons per household. Based on this average, the Valley & Ramona Residential project's 62 houses would result in a population of 256 persons. Project site #2, as discussed in Item #IIb, above, could support an additional 3 residential units or 12 persons. With a total population of 115,774, the additional 268 persons (256 plus 12 persons) would represent an increase in population of 0.23 percent. This increase is not significant, and as discussed in Checklist Item #X.b, the Project would be consistent with the General Plan Downtown goal to create a mixed-use, mixed-income district with new housing and business. Consequently, the Project would not result in a substantial increase of population and would not induce substantial population growth.				
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
No Impact. The Project site is currently vacant with abandoned buildings and scattered vegetation. Consequently, the Project would not displace substantial numbers of existing housing.				
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
No Impact. The Project site is currently vacant with abandoned buildings and scattered vegetation.				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

Consequently, the Project would not displace substantial numbers of people and would not necessitate the construction of replacement housing elsewhere.

XIV. PUBLIC SERVICES –

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

Fire protection?			X	

Less Than Significant Impact. Fire protection and emergency services for the City of El Monte are provided by the Los Angeles County Fire Department (LACoFD). Table 8 presents the locations, equipment, and personnel at LACoFD stations in and within one mile of El Monte. In the event of a large-scale emergency in the City of El Monte, LACoFD stations from Rosemead, Temple City, and South El Monte would assist. Station 166 is the closest station to the Project site, located 0.9 miles directly west.

TABLE 8. FIRE STATION RESOURCES

Name and Location	Equipment	Daily Firefighter Staffing
Fire Stations in El Monte		
Station 166 at 3515 Santa Anita Ave.	1 quint[1], 1 paramedic squad, 1 battalion, and 1 utility truck	6
Station 168 at 3207 Cogswell Road	1 engine	3
Station 169 at 5112 N. Peck Road	1 engine	3
Fire Stations within One Mile of El Monte City Limits		
TABLE 8. FIRE STATION RESOURCES - CONTINUED		
Station 42 at 9319 Valley Boulevard in City of Rosemead, about 0.2 mile west of El Monte city limits	1 engine	3
Station 90 at 10115 Rush Street in City of South El Monte, about 0.5 mile south of El Monte city limits	1 engine and 1 paramedic squad	5

[1] A quint is a combination fire engine and ladder truck

The General Plan EIR, Section 5.11.1, finds that build-out of the General Plan could result in the need for additional fire protection resources, and determines that future projects should be reviewed by the City of El Monte individually and be required to comply with requirements in effect at the time building permits are issued (i.e., payment of impact fees). The Project would develop 62 single family attached dwellings and additional commercial or residential uses on two commercially zoned sites. This change is consistent with the General Plan Core designation and would not substantially increase fire response demand to levels requiring the provision of additional or expanded facilities. As part of the Project's review process, the City Economic Development Department staff has included LACoFD review and will

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
include applicable conditions of approval as warranted. Consequently, Project impacts relative to new or physically altered fire protection facilities would be less than significant.				
Police protection?			X	
Less Than Significant Impact. Police services are provided by the City of El Monte through its Police Department, which is responsible for enforcing local, state, and federal laws, performing investigations and makes arrests, administering emergency medical treatment and responding to City emergencies. The main police station is at 11333 Valley Boulevard, located 0.2 miles southeast of the Project site. The El Monte Police Department (EMPD) also operates two community relations offices, one at 10503 Valley Boulevard and a second at 11204 Asher Street and an air-support unit office at the El Monte Airport. Two helicopters are available at the airport to assist police operations in the City. The EMPD has a qualified staff of 127 police officers, 46 civilian staff, and 4 K-9 units, which equates to about 1.1 police officers per 1,000 residents, slightly below the average of 1.4 for cities in the west San Gabriel Valley. The EMPD receives 17,000 to 20,000 calls per month. Of this total, approximately 17 percent are emergency calls. The General Plan EIR, Section 5.11.2, finds that build-out of the General Plan could result in the need for additional police resources, and determines that future projects should be reviewed by the City of El Monte individually and be required to comply with requirements in effect at the time building permits are issued (i.e., payment of impact fees). The Project would develop 62 single family attached dwellings and additional commercial or residential uses on two commercially zoned sites. This change is consistent with the General Plan Core designation and would not substantially increase police response demand to levels requiring the provision of additional or expanded facilities. As part of the Project's review process, the City Economic Development Department staff has included EMPD review and will include applicable conditions of approval as warranted. Consequently, Project impacts relative to new or physically altered police facilities would be less than significant.				
Schools?			X	
Less Than Significant Impact. There are three school districts that service the City of El Monte: the Mountain View School District, the El Monte City School District, and the El Monte Union High School District, which, combined, provide 35 public schools. There are also 10 private schools in the City. The General Plan EIR, Section 5.11.3, finds that build-out of the General Plan could result in the need for additional school resources. The schools serving the Project site and their respective current enrollments are listed below: • Columbia Elementary School Location: 3400 California Ave, El Monte, CA 91731 Grades: K-8				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

Current Enrollment: 942 students[23]

- El Monte High School
  Location: 3048 Tyler Avenue, El Monte, CA 91731
  Grades: 9-12
  Current Enrollment: 1,970 students[24]

As indicated in Table 9, the Valley & Ramona Residential project's 62 units would generate an estimated 37 students, and the potential additional 3 units on project site #2 would generate an estimated 2 students, resulting in a total Project student generation of 39:

TABLE 9. STUDENT GENERATION

	Elementary School	High School	Total
Generation Rate [1]	0.4	0.2	0.6
Valley & Ramona Residential Project Site #1 Students Generated	25	12	37
Project Site #2 Students Generated	1	1	2
Total Project Student Generation	26	13	39

[1] Source: City of El Monte General Plan EIR.

Per California Government Code (CGC), the Project would be subject to the payment of school impact fees (Section 53080, CGC). As authorized under Section 17620(a) of the California Education Code (CEC) and Section 65995(b) of the CGC, local school districts are authorized to impose and collect school "impact fees" for all residential and non-residential development activities that occur within their jurisdiction to off-set the additional costs associated with the new students that result directly from the construction of new homes. Payment of school impact fees constitutes full mitigation for the impacts associated with new residential and non-residential development. Consequently, Project impacts relative to new or physically altered school police facilities would be less than significant.

Parks?			X	

Less Than Significant Impact. The City of El Monte has 11 local parks covering approximately 50 acres of land. The parks are managed by the City Parks and Recreation Department. The Project would develop 62 single family attached dwellings and additional commercial or residential uses on two commercially zoned sites, resulting in a maximum population increase of 0.23 percent. The Project would be required

[23] Enrollment information provided by Margaret Alvarado, Columbia School, December 4, 2015. Ms. Alvarado indicates that the school does not have an established capacity.

[24] Enrollment information provided by http://www.localschooldirectory.com, accessed, December 4, 2015. School capacity not indicated.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
to pay City Quimby fees, which are established to provide for residential development's fair share of park facilities. Consequently, Project impacts relative to new or physically altered park facilities would be less than significant.				
Other public facilities?			X	
Less Than Significant Impact. Other public facilities include library and general municipal services. The Project would develop 62 single family attached dwellings and additional commercial or residential uses on two commercially zoned sites, resulting in a maximum population increase of 0.23 percent. This increase would not substantially increase the demand on other public facilities. Consequently, Project impacts relative to new or physically altered public facilities would be less than significant.				
XV. RECREATION				
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	

Less Than Significant Impact. The Project would develop 62 single family attached dwellings and additional commercial or residential uses on two commercially zoned sites, resulting in a maximum population increase of 0.23 percent. For use by its future residents, the Valley & Ramona Residential project proposes private open spaces consisting of either front yard patios, decks, courtyards or porches. Total private open space proposed for the Project is 8,035 square feet. Proposed Common Open Space consists of 232 square feet per unit, for a total common open space for the Valley & Ramona Residential project of 14,411 square feet. As shown in Table 6 and summarized below, the Valley & Ramona Residential project meets all exceeds the open space requirements of the MMU Zone.

MMU Zone Category	MMU Zone Standard	Proposed Project	Comparison [Meets MMU Regulations: Yes/No]
Publicly accessible open space (nonresidential)	15% of net lot area	15% of net lot area	Yes.
Private open space (multi-family residential)	1st floor-150 s.f. per unit Upper floor-100 s.f. per unit	1st floor-150 s.f. per unit Upper floor-100 s.f. per unit	Yes.
Common open space (multi-family residential)	200 s.f. per unit	231 s.f. per unit	Yes. Exceeds minimum.

As discussed in Checklist Item #XIV, above, the Project would be required to pay City Quimby fees, which are established to provide for residential development's fair share of park facilities. Quimby Act fees may

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
be used for rehabilitating existing parks and recreation facilities. Consequently, Project impacts relative to substantial physical deterioration of a recreational facility would be less than significant.				
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
No Impact. The Valley & Ramona Residential project includes 12,784 square feet of common open space. The Project does not include recreational facilities nor would it substantially increase the demand for recreational facilities. Consequently, the Project would not require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.				
XVI. TRANSPORTATION/TRAFFIC – Would the project:				
Data presented in this Transportation/Traffic section is based on a "Valley & Ramona Traffic Impact Analysis", prepared by Kunzman Associates, Inc., October 8, 2015, and Supplemental information provided by Kunzman Associates, December 2015, and contained as Appendix D; and Valley & Ramona Trip Generation Comparison Analysis to Assess Traffic Impacts Associated with Zoning Map Change for Adjacent Property Located at the Northeast Corner of Valley Boulevard and Ramona Boulevard in the City of El Monte, prepared by Kunzman Associates January 2016, and contained as Appendix F.				
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	
Less Than Significant. Nonmotorized: Nearby transit facilities are provided by the Los Angeles County Metropolitan Transportation Authority Local Lines 76, 176 and 268 along Tyler Avenue, Local lines 76, 190 and 194 along Valley Boulevard, and Local Lines 76, 176 and 190 along Ramona Boulevard. Foothill Transit Route 488 also serves Ramona Boulevard. The closest bus stops are located across the street from the Project site on the south side of Ramona Boulevard at its southeast corner with Valley Boulevard, and on the north and south sides of Ramona Boulevard at tis southwest corner with Valley Boulevard. Existing and proposed pedestrian and bike paths are located adjacent to and surrounding the Project site. The El Monte Metrolink Station, El Monte Station and City Trolley Station are located near the Project site. These nonmotorized systems would be enhanced by the proposed City of El Monte Downtown				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

Specific Plan which encompasses the Project site. As discussed above, the purpose of the Specific Plan is to provide sufficient housing, retail, commercial, entertainment, dining, and recreational uses to create a critical mass of development sufficient to function as a true Transit Oriented Downtown for the City of El Monte to implement regional planning policies and create the synergies needed for a more active urban experience in Downtown El Monte. The proposed Specific Plan would implement additional bicycle lanes and pedestrian walkways, narrowing of vehicle lanes, reorienting of intersection angles, and expansion of bicycle parking. An objective of these Specific Plan transportation proposals is to conform to the requirements and plans to reduce GHG in California as contained in SB 375 and the SCAG Sustainable Communities Strategy.

The mixed use character of the Project would be consistent SB 375, SCAG Sustainable Communities Strategy and the General Plan Downtown Core designation. Inclusion in the proposed Downtown Specific Plan would further support nonmotorized transportation options in the Project area. Therefore the Project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness of the nonmotorized circulation system.

Motorized: The Traffic Impact Analysis (TIA) evaluated vehicular traffic impacts specific to the Valley & Ramona Residential project considering two alternatives. Alternative 1 consists of an access on Valley Boulevard and an emergency access only on Ramona Boulevard. Alternative 2 consists of an access on Valley Boulevard and an access on Ramona Boulevard. The TIA analysis focused on vehicle impacts at the following intersections which were identified by the City of El Monte Public Works Department:

- Tyler Avenue (NS) at: Ramona Boulevard (EW); and at Valley Boulevard (EW)
- Valley Boulevard (NS) at: Project Access (EW); and Ramona Boulevard (EW)
- Project Access (NS) at Ramona Boulevard (EW) – (Alternative 2 only).

To determine Valley & Ramona Residential project impacts on these intersections, the TIA followed the City of El Monte General Plan Circulation Element policy that states that peak hour intersection operations of Level of Service D or better are generally acceptable, except that Level of Service E may occur under the following circumstances:

- Intersections/roadways at, or adjacent to, freeway ramps
- Intersections/roadways on major corridors and transit routes
- Intersections/roadways on truck routes
- Intersections/roadways in or adjacent to commercial districts.

The Circulation Element policy further states that an impact is considered significant for signalized intersections if the project related increase in the volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service F for all intersections on major corridors, truck routes, commercial corridors or adjacent to freeway ramps. A significant impact occurs when the project related increase in volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service E for all intersections which are not on major corridors, truck routes, commercial corridors or

adjacent to freeway ramps. For an unsignalized intersection, a significant impact occurs if the project related increase in traffic delay equals or exceeds two percent (0.02), causing or worsening Level of Service E for those intersections.

Level of Service (LOS) is generally defined according the following criteria. V/C (Volume to Capacity) refers to the volume of traffic relative to the traffic capacity of the roadway:

LOS DEFINITIONS

- LOS A: Free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.

V/C 0.00 – 0.60

- LOS B: Stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream from LOS A.

V/C 0.61 – 0.70

- LOS C: Stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.

V/C 0.71 – 0.80

- LOS D: High-density, but stable, flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience. Small increases in traffic flow will generally cause operational problems at this level.

V/C 0.81 – to 0.90

- LOS E: Operating conditions at or near the capacity level. Freedom to maneuver within the traffic stream is extremely difficult. Operations at this level are usually unstable, because small increases in flow or minor perturbations within the traffic stream will cause breakdowns.

V/C 0.91 – 1.00

- LOS F: Level-of-Service F. Forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations.

V/C >1.00

As shown in Table 10, the TIA found that the existing LOS at the studied intersections operate at LOS A.

TABLE 10. EXISTING INTERSECTION CAPACITY UTILIZATION AND LEVEL OF SERVICE

Intersection	Jurisdiction	Traffic Control[2]	Intersection Approach Lanes[1]												Peak Hour Level of Service	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Tyler Avenue (NS) at: Ramona Boulevard (EW) Valley Boulevard (EW)	El Monte El Monte	TS	1 1	1.5 1.5	0.5 0.5	1 1	1 1.5	1 0.5	1 1	1.5 1.5	0.5 0.5	1 1	1.5 1.5	0.5 0.5	0.359–A	0.376–A
Valley Boulevard (NS) at: Ramona Boulevard (EW)	El Monte	TS	1	2	1	1	2	1	1	2	0	1	1.5	0.5	0.574–A	0.576–A

1 When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes (de facto right turn lane). L = Left; T = Through; R = Right

2 TS = Traffic Signal

The Valley & Ramona Residential project is expected to add 394 daily vehicle trips to the studied intersections. As indicated in Table 11, the TIA calculates these trips for morning and evening peak hours and assumes a 10% reduction in trips based on the Live/Work component.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

TABLE 11. VALLEY & RAMONA RESIDENTIAL PROJECT TRIP GENERATION

Land Use	Quantity	Units[2]	Peak Hour Morning Inbound	Peak Hour Morning Outbound	Peak Hour Morning Total	Peak Hour Evening Inbound	Peak Hour Evening Outbound	Peak Hour Evening Total	Daily
Trip Generation									
Residential		DU	0.07	0.37	0.44	0.35	0.17	0.52	5.81
Townhouse		TSF	0.80	0.53	1.33	1.19	1.52	2.71	44.32
Trips Generated									
Residential	62	DU	5	23	28	22	11	33	360
Townhouse	1.750	TSF	1	1	2	2	3	5	78
Subtotal			6	24	30	24	14	38	438
10% Reduction			-1	-2	-3	-2	-1	-3	-44
Total			5	22	27	22	13	35	394

With inclusion of Valley & Ramona Residential project traffic, the TIA estimates that LOS will remain at LOS A at the intersections, falling slightly to LOS B at the Project entrance. As indicated in Tables 12 and 13 below, these traffic conditions would occur for both alternatives considered by the TIA. Because all studied intersections would remain below the LOS threshold established by the General Plan Circulation Element,

TABLE 12. EXISTING PLUS VALLEY & RAMONA RESIDENTIAL PROJECT INTERSECTION CAPACITY UTILIZATION AND LEVEL OF SERVICE - ALTERNATIVE 1

Intersection	Jurisdiction	Traffic Control[2]	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R	Peak Hour Level of Service Morning	Peak Hour Level of Service Evening
Tyler Avenue (NS) at:																
Ramona Boulevard (EW)	El Monte	TS	1	1.5	0.5	1	1	1	1	1.5	0.5	1	1.5	0.5	0.361-A	
Valley Boulevard (EW)	El Monte	TS	1	1.5	0.5	1	1.5	0.5	1	1.5	0.5	1	1.5	0.5	0.537-	0.378-A 0.516-A
Valley Boulevard (NS) at:																
Project Access (EW)		CSS														
Ramona Boulevard (EW)	El Monte	TS	0	1.5	0.5	0	2	0	0	0	0	0	0	1	12.4-B	10.7-B
	El Monte		1	2	1	1	2	1	1	2	0	1	1.5	0.5	0.576-A	0.579-A

1 When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes (de facto right turn lane). L = Left; T = Through; R = Right; 1 = Improvement

2 TS = Traffic Signal; CSS = Cross Street Stop

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

TABLE 13. EXISTING PLUS VALLEY & RAMONA RESIDENTIAL PROJECT INTERSECTION CAPACITY UTILIZATION AND LEVEL OF SERVICE - ALTERNATIVE 2

Intersection	Jurisdiction	Traffic Control[2]	Intersection Approach Lanes[1]												Peak Hour Level of Service	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Tyler Avenue (NS) at:																
Ramona Boulevard (EW) –	El Monte	TS	1	1.5	0.5	1	1	1	1	1.5	0.5	1	1.5	0.5	0.360–A	0.378–A
Valley Boulevard (EW) #2	El Monte	TS	1	1.5	0.5	1	1.5	0.5	1	1.5	0.5	1	1.5	0.5	0.537–A	0.512–A
Valley Boulevard (NS) at:																
Project Access (EW)	El Monte	CSS	0	1.5	0.5	0	2	0	0	0	0	0	0	1	12.2–B	10.6–B
Ramona Boulevard (EW) –	El Monte	TS	1	2	1	1	2	1	1	2	0	1	1.5	0.5	0.578–A	0.580–A
Project Access (EW)	El Monte	CSS	0	0	0	0	0	1	0	2	0	0	1.5	0.5	16.3–C	9.8–A

1 When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes (de facto right turn lane). L = Left; T = Through; R = Right; 1 = Improvement

2 TS = Traffic Signal; CSS = Cross Street Stop

The TIA included an analysis of potential traffic from development of project site #2 (reference Appendix F) assuming four alternative development scenarios were considered: Alternative 1 consisting of 2,500 square feet of commercial retail; Alternative 2 consisting of 3,000 square feet of office space; Alternative 3 consisting of 2,000 square feet of non-residential (office) and three multi-family attached residential units, with each unit being a studio to one-bedroom (residential condominium/townhouses); Alternative 4 consisting of three multi-family attached residential units with each dwelling unit being one to two bedrooms (residential condominium/townhomes).

For each of the project site #2 alternatives, the TIA subtracted the traffic that could be generated from the two existing commercial buildings that currently exist on the site. For each of the alternative scenarios for project site #2, the TIA found that development of the site under the MMU designation would result in less vehicle trips than currently could occur if the existing buildings were to be occupied: Alternative 1 would generate approximately 17 less daily vehicle trips, 1 less of which will occur during the morning peak hour and 2 less of which will occur during the evening peak hour; Alternative 2 would generate approximately 91 less daily vehicle trips, 2 less of which will occur during the morning peak hour and 6 less of which will occur during the evening peak hour; Alternative 3 would generate approximately 85 less daily vehicle trips, 1 less of which will occur during the morning peak hour and 6 less of which will occur during the evening peak hour; and Alternative 4 would generate approximately 107 less daily vehicle trips, 2 less of which will occur during the morning peak hour and 9 less of which will occur during the evening peak hour.

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Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Consequently Project traffic impacts for both project sites #1 and #2 would be less than significant, and the Project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness of the motorized circulation system.				
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
No Impact. Proposition 111, which was adopted in 1990, requires California's urbanized areas with populations of 50,000 or more to adopt a Congestion Management Program (CMP). The City of El Monte follows the Los Angeles County CMP. As discussed in Checklist Item #XVI.a, the Project would not significantly increase traffic. Further the Valley & Ramona Residential project would not impact the key intersections analyzed in the surrounding roadway system: Tyler Avenue (NS) at: Ramona Boulevard (EW); and at Valley Boulevard (EW); Valley Boulevard (NS) at: Project Access (EW); and Ramona Boulevard (EW); Project Access (NS) at Ramona Boulevard (EW) – (Alternative 2 only). Inclusion in the proposed Downtown Specific Plan would further support nonmotorized transportation options in the Project area. Therefore Project would not conflict with CMP levels of service or standards.				
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
No Impact. The nearest airport to Project site is El Monte Airport, located approximately 1.4 miles north of the site. The Project site is not located within the airport approach or departure zone. The Project would not result in changes to air traffic patterns or a change in air traffic locations.				
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?		X		
Less Than Significant with Mitigation. As discussed in Checklist Item # III.b, above, grading of the Valley & Ramona residential project would include the import of an estimated 3600 cubic yards of soil. Trucks delivering the soil to the site would travel either via Valley Boulevard or Ramona Boulevard, both of which are designated truck routes. These truck deliveries are expected to be spread over several weeks and would not result in more than 50 trucks per day. None of the trucks would travel through residential areas. Mitigation Measure AQ-1 is added to the Valley & Ramona residential project to require that trucks transporting soils to the site not travel during peak hour, and that their number and route to and from the site be managed by a truck traffic control plan subject to review and approval of the City Economic Development Department and Public Works Department. Inclusion of this measure will facilitate flow of				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

traffic in and around the Valley & Ramona project during its grading phase.

In addition, the Traffic Impact Analysis analyzed the Valley & Ramona Residential project's proposed vehicular access on Valley Boulevard and an emergency access that has been requested by the City of El Monte on Ramona Boulevard. Based on this analysis, the Traffic Impact Analysis recommends a series of improvements that are added as Mitigation Measure TR-1, and would reduce roadway hazards from Project development to less than significant levels.

Mitigation Measure:

TR-1: Prior to certificate of occupancy for the Valley & Ramona Residential project, the Applicant shall implement the following improvements: (1) Construct Valley Boulevard from the north project boundary to Ramona Boulevard at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary. (2) Construct Ramona Boulevard from Valley Boulevard to the east project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary. (3) Sight distance at the project access shall comply with standard California Department of Transportation and City of El Monte sight distance standards. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City Public Works Department and approved as consistent with this measure prior to issue of grading permits. (4) The project shall provide sufficient parking spaces to meet the City of El Monte parking code requirements in order to service on-site parking or as otherwise approved by the City through the modification process. (5) On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

Potential impacts from future development of project site #2 will be evaluated at the time a development proposal is submitted to the City. The City's review process will include a review of vehicular circulation to ensure that any potential roadway hazards would be reduced to less than significant levels.

e) Result in inadequate emergency access?			X	

Less Than Significant. As discussed in Checklist Item #XVI.a., an emergency access has been requested by the City of El Monte on Ramona Boulevard. With inclusion of this emergency access, the Project will have adequate emergency access.

f) Conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

No Impact. As discussed in Checklist Item #XVI.a., existing and proposed transit, pedestrian and bike paths are located adjacent to and surrounding the Project site. Inclusion in the proposed Downtown Specific Plan would further support nonmotorized transportation options in the Project area.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Consequently, the Project would not conflict with alternative transportation plans or policies.				
XVII. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	

Less Than Significant Impact. Wastewater collection facilities that serve the City are owned, operated, and maintained by the City of El Monte Public Works Department. The City's present wastewater system includes a total of 135 miles of pipeline, six pump stations, and 2,697 manholes. Wastewater treatment is provided to El Monte by the Sanitation Districts of Los Angeles County (LACSD) at three treatment plants: the San Jose Creek Water Reclamation Plant, the Whittier Narrows Water Reclamation Plant, and the Los Coyotes Water Reclamation Plant. Table 14 summarizes the wastewater capacity and flow information contained in the General Plan EIR, and demonstrates that there is sufficient residual capacity at the three plants to accommodate City buildout.

TABLE 14. WASTEWATER TREATMENT FACILITIES SERVING EL MONTE

Facility	Location	Capacity (mgd)[1]	Wastewater Flows (mgd)	Residual Capacity (mgd)
San Jose Creek Water Reclamation Plant (WRP)	1965 Workman Mill Road, near intersection of I-605 and SR-60	100	75	25
Whittier Narrows WRP	301 N. Rosemead Boulevard, City of El Monte	15	8	7
Los Coyotes WRP	16515 Piuma Avenue, City of Cerritos	37.5	23.3	14.2
Totals		**152.5**	**106.3**	**46.2**

[1]mgd = million gallons per day
Source: City of El Monte General Plan Table 5.14.3.

Applying the wastewater generation rates presented in Table 5.14-2 of the General Plan EIR, a medium density residential unit generates 243.75 gallons per day (gpd) of wastewater. At 62 units, the Project would generate 15,112.50 gpd of wastewater, which is well within the capacity of the wastewater treatment facilities shown in Table 14. Development of project site #2 could add 3 additional units and generate an additional 731.25 gpd of wastewater, also which is well within the capacity of the wastewater treatment facilities shown in Table 14. Consistent with the findings of the General Plan EIR, there is adequate wastewater treatment capacity to accommodate the proposed Project. The Project would not exceed the wastewater requirements anticipated in the General Plan. Consequently, Project impacts relative to wastewater treatment requirements are less than significant.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	

Less Than Significant Impact. As discussed above, adequate wastewater treatment capacity would serve the Project. Wastewater facilities to be constructed as part of the Valley & Ramona project include a sewer lift station that would serve all 62 units and be privately maintained by the project homeowner's association. The sewer lift station would be required because the public connection at the public sewer main and manhole is fairly shallow. The lift station is proposed to be located underground, in a driveway in the southwest portion of the project. As proposed, the design of the sewer lift station includes two pumps to allow for redundancy should one of the pumps fail. The pumps would also be sized to accommodate the morning peak flow anticipated from the development. Conditions of Approval will also be added to the project, which designate the maintenance responsibilities for the lift station.

Water supply is currently provided by the City of El Monte, with nine smaller water companies also serving portions of the City. Of these, the three major water providers are the City, San Gabriel Valley Water Company and the California Americana Water. These three major water providers have completed Urban Water Management Plans (UWMPs) and have demonstrated the ability to service the City for the next 25 years. General Plan EIR Table 5.14-1 illustrates this water supply and demand information, and demonstrates that there will be adequate water supply through year 2025. By year 2025, there will be a water supply available to the City of 3,272 acre feet and demand of 3,109 acre feet, resulting in a surplus capacity of 163 acre feet per year. The Project is consistent with the General Plan Downtown Core designation, and would not exceed the water supply or treatment requirements anticipated in the General Plan and the applicable UWMPs. Consequently, Project impacts relative to water or wastewater facilities would be less than significant impact.

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

No Impact. As described in Section 5.14-3 of the General Plan EIR, the City's local storm drainage system consists of 233 storm drains and 6 underpass pumps that are essential in preventing and minimizing flooding during periods of heavy rains.

The Project site drains westerly. As discussed in Checklist Items #IX.a and c, the Valley and Ramona Residential project proposes to capture site drainage through private street gutters and into a drywell infiltration system, where the runoff will be treated and infiltrated before being released into the public storm drain system. The storm drains would be installed and maintained in compliance with the County's MS4 and LID standards. Future development of project site #2 would be subject to City review and

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
approval of a LID study and its prescribed BMPs. As such, the Project would not alter the basic site drainage pattern but would include improvements to capture and filter stormwater. The Project would not result in the need to construct a new storm water drainage facility that could cause significant environmental effects.				
d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
Less Than Significant Impact. As discussed in Checklist Item #XVII.b, above, the Project is consistent with the General Plan Downtown Core designation, and would not exceed the water supply requirements anticipated in the General Plan and the applicable UWMPs. Consequently, Project impacts relative to sufficient water supplies would be less than significant.				
e) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
Less Than Significant Impact. As discussed in Checklist Item #XVII.a, the Project is consistent with the General Plan Downtown Core designation and would not exceed the wastewater treatment requirements anticipated in the General Plan. The General Plan finds that there is adequate wastewater treatment capacity at the WRP. No new or expanded wastewater facilities would be required to support the project. Consequently, Project impacts relative to sufficient wastewater treatment capacity would be less than significant.				
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
Less Than Significant Impact. El Monte is served by four waste management companies: American Reclamation, Phoenix Waste and Recycling, Valley Vista Services, and Waste Management. American Reclamation and Phoenix Waste collect and recycle trash from the multiple family residential. Each of these waste management companies use the following landfills: Sunshine Canyon with a current capacity of 80,000,000 tons; Olinda Alpha with a current capacity of 23,000,000 and El Sobrante with a current capacity of 144,000.[25] Applying the solid waste generation rates presented in Table 5.14-9 of the General Plan EIR, multifamily generates 5.32 gallons per day (gpd) of solid waste. At 62 units, the Project				

[25] Initial Study/Mitigated Negative Declaration for 11022-11044 Garvey Mix Use Project, certified November 2014 by the City of El Monte.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
would generate 329.84 gpd of solid waste. Development of project site #2 could add 3 additional units and generate an additional 15.96 gpd of solid waste. Project solid waste generation is well within the capacity of the landfills that currently serve El Monte. Consistent with the findings of the General Plan EIR, there is adequate landfill capacity to accommodate solid waste generated by City build-out. The proposed Project is consistent with the General Plan Downtown Core designation. Consequently, potential impacts associated with landfill capacity would be less than significant.				
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	
Less Than Significant Impact. As discussed above, the City is currently in compliance with the State of California Waste Management Act (AB 939), and there is adequate landfill capacity to serve the Project. Consequently, Project impacts relative to compliance with solid waste regulations would be less than significant.				
XVII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
Less Than Significant with Mitigation Incorporated. The Project would not have substantial impacts on special status species, stream habitat, and wildlife dispersal and migration. Furthermore, the proposed Project would not affect the local, regional, or national populations or ranges of any plant or animal species and would not threaten any plant communities. Potential impacts to nesting birds and trees would be mitigated by Mitigation Measures BIO-1 and BIO-2, respectively. Potential impacts to archaeological resources would be mitigated by Mitigation Measure CR-1. With implementation of these mitigation measures, the Project's Mandatory Finding of Significance relative to degrading the quality of the environment would be less significant.				
b) Does the Project have impacts that are individually limited, but cumulatively considerable? ('Cumulatively considerable' means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other		X		

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
current projects, and the effects of probable future projects)?				
Less than Significant with Mitigation Incorporated. The Project contribution to cumulative air quality, hydrology, public services and utilities would be less than significant. Project contribution to noise and traffic would be less than significant with mitigation incorporated. Consequently, the Project's Mandatory Finding of Significance relative to contribution to cumulative impacts would be less than significant with mitigation incorporated.				
c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		
Less than Significant with Mitigation Incorporated. The Project would create potential impacts related to hazards, noise and traffic. However Mitigation Measures HAZ-1 and HAZ-2, NOI-1 through NOI-4, and TR-1 would reduce these potential impacts to a less than significant impact levels. Consequently, to adverse effects on humans either directly or indirectly would be less than significant.				

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Valley & Ramona Residential Project Focused Air Quality and Greenhouse Gas Analysis

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VALLEY & RAMONA RESIDENTIAL PROJECT FOCUSED AIR QUALITY AND GREENHOUSE GAS ANALYSIS

1.0 Methodology

This air quality evaluation was prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) to determine if significant air quality impacts are likely to occur in conjunction with the type and scale of development associated with the Valley & Ramona residential project to be located in the City of El Monte, California. The impact analysis contained in this report was prepared in accordance with the methodologies provided by the South Coast Air Quality Management District (SCAQMD) as included in *CEQA Air Quality Handbook* (April 1993) (*Handbook*) as well as updates included on the SCAQMD Internet web site. The analysis makes use of the CalEEMod urban emissions model, screening tables included in the SCAQMD's *Final Localized Significance Threshold Methodology* (June 2003), and *Sample Construction Scenarios for Projects Less than Five Acres in Size*, (February 2005).

The Valley & Ramona residential project includes the removal of existing surface paving and the subsequent construction and occupancy of 62, detached units, with heights up to three stories and 50 feet, with common landscape and amenity areas. The site includes 3.12 acres and the structures are to cover 46,067 square feet with a total area of 95,417 square feet.

Projected air emissions are calculated using the California Emissions Estimator Model (CalEEMod Version 2013.2.2) distributed by the SCAQMD. The CalEEMod model uses EMFAC2011 emissions factors for vehicle traffic and the OFFROAD2011 emissions factors for construction equipment. For the purposes of this analysis, construction is estimated to begin in January 2016 and follows the CalEEMod default construction schedule.

The subsequent occupation of the site in 2017 is also based on the CalEEMod model using the traffic-projections provided by the Kunzman Associates, Inc. (Kunzman). Kunzman projects the project's traffic volume using "Residential Townhouse" (ITE Code 230) for the 62 dwelling units totaling 93,667 square feet. Because the project represents a live/work environment, Kunzman also included additional vehicle trips to represent "Specialty Retail" (ITE 826) for 1,750 square feet (95,417 total square feet). In this case it is necessary to separate the residential and commercial uses as the CalEEMod assigns different trip lengths to these uses.

The calculated emissions of the project are compared to thresholds of significance for individual projects using the SCAQMD *Handbook* as well as their Internet updates. The analysis finds that neither the construction nor the operation of the project is anticipated to result in any significant air quality impacts and all other air quality emissions and localized concentrations would remain below their respective threshold values. Furthermore, the project is found to be consistent with the goals of the Air Quality and Climate Change Plans.

2.0 Existing Conditions

2.1 Climate/Meteorology

The project area lies in the South Coast Air Basin (SCAB or Basin). The SCAB includes all of Orange County as well as the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The Basin is located in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild climatological pattern is infrequently interrupted by periods of extremely hot weather, winter storms, or Santa Ana winds.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The SCAQMD reports that the weather station located in San Gabriel shows an annual average of 64°F. The average low is reported at 42°F in January while the average high is 89°F in July and August. All areas in the Basin have recorded temperatures above 100°F in recent years and temperatures as high as 111°F have been recorded at the San Gabriel station to the west of the project site.

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from November through April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast with slightly heavier shower activity in the east and over the mountains. Rainfall averages around 17.37 inches per year in the project area as measured in Covina to the east of the project site.

Although the Basin has a semi-arid climate, the air near the surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the Basin by offshore winds, the ocean effect is dominant. Periods of heavy fog, especially along the coast, are frequent; and low stratus clouds are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the east portions of the Basin.

Wind patterns across the region are characterized by easterly winds during the winter and westerly winds in the summer. Wind speed is somewhat greater during the spring months. Annually, typical winds in the project area average about 4.7 mph as measured in Baldwin Park to the east of the project site.

Between the periods of dominant air flow, periods of air stagnation may occur, both in the morning and evening hours. Whether such a period of stagnation occurs is one of the critical determinants of air quality conditions on any given day. During the winter and fall months, surface high pressure systems over the Basin, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally have a duration of a few days before predominant meteorological conditions are reestablished.

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed: marine/subsidence inversion and the radiation inversion. The height of the base of the inversion at any given time is known as the "mixing height." This mixing height can change under conditions when the top of the inversion does not change. In the project area, the combination of winds and inversions are critical determinants in leading to the highly degraded air quality in summer and the generally good air quality in the winter.

2.2 Ambient Air Quality

The following characterization of the baseline atmospheric environment includes an evaluation of the ambient air quality and applicable rules, regulations, and standards for the area. Because the project has the ability to release gaseous emissions of criteria pollutants and dust into the ambient air, it falls under the ambient air quality standards promulgated on the local, State, and federal levels.

2.2.1 Affected Environment

Topographical features that affect the transport and diffusion of pollutants in the project area include the mountain ranges to the northeast that prevent the transport of pollutants. Air quality in the SCAB generally ranges from fair to poor and is similar to air quality in most of coastal southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions.

The quality of the ambient air is affected by pollutants emitted into the air from stationary and mobile sources. Stationary sources can be divided into two major subcategories: point sources and area sources. Point sources

consist of one or more emission sources at a facility with an identified location and are usually associated with manufacturing and industrial processing plants. Area sources are widely distributed and produce many small emissions.

Mobile sources refer to emissions from motor vehicles (including tailpipe and evaporative emissions) and are classified as either on-road or off-road. On-road sources are a combination of emissions from automobiles, trucks, and indirect sources. Indirect sources are sources that, by themselves, may not emit air contaminants; however, they indirectly cause the generation of air pollutants by attracting vehicle trips or consuming energy. Examples of indirect sources include a commercial center that generates vehicle trips and consumes energy resources through the use of natural gas for space and water heating. Indirect sources also include actions proposed by local governments, such as public and private development projects. In addition, indirect sources include those emissions created by the distance vehicles travel. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment.

2.2.2 Criteria Air Pollutants

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by State and federal law. These regulated air pollutants are known as "criteria air pollutants" and are categorized as primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NOx, sulfur dioxide (SO_2), and most fine particulate matter (PM_{10} and $PM_{2.5}$) including lead (Pb) and fugitive dust are primary air pollutants. Of these CO, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NOx are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reaction in the atmosphere. Ozone (O_3) and nitrogen dioxide (NO_2) are the principal secondary pollutants.

Presented below is a description of each of these primary and secondary criteria air pollutants and their known health effects. Other pollutants, such as carbon dioxide (CO_2), a natural by-product of animal respiration that is also produced in the combustion process, have been linked to such phenomena as global warming. These emissions are now starting to be regulated and there are preliminary thresholds for their release. However, these pollutants do not jeopardize the attainment status of the SCAB.

Carbon monoxide (CO) is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances (e.g., gasoline or diesel fuel). The primary adverse health effect associated with CO is the interference of normal oxygen transfer to the blood, which may result in tissue oxygen deprivation.

Reactive organic gases (ROGs) are compounds comprised primarily of atoms of hydrogen and carbon. Internal combustion, associated with motor vehicle usage, is the major source of hydrocarbons. Other sources of ROG include the evaporative emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROG but rather by reactions of ROG to form secondary pollutants. Note that for the purposes of this analysis ROG and **volatile organic compounds** (VOC), such as the emissions released from paint, are synonymous.

Nitrogen oxides (NOx) serve as integral participants in the process of photochemical smog production. The two major forms of NOx are nitric oxide (NO) and nitrogen dioxide (NO_2). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO_2 is a reddish-brown irritating gas formed by the combination of NO and oxygen (O). NOx acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens.

Nitrogen dioxide (NO_2) is a byproduct of fuel combustion. The principal form of NO_2 produced by combustion is nitric oxide (NO). NO reacts to form NO_2, creating the mixture of NO and NO_2 commonly called NOx. NO_2 acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO_2 is only potentially irritating. There is some indication of a relationship between NO_2 and chronic

pulmonary fibrosis. Some increase in bronchitis in children (2-3 years old) has been observed at concentrations below 0.3 ppm. NO_2 absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. NO_2 also contributes to the formation of PM_{10} (particulates having an aerodynamic diameter of 10 microns or 0.0004 inch or less in diameter).

Sulfur dioxide (SO_2) is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. Fuel combustion is the primary source of SO_2. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. At lower concentrations, when combined with particulates, SO_2 may injure lung tissue.

Particulate matter (PM) consists of finely divided solids or liquids, such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulate are now recognized. Course particles (PM_{10}) include that portion of the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 one-millionths of a meter or 0.0004 inch) or less. Fine particles ($PM_{2.5}$) have an aerodynamic diameter of 2.5 microns (i.e., 2.5 one-millionths of a meter or 0.0001 inch) or less. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. Wind action on the arid landscape also contributes substantially to the local particulate loading. Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in those people who are naturally sensitive or susceptible to breathing problems.

Fugitive dust poses primarily two public health and safety concerns. The first concern is that of respiratory problems attributable to the suspended particulates in the air. The second concern is that of motor vehicle accidents caused by reduced visibility during severe wind conditions. Fugitive dust may also cause significant property damage during strong windstorms by acting as an abrasive material agent. Fugitive dust can also result in a nuisance factor due to the soiling of proximate structures and vehicles.

Ozone (O_3) is one of a number of substances called photochemical oxidants that are formed when reactive organic compounds (ROC) and NOx (both byproducts of the internal combustion engine) react with sunlight. O_3 is present in relatively high concentrations in the SCAB and the damaging effects of photochemical smog are generally related to the concentrations of O_3. O_3 may pose a health threat to those who already suffer from respiratory diseases as well as healthy people. O_3 has been tied to crop damage (typically in the form of stunted growth and pre-mature death) and acts as a corrosive (resulting in property damage such as the embitterment of rubber products).

2.2.3 Toxic Air Contaminants

The public's exposure to toxic air contaminants (TAC) is an environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The H&SC defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant (HAP), pursuant to Section 112(b) of the CAA (42 U.S.C. 7412[b]) is a TAC.

Under State law, the California Environmental Protection Agency (CalEPA), acting through the CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant which may cause or contribute to an increase in mortality or serious illness or which may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bills 1807 (Tanner Air Toxics Act) and 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology (T-BACT) to minimize emissions.

Air toxics from stationary sources are regulated in California under the Air Toxics "Hot Spot" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the AQMD or APCD. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. To date, the CARB has designated nearly 200 compounds as TACs. Additionally, the CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to a relatively few compounds, the most important being particulate matter from diesel-fueled engines (diesel PM).

In 2000, the SCAQMD conducted a study on ambient concentrations of TACs and estimated the potential health risks from air toxics. The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,400 in a million. The largest contributor to this risk was diesel exhaust, accounting for 71 percent of the air toxics risk.

2.2.4 Other Effects of Air Pollution

Just as humans are affected by air pollution, so too are plants and animals. Animals must breathe the same air and are subject to the same types of negative health effects. Certain plants and trees may absorb air pollutants that can stunt their development or cause premature death, as well as interfere with their ability to convert CO_2 to oxygen. There are also numerous impacts to our economy including lost workdays due to illness, a desire on the part of business to locate in areas with a healthy environment, and increased expenses from medical costs. Pollutants may also lower visibility and cause damage to property. Certain air pollutants are responsible for discoloring painted surfaces, eating away at stones used in buildings, dissolving the mortar that holds bricks together, and cracking tires and other items made from rubber.

2.2.5 Greenhouse Gas Emissions

Federal Regulations

Office of the President

In June 2013, the Executive Office of the President released The President's Climate Action Plan to reduce the causes and impacts of global climate change. The President's comprehensive plan includes numerous steps and measures to reduce climate change. For example, to cut carbon pollution in America, the plan:

- Directs EPA to work closely with states, industry and other stakeholder to establish carbon pollution standards for both new and existing power plants;
- Makes up to $8 billion in loan guarantee authority available for a wide array of advanced fossil energy and efficiency projects to support investments in innovative technologies;
- Directs DOI to permit enough renewables project—like wind and solar – on public lands by 2020 to power more than 6 million homes; designates the first-ever hydropower project for priority permitting; and sets a new goal to install 100 megawatts of renewables on federally assisted housing by 2020; while maintaining the commitment to deploy renewables on military installations;
- Expands the President's Better Building Challenge, focusing on helping commercial, industrial, and multi-family buildings cut waste and become at least 20 percent more energy efficient by 2020;

- Sets a goal to reduce carbon pollution by at least 3 billion metric tons cumulatively by 2030 – more than half of the annual carbon pollution from the U.S. energy sector – through efficiency standards set over the course of the Administration for appliances and federal buildings;

- Commits to partnering with industry and stakeholders to develop fuel economy standards for heavy-duty vehicles to save families money at the pump and further reduce reliance on foreign oil and fuel consumption post-2018; and

- Leverages new opportunities to reduce pollution of highly-potent greenhouse gases known as hydrofluorocarbons; directs agencies to develop a comprehensive methane strategy; and commits to protect our forests and critical landscapes.

To prepare the United States for the impacts of climate change, the plan:

- Directs agencies to support local climate-resilient investment by removing barriers or counterproductive policies and modernizing programs; and establishes a short-term task force of state, local, and tribal officials to advise on key actions the Federal government can take to help strengthen communities on the ground;

- Pilots innovative strategies in the Hurricane Sandy-affected region to strengthen communities against future extreme weather and other climate impacts; and building on a new, consistent flood risk reduction standard established for the Sandy-affected region, agencies will update flood-risk reduction standards for all federally funded projects;

- Launches an effort to create sustainable and resilient hospitals in the face of climate change through a public-private partnership with the healthcare industry;

- Maintains agricultural productivity by delivering tailored, science-based knowledge to farmers, ranchers, and landowners; and helps communities prepare for drought and wildfire by launching a National Drought Resilience Partnership and by expanding and prioritizing forest- and rangeland-restoration efforts to make areas less vulnerable to catastrophic fire; and

- Provides climate preparedness tools and information needed by state, local, and private-sector leaders through a centralized "toolkit" and a new Climate Data Initiative.

Finally, to lead international efforts to address global climate change, the plan:

- Commits to expand major new and existing international initiatives, including bilateral initiatives with China, India, and other major emitting countries;

- Leads global sector public financing towards cleaner energy by calling for the end of U.S. government support for public financing of new coal-fired powers plants overseas, except for the most efficient coal technology available in the world's poorest countries, or facilities deploying carbon capture and sequestration technologies; and

- Strengthens global resilience to climate change by expanding government and local community planning and response capacities.

USEPA

As part of President Obama's Climate Action Plan to cut carbon pollution and lead in clean energy, EPA released its 2013 Strategic Sustainability Performance Plan that outlines actions planned over the next year to cut energy use and waste in agency operations. President Obama signed Executive Order 13514 on Federal Leadership in Environmental, Energy, and Economic Performance in October 2009 setting aggressive targets for reducing waste and pollution in Federal operations by 2020. EPA's 2013 Sustainability Plan builds on four years of progress under the Executive Order and provides an overview of how the agency is saving taxpayer dollars, reducing carbon emissions, and saving energy.

The 2013 Sustainability Plan also helps guide EPA's actions to meet the new goal by directing the federal government to consume 20 percent of its electricity from renewable sources by 2020 – more than double the prior level. Meeting this renewable energy goal reduces pollution in our communities, promotes American energy independence, and supports homegrown energy produced by American workers.

The 2013 Sustainability Plan outlines actions planned for the upcoming year to continue progress in meeting the President's goals, including:

- Pursuing reconstruction of key EPA research infrastructure;
- Consolidating the Research Toxicology Laboratory in Durham, NC into the Main laboratory at Research Triangle Park, NC; and
- Continuing work on EPA's award winning water conservation program.

Additionally, On June 2, 2014, the U.S. Environmental Protection Agency, under President Obama's Climate Action Plan, proposed a commonsense plan to cut carbon pollution from power plants. The EPA's Clean Power Plan cuts carbon pollution from the power sector by 30 percent from 20005 levels. The proposal will also cut pollution that leads to soot and smog by over 25 percent in 2030. Additionally, the plan will lead to climate and health benefits worth an estimated $55 to $93 billion in 2030, including 2,700 to 6,000 premature deaths and 140,000 to 150,000 asthma attacks in children.

State Regulations

In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger established Executive Order S-3-05, which sets forth a series of target dates by which statewide emission of greenhouse gas would be progressively reduced, as follows:

- By 2010, reduce greenhouse gas emissions to 2000 levels;
- By 2020, reduce greenhouse gas emissions to 1990 levels; and
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

In 2006, California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500, et seq.), which requires CARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide greenhouse gas emissions are reduced to 1990 levels by 2020 (representing an approximate 25 percent reduction in emissions).

In June 2007, CARB directed staff to pursue 37 early actions for reducing greenhouse gas emissions under AB 32. The broad spectrum of strategies to be developed – including a Low Carbon Fuel Standard, regulations for refrigerants with high global warming potentials, guidance and protocols for local governments to facilitate

greenhouse gas reductions, and green ports – reflects that the serious threat of climate change requires action as soon as possible.

In addition to approving the greenhouse gas reduction strategies, CARB directed staff to further evaluate early action recommendations made at the June 2007 meeting, and to report back to CARB within 6 months. The general sentiment of CARB suggested a desire to try to pursue greater greenhouse gas emissions reductions in California in the near-term. Since the June 2007 CARB hearing, CARB staff has evaluated all 48 recommendations submitted by several stakeholder and several internally-generated staff ideas and published the *Expanded List of Early Action Measures To Reduce Greenhouse Gas Emissions In California*, recommended for board consideration in October 2007. Based on its additional analysis, CARB staff is recommending the expansion of the early action list to a total of 44 measures. Nine of the strategies meet the AB 32 definition of discrete early action measures. Discrete early action measures are measures that will be in place and enforceable by January 1, 2010. The discrete early action items include: (1) a Low Carbon Fuel standards for ethanol, biodiesel, hydrogen, electricity, compressed natural gas, liquefied petroleum gas, and biogas; (2) restrictions on High Global Warming Potential Refrigerants; (3) Landfill Methane Capture; (4) Smartway Truck Efficiency; (5) Port Electrification; (6) Reduction of perfluorocarbons from the semiconductor industry; (7) Reduction of propellants in consumer products; (8) Tire inflation; and (9) Sulfur Hexafluoride (SF6) reductions from non-electricity sector.

The 2020 target reductions are currently estimated to be 174 million metric tons of carbon dioxide (CO_2) equivalent ($MMTCO_2e$). In total, the recommended early actions have the potential to reduce greenhouse gas emissions by at least 42 $MMTCO_2e$ emissions by 2020, representing about 25 percent of the estimated reductions needed by 2020. The CARB Board adopted Resolution 07-55 in December 2007, approving 427 $MMTCO_2e$ as the statewide greenhouse gas emissions limit for 2020, which is equivalent to the 1990 emissions level. The measures are in the sectors of fuels, transportation, forestry, agriculture, education, energy efficiency, commercial, solid waste, cement, oil and gas, electricity, and fire suppression.

The First Update to the AB 32 Scoping Plan was approved by the California Air Resources Board on May 22, 2014, and builds upon the initial Scoping Plan with new strategies and recommendations. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines ARB's climate change priorities for the next five years, and also sets the groundwork to reach long-term goals set forth in Executive Orders S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use.

2.3 Ambient Air Quality Standards (AAQS)

The Clean Air Act Amendment of 1971 established national Ambient Air Quality Standards (AAQS) with states retaining the option to adopt more stringent standards or to include other pollution species. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both the State of California and the federal government have established health based Ambient Air Quality Standards for six air pollutants. As shown in Table 1, these pollutants include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulate matter (PM_{10}, $PM_{2.5}$), and lead. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

In addition to primary and secondary Ambient Air Quality Standards, the State of California has established a set of episode criteria for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and particulate matter. These criteria refer to episode levels representing periods of short-term exposure to air pollutants, which actually threaten public health.

Table 1
AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Major Pollutant Sources
Ozone (O_3)	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070	0.075 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO_2)	Annual Average	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	*	
Sulfur Dioxide (SO_2)	Annual Average	*	0.03 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	*	
	24 hours	0.04 ppm	0.14 ppm	
Suspended Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 $\mu g/m^3$	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g. wind-raised dust and ocean sprays).
	24 hours	50 $\mu g/m^3$	150 $\mu g/m^3$	
Suspended Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 $\mu g/m^3$	15 $\mu g/m^3$	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g. wind-raised dust and ocean sprays).
	24 hours	*	35 $\mu g/m^3$	
Lead (Pb)	Monthly	1.5 $\mu g/m^3$	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	*	1.5 $\mu g/m^3$	
Sulfates (SO_4)	24 hours	25 $\mu g/m^3$	*	Industrial processes.

Notes:
ppm: parts per million; $\mu g/m^3$: micrograms per cubic meter
* Standard is not applicable for this pollutant/duration by this entity.

Source: California Air Resources Board

2.4 Air Quality Management Planning

2.4.1 Local Planning Requirements

The SCAQMD and the Southern California Association of Governments (SCAG) are the agencies responsible for preparing the Air Quality Management Plan (AQMP) for the SCAB. Since 1979, a number of AQMPs have been prepared. The AQMP was designed to comply with State and federal requirements, reduce the high level of pollutant emissions in the SCAB, and ensure clean air for the region through various control measures. To accomplish its task, the AQMP relies on a multilevel partnership of governmental agencies at the federal, State,

regional, and local level. These agencies (i.e., the United States Environmental Protection Agency (USEPA), CARB, local governments, SCAG, and SCAQMD) are the cornerstones that implement the AQMP programs.

On December 7, 2012, the SCAQMD adopted the *2012 Air Quality Management Plan*. The purposes of the 2012 AQMP for the Basin are to set forth a comprehensive and integrated program that will lead the Basin into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, to satisfy the planning requirements of the federal Clean Air Act, and to provide an update to the Basin's commitments towards meeting the federal 8- hour ozone standards. It will also serve to satisfy the recent USEPA proposed requirement for a new attainment demonstration of the revoked 1-hour ozone standard, as well as a VMT emissions offset demonstration. Specifically, the Plan will serve as the official SIP submittal for the federal 2006 24-hour $PM_{2.5}$ standard, for which USEPA has established a due date of December 14, 2012. In addition, the 2012 AQMP will update specific new control measures and commitments for emissions reductions to implement the attainment strategy for the 8-hour ozone SIP, and thus help to reduce reliance on CAA Section 182(e)(5) long-term measures. Once approved by the District Governing Board and CARB, the 2012 AQMP will be submitted to USEPA as the 24-hour $PM_{2.5}$ SIP addressing the 2006 $PM_{2.5}$ NAAQS and as a limited update to the approved 8-hour ozone SIP. The 1-hour ozone attainment demonstration and VMT emissions offset demonstration will also be submitted through CARB to the USEPA.

The 2012 AQMP also includes an update on the air quality status of the Salton Sea Air Basin (SSAB) in the Coachella Valley, a discussion of the emerging issues of ultrafine particle and near-roadway exposures, a report on the health effects of $PM_{2.5}$, and an analysis of the energy supply and demand issues that face the Basin and their relationship to air quality. Pursuant to statute, the public hearing will also discuss the report on health effects of $PM_{2.5}$ (Health & Safety Code §40471).

The 2012 AQMP incorporates the most recent planning assumptions and the best available information including: revised stationary point and area source emissions inventories; on-road and off-road mobile source emissions inventories based on CARB's latest EMFAC2011 and Off-Road Models; the use of new meteorological episodes for ozone and expanded air quality modeling analysis; and the latest demographic growth forecasts based on the approved 2012 Regional Transportation Plan (2012 RTP) developed by SCAG.

2.4.2 Air Quality Attainment Status

Areas that meet the ambient air quality standards are classified as "attainment" areas while areas that do not meet these standards are classified as "non-attainment" areas. The severities of the classifications for ozone non-attainment include and range in magnitude from: marginal, moderate, serious, severe, and extreme. The attainment status for the SCAB is included in Table 2.

Table 2
ATTAINMENT STATUS FOR THE SOUTH COAST AIR BASIN

Pollutant	State Status	Federal Status
Ozone (1-hour)	Extreme Non-attainment	Extreme Non-attainment (under the prior standard)
Ozone (8-hour)	Extreme Non-Attainment	Severe-17 (may petition for Extreme)
PM_{10}	Serious Non-attainment	Serious Non-attainment
$PM_{2.5}$	Non-attainment	Non-attainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Attainment/Maintenance

Source: California Air Resources Board

The Basin is also designated as attainment of the California Ambient Air Quality Standards (CAAQS) for SO_2, lead, and sulfates. Areas that are designated as Severe-17 for the ozone standard must meet attainment of the 8-

hour standard by 2021 (2024 if reclassified to Extreme). Areas considered as serious non-attainment of the PM_{10} standards must have reached attainment by the end of 2006, or as expeditiously as possible. To date, the Basin still does not meet this standard. The $PM_{2.5}$ attainment date is to be met in the year 2015.

2.4.3 State Planning Requirements

Executive Order S-3-05

Under Executive Order S-3-05, as signed by Governor Arnold Schwarzenegger on June 1, 2005, the following greenhouse gas (GHG) emission reduction targets were established for California: (1) by 2010, reduce GHG emissions to 2000 levels; (2) by 2020, reduce GHG emissions to 1990 levels; and (3) by 2050, reduce GHG emissions to 80 percent below 1990 levels. In response, in March 2006, the California Environmental Protection Agency (CalEPA) published a Climate Action Team (CAT) report detailing how State agencies could implement a series of policies to meet the 2010 and 2020 goals. As indicated therein, among the policy actions that are cited are "smart land use and intelligent transportation." The CAT states that smart land use is an umbrella term for strategies that integrate transportation and land-use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population. Intelligent transportation systems (ITS) is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods, and service.[1]

California Health and Safety Code

Section 41700 of the H&SC requires that "no person shall discharge from any source whatsoever such quantities of air contaminants or other material which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, response, health, or safety of any such person or the public, or which causes, or have a natural tendency to cause, injury or damage to business or property." Section 39606(b) of the H&SC authorizes the California Air Resources Board (CARB) to adopt standards for ambient air quality "in consideration of public health and safety, and welfare, including but not limited to health, illness, irritation to the senses, aesthetic value, interference with visibility, and the effects of air pollution on the economy." The objective of ambient air quality standards (AAQS) is to provide a basis for preventing or abating adverse health or welfare effects of air pollution (17 CCR 70101).

Section 39607(e) requires that the CARB establish and periodically review area designation criteria. The CARB makes area designations for the following nine pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns (PM_{10}), sulfates (SO_4), lead (Pb), hydrogen sulfide (H_2S), and visibility-reducing particles. Assembly Bill 2595, known as the California Clean Air Act (CCAA), divided non-attainment areas into categories with progressively more stringent requirements (Sections 40918-40920.5, H&SC). As specified, it is the responsibility of each air pollution control district (APCD) and air quality management district (AQMD) within the State to attain and maintain California Ambient Air Quality Standards (CAAQS).[2] The CCAA requires that an attainment plan be developed by all non-attainment districts for O_3, CO, sulfur oxides (SOx), and nitrogen oxides (NOx) that are either receptors or contributors of transported air pollutants. The CAAQS are listed in Table 1.[3] Areas meeting CAAQS are classified as attainment; areas not meeting CAAQS are classified as non-attainment.

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[1]/ California Environmental Protection Agency, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, p. 58.

[2]/ The CARB considers an area to be non-attainment of a CAAQS for a particular pollutant if the standards for O_3, CO (except Lake Tahoe), SO_2 (1 hour and 24 hour), NO_2, PM_{10}, and visibility-reducing particles are exceeded.

[3]/ These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. In addition to primary and secondary ambient air quality standards, the State has established a set of episode criteria for ozone, carbon monoxide,

Assembly Bill 32 (California Global Warming Solutions Act of 2006), codified in Section 38500 *et seq*. of the H&SC, established a comprehensive program to reduce GHG by 2020 and identifies several major requirements that CARB is required to implement, including: (1) adoption and implementation of a list of discrete and early action GHG reduction measures; (2) approval of a Statewide1990 emission level that becomes the Statewide 2020 emissions limits; (3) adoption of mandatory GHG reporting rules for significant GHG sources; and (4) adoption of regulations to achieve the maximum technologically feasible and cost-effective reductions. As defined in Section 38505 of the H&SC, greenhouse gases include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

2.4.4 Federal Clean Air Act Requirements

The Federal Clean Air Act of 1970 (42 U.S.C. Section 7401 *et seq*.) (CAA) requires any new major stationary sources of air pollution and any major modifications to major stationary sources to obtain an air pollution permit before commencing construction. New Source Review (NSR) requirements (42 U.S.C. 7411) differ depending on the attainment status of the area where the major facility is to be located. Prevention of Significant Deterioration (PSD) requirements (42 U.S.C. 7470-7491) apply in areas that are in attainment of the National Ambient Air Quality Standards (NAAQS). Non-attainment area NSR requirements apply to areas that have not been able to demonstrate compliance with the NAAQS.

Section 108 of the CAA directs the USEPA to list pollutants that may reasonably be anticipated to endanger public health and welfare and to issue air quality criteria for those pollutants. The USEPA has set NAAQS for the following pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), and sulfur dioxide (SO_2). The NAAQS for those primary pollutants are listed in Table 1. Section 176(c) prohibits federal agencies from taking actions in NAAQS non-attainment or maintenance areas that do not conform to the State Implementation Plan (SIP) for the attainment and maintenance of NAAQS pursuant to Section 110(a).

2.5 Baseline Air Quality

Existing levels of ambient air quality and historical trends and projections in the project area are best documented by measurements made by the SCAQMD. The project is located within Source Receptor Area (SRA) 9 (East San Gabriel Valley). Data from this station is summarized in Table 3. The measurements have shown that while ozone levels continue to exceed the California and national hourly standards, these occurrences show no clear trend over the last 5 years, though latter years show a marked decrease in the number of violations from the historical numbers of earlier years.

Although NO_2 measurements indicate that no standards were exceeded, NO_2 is a precursor to O_3 formation, which occasionally does exceed the standards. Hydrocarbons and NO_2 are emitted by both mobile and stationary sources, with the greater portion emanating from mobile sources in the Basin. These concentrations increase during the summer, with concentrations increasing from the late morning through the afternoon.

With regard to particulate matter, no trend is readily apparent, though 2014 showed a marked increase in this pollutant. The State standard for PM_{10} was exceeded 48 of the 298 times (16.1 percent) in the last 5 years that it was monitored. The federal standard has not been violated in the last 5 years. However, the federal standard for $PM_{2.5}$ was exceeded three of the 449 times (0.7 percent) in the last 4 years of available data. Suspended particulate matter (both total suspended particulates [TSP], and PM_{10} and $PM_{2.5}$) is a mixture of natural and manmade materials that include soil particles, biological materials, sulfates, nitrates, organic compounds, and lead. Smaller particles (PM_{10}, $PM_{2.5}$) are created by the combustion of fossil fuels, but are also given off from tire wear and brake dust.

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nitrogen dioxide, sulfur dioxide, and particulate matter. These criteria refer to episode levels representing periods of short-term exposure to air pollutants which threaten public health.

Table 3
AIR QUALITY MONITORING SUMMARY FOR THE
EAST SAN GABRIEL VALLEY MONITORING STATION
(Number Of Days Standards Were Exceeded And Maximum Levels During Such Violations)

State and Federal Pollutant/Standard	2010	2011	2012	2013	2014
Ozone (O_3)					
State 1-hour > 0.09 ppm	5	13	18	7	11
State 8-hour >0.070 ppm	10	19	18	15	20
Federal 1-hour > 0.124 ppm	0	0	1	0	0
Federal 8-hour > 0.075 ppm	3	12	10	6	11
Max. 1-hour conc. (ppm)	0.081	0.111	0.134	0.115	0.123
Max. 8-hour conc. (ppm)	0.075	0.092	0.095	0.085	0.092
Carbon Monoxide (CO)					
State 8-hour ≥ 9.1 ppm	0	0	0	0	0
Max. 8-hour conc. (ppm)	1.3	1.4	1.2	1.7	1.9
Nitrogen Dioxide (NO_2)					
State 1-hour > 0.25 (ppm)	0	0	0	0	0
Max. 1-hour conc. (ppb)	77.2	79.5	71.8	76.9	70.2
Inhalable Particulates (PM_{10})[1]					
State 24-hour > 50 µg/m^3	5/55	9/61	6/61	6/61	22/60
Federal 24-hour > 150 (µg/m^3)	0/55	0/61	0/61	0/61	0/60
Max. 24-hour conc. (µg/m^3)	70	65	78	76	96
Inhalable Particulates ($PM_{2.5}$)[1]					
Federal 24-Hour > 35 µg/m^3	1/93	1/118	1/118	0/120	ND[2]
Max. 24-Hour Conc. (µg/m^3)	44.4	49.5	39.6	29.6	ND

[1] Violations per number of samples.
[2] ND, No Data available at this time.

Source: South Coast Air Quality Management District

2.6 Standard Conditions and Uniform Codes

All projects constructed in the SCAB are subject to standard conditions and uniform codes. Compliance with these provisions is mandatory and as such, does not constitute mitigation under CEQA. Those conditions specific to air quality are included below.

- Adherence to SCAQMD Rule 403, which sets requirements for dust control associated with grading and construction activities.
- Adherence to SCAQMD Rules 431.1 and 431.2, which require the use of low sulfur fuel for stationary construction equipment.
- Adherence to SCAQMD Rule 1108, which sets limitations on ROG content in asphalt.
- Adherence to SCAQMD Rule 1113, which sets limitations on ROG content in architectural coatings.
- Adherence to SCAQMD Rule 1143, which sets limitations on ROG content in consumer paint thinners and multipurpose solvents.

Furthermore, the project shall comply with Title 24 energy-efficient design requirements as well as the provision of window glazing, wall insulation, and efficient ventilation methods in accordance with the requirements of the Uniform Building Code (UBC).

During construction, the project would be subject to SCAQMD Rule 403 (Fugitive Dust). SCAQMD Rule 403 does not require a permit for construction activities but sets forth general and specific requirements for all construction sites (as well as other fugitive dust sources) in the Basin. The general requirement prohibits a person from causing or allowing emissions of fugitive dust from construction (or other fugitive dust source) such that the presence of such dust remains visible in the atmosphere beyond the property line of the emissions source. SCAQMD Rule 403 also prohibits a construction site from causing an incremental PM_{10} concentration impact at the property line of more than 50 $\mu g/m^3$ as determined through PM_{10} high-volume sampling. The concentration standard and associated PM_{10} sampling do not apply if specific measures identified in the rule are implemented and appropriately documented.

In accordance with Rule 403, the SCAQMD requires that contractors implement Best Available Control Technology (BACT) for construction activities. Rule 403 identifies two sets of specific measures, one for projects less than 50 acres and another set of conditions for projects that exceed 50 acres. The requirements applicable to the project are included in Table 4. Note that these measures are regulatory requirements and as such, do not constitute mitigation under CEQA.

Table 4
SCAQMD REQUIRED BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measures	Guidance
Backfilling	Stabilize backfill material when not actively handling; and Stabilize backfill material during handling; and Stabilize soil at completion of activity	Mix backfill soil with water prior to moving; and Dedicate water truck or high capacity hose to backfilling equipment; and Empty loader bucket slowly so that no dust plumes are generated; and Minimize drop height from loader bucket.
Clearing and Grubbing	Maintain stability of soil through prewatering of site prior to clearing and grubbing; and Stabilize soil during clearing and grubbing activities; and Stabilize soil immediately after clearing and grubbing activities.	Maintain live perennial vegetation where possible; and Apply water in sufficient quantity to prevent generation of dust plumes.
Clearing Forms	Use water spray to clear forms; or Use sweeping and water spray to clear forms; or Use vacuum system to clear forms.	Use of high pressure air to clear forms may cause exceedance of Rule requirements.
Crushing	Stabilize surface soils prior to operation of support equipment; and Stabilize material after crushing.	Follow permit conditions for crushing equipment; and Pre-water material prior to loading into crusher; and Monitor crusher emissions opacity; and Apply water to crushed material to prevent dust plumes.
Cut and Fill	Pre-water soils prior to cut and fill activities; and Stabilize soil during and after cut and fill activities.	For large sites, pre-water with sprinklers or water trucks and allow time for penetration; and Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts.

Demolition Mechanical/Manual	Stabilize wind erodible surfaces to reduce dust; and Stabilize surface soil where support equipment and vehicles will operate; and Stabilize loose soil and demolition debris; and Comply with Rule 1403.	Apply water in sufficient quantities to prevent the generation of visible dust plumes.
Disturbed Soil	Stabilize disturbed soil throughout the construction site; and Stabilize disturbed soil between structures	Limit vehicular traffic and disturbances on soils where possible; and If interior block walls are planned, install as early as possible; and Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes.
Earth-Moving Activities	Pre-apply water to depth of proposed cuts; and Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and Stabilize soils once earth-moving activities are complete.	Grade each project phase separately, timed to coincide with construction phase; and Upwind fencing can prevent material movement on site; and Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes.
Importing/Exporting of Bulk Materials	Stabilize material while loading to reduce fugitive dust emissions; and Maintain at least six inches of freeboard on haul vehicles; and Stabilize material while transporting to reduce fugitive dust emissions; and Stabilize material while unloading to reduce fugitive dust emissions; and Comply with CVC Section 23114.	Use tarps or other suitable enclosures on haul trucks; and Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage; and Comply with track-out prevention/mitigation requirements; and Provide water while loading and unloading to reduce visible dust plumes.
Landscaping	Stabilize soils, materials, slopes	Apply water to materials to stabilize; and Maintain materials in a crusted condition; and Maintain effective cover over materials; and Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes; and Hydroseed prior to rain season.
Road Shoulder Maintenance	Apply water to unpaved shoulders prior to clearing; and Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs; and Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs.
Screening	Pre-water material prior to screening; and Limit fugitive dust emissions to opacity and plume length standards; and Stabilize material immediately after screening.	Dedicate water truck or high capacity hose to screening operation; and Drop material through the screen slowly and minimize drop height; and Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point.
Staging Areas	Stabilize staging areas during use; and Stabilize staging area soils at project completion.	Limit size of staging area; and Limit vehicle speeds to 15 miles per hour; and Limit number and size of staging area entrances/exits.

Stockpiles/Bulk Material Handling	Stabilize stockpiled materials, and stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	Add or remove material from the downwind portion of the storage pile; and Maintain storage piles to avoid steep sides or faces.
Traffic Areas for Construction Activities	Stabilize all off-road traffic and parking areas; and Stabilize all haul routes; and Direct construction traffic over established haul routes.	Apply gravel/paving to all haul routes as soon as possible to all future roadway areas; and Barriers can be used to ensure vehicles are only used on established parking areas/haul routes.
Trenching	Stabilize surface soils where trencher or excavator and support equipment will operate; and Stabilize soils at the completion of trenching activities.	Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching; and Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment.
Truck Loading	Pre-water material prior to loading; and Ensure that freeboard exceeds six inches (CVC 23114)	Empty loader bucket such that no visible dust plumes are created; and Ensure that the loader bucket is close to the truck to minimize drop height while loading.
Turf Overseeding	Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and Cover haul vehicles prior to exiting the site.	Haul waste material immediately off-site.
Unpaved Roads/Parking Lots	Stabilize soils to meet the applicable performance standards; and Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements.
Vacant Land	In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

2.7 Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases.

Residential areas are considered to be sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Schools are also considered as sensitive since children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution since exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public.

The project is a residential land use and is sensitive in nature. The project site is located along the east side of Valley Boulevard and north side of Ramona Boulevard. The site is surrounded by commercial uses and parking areas. The nearest residential units are located to the northeast at the southwest end of the Clark Avenue (approximately 115 feet) and to the east at the west end of Iris Lane (approximately 375 feet).

3.0 Threshold of Significance Criteria

Presented below are the threshold of significance criteria identified by the SCAQMD relative to this topical issue. In accordance therewith, the proposed project would normally be deemed to produce a significant land use impact if the project or if project-related activities were to:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standards.
- Expose sensitive receptors to substantial air pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.
- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

As indicated in Section 15064(i)(1) of the State CEQA Guidelines, "cumulatively considerable" is defined to mean "that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

In order to determine whether or not the proposed project would cause a significant effect on the environment, the impact of the project must be determined by examining the types and levels of emissions generated and its impacts on factors that affect air quality. To accomplish this determination of significance, the SCAQMD has established air pollution thresholds against which a proposed project can be evaluated and assist lead agencies in determining whether or not the proposed project is significant. If the thresholds are exceeded by a proposed project, then it should be considered significant.

While the final determination of whether or not a project is significant is within the purview of the lead agency, the SCAQMD recommends that the following air pollution thresholds be used in determining whether the construction or operational phase of a proposed project is significant. As recommended by the SCAQMD, if the

lead agency finds that the proposed project has the potential to exceed any of these air pollution thresholds, the project should be considered significant.

3.1 Construction Phase - Thresholds of Significance

The following significance thresholds for air quality have been established by the SCAQMD on a daily basis for construction emissions:

- 75 pounds per day for ROG
- 100 pounds per day for NOx
- 550 pounds per day for CO
- 150 pounds per day of SOx
- 150 pounds per day for PM_{10}
- 55 pounds per day for $PM_{2.5}$

During construction, if any of the identified daily air pollutant thresholds are exceeded by the proposed project, then the project's air quality impacts may be considered significant.

3.2 Operational Phase - Thresholds of Significance

Specific criteria air pollutants have been identified by the SCAQMD as pollutants of special regional concern. Based upon this categorization, the following significance thresholds have been established by the SCAQMD for project operations:

- 55 pounds per day of ROG
- 55 pounds per day of NOx
- 550 pounds per day of CO
- 150 pounds per day of SOx
- 150 pounds per day of PM_{10}
- 55 pounds per day for $PM_{2.5}$

Projects within the SCAB with daily operation-related emissions that exceed any of the above emission thresholds may be considered significant. The SCAQMD indicates in Chapter 6 of their *Handbook* that they consider a project to be mitigated to a level of insignificance if its primary effects are mitigated below the thresholds provided above.

In addition to the criteria pollutants, the SCAQMD Working Group has established a tentative threshold of 3,000 metric tons (Mtons) per year for CO_2e emissions for residential and commercial projects, and a threshold of 10,000 Mtons per year for industrial projects.

3.3 Local Emission Standards

In addition to the mass daily threshold values presented above, projects that have the ability to exceed or add measurably to an existing excess of the ambient concentrations presented in Table 1 may be considered significant. The following localized significance thresholds have been established by the SCAQMD for individual projects:

- California State 1-hour CO standard of 20.0 ppm
- California State 8-hour CO standard of 9.0 ppm

- California State 1-hour NO_2 standard of 0.18 ppm
- SCAQMD 24-hour construction PM_{10} and $PM_{2.5}$ standards of 10.4 $\mu g/m^3$
- SCAQMD 24-hour operational PM_{10} and $PM_{2.5}$ standards of 2.5 $\mu g/m^3$

If ambient levels already exceed a State or federal standard, then project emissions are considered significant if they increase ambient concentrations by a measurable amount. In the case of CO, the SCAQMD defines a measurable amount as 1.0 ppm or more for the 1-hour CO concentration or 0.45 ppm or more for the 8-hour CO concentrations. The SCAQMD indicates that they consider a project to be mitigated to a level of insignificance if its secondary effects are mitigated below these thresholds.

4.0 Environmental Impacts and Mitigation Measures

This project includes the construction and operation of 62 detached residential townhome units on approximately 3.12 gross acres of land. Projected air emissions are calculated using the California Emissions Estimator Model (CalEEMod Version 2013.2.2) distributed by the SCAQMD. The CalEEMod model uses EMFAC2011 emissions factors for vehicle traffic and the OFFROAD2011 emissions factors for construction equipment.

For the purposes of this analysis, construction is estimated to begin in January 2016 following the CalEEMod default construction schedule. Daily emissions are based on the higher of the summer or winter emissions, regardless of when they actually would occur.

The subsequent occupation of the site is also based on the CalEEMod model using traffic-projections provided by the Kunzman. In accordance with the Kunzman projections, the project is estimated to generate approximately 394 average daily trips (ADT) on a weekday. While Kunzman does not report Saturday and Sunday trip rates, these are derived from the CalEEMod Model and include 418 ADT on a Saturday, and 331 ADT on a Sunday. Because the model is reported to present the highest day's emissions, the reported daily emissions are actually those produced on a Saturday. The Sunday and weekday trip rates are used to determine the yearly emission levels in the calculation of greenhouse gas emissions.

For ease of the reader, the analysis follows the format included in the California CEQA Guidelines, Appendix G: Environmental Checklist Form for Section III. AIR QUALITY and Section VII. GREENHOUSE GAS EMISSIONS addressing each issue included in those sections, respectively.

4.1 Project Consistency With the Applicable Air Quality Plan

Less than Significant Impact. CEQA requires that projects be consistent with the AQMP. A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the AQMP in the following ways: (1) it fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are fully addressed; and (2) it provides the local agency with ongoing information assuring local decision-makers that they are making real contributions to clean air goals contained in the AQMP.

Only new or amended general plan elements, specific plans, and regionally significant projects need to undergo a consistency review. This is because the AQMP strategy is based on projections from local general plans. Projects that are consistent with the local general plan are, therefore, considered consistent with the air quality management plan.

As proposed, the Applicant seeks approval for a 62-residential unit development on 3.12 gross acres of land. The project represents infill development. Neither the construction (Table 5) nor the operation (Table 6) of the project is projected to exceed the daily threshold values suggested by the SCAQMD. Additionally, the project

would not result in significant localized air quality impacts. As such, the project is consistent with the goals of 2012 AQMP and, in that respect, does not present a significant air quality impact.

4.2 Project Potential to Violate or Add to a Violation of an Air Quality Standard

4.2.1 Construction Impacts

Less than Significant Impact. The potential air quality impacts associated with and attributable to the construction and operation of the project are addressed separately below.

Equipment, Vehicles, and Dust

Air quality impacts may occur during site preparation and construction activities required to implement the proposed land uses. Major sources of emissions during construction include exhaust emissions, fugitive dust generated as a result of soil and material disturbance during site preparation and grading activities, and the emission of ROGs during the painting of the structures.

As noted, the project involves the construction of 62 single-family, detached residential town house units. Based on the proposed land use, by default the CalEEMod model allocates the construction over 380 working days and this schedule was retained for the analysis. Construction is assumed to begin in January 2016 and end in March 2017 thereby allowing for occupancy in February 2017.

The site is currently paved and this asphalt would require removal. There are a few other amenities (e.g., signs) that would be removed from the site, but asphalt removal represents the bulk of the debris. Typical paving would have a depth of 6 inches. Based on an area of 3.12 acres and a depth of 0.5 foot:

3.*12 acres x 43,560 sq ft/acre x 0.5 ft / 27 cu ft/cu yd = 2,517 cubic yards to be removed*

Crushed asphalt has a weight of about 1,215 pounds per cubic yard.

2,517 cubic yards x 1,215 pounds per cubic yard = 3,058,155 pounds / 2,000 pounds per ton = 1,529 tons

Based on the size of the development, the CalEEMod model default puts site demolition at 20 days. The CalEEMod model assumes that this movement of materials would generate 151 truck hauls over the 20 day period.

SCAQMD's Rule 403 governs fugitive dust emissions from construction projects. This rule sets forth a list of control measures that must be undertaken for all construction projects to ensure that no dust emissions from the project are visible beyond the property boundaries. Adherence to Rule 403 is mandatory and as such, does not denote mitigation under CEQA. The following analysis assumes the use of the minimal measures specified in Rule 403 that overlap between the rule and the CalEEMod model. These include: (1) soil stabilizers shall be applied to unpaved roads; (2) ground cover shall be quickly applied in all disturbed areas; and (3) the active construction site shall be watered twice daily. The model assigns a control efficiency of 55 percent for twice daily watering and a similar efficiency was assumed for other controlled dust-producing, heavy equipment activities. In actuality, Rule 403 specifies several measures that the CalEEMod model does not consider (Table 4), so the modeled PM_{10} and $PM_{2.5}$ emissions associated with fugitive dust are considered conservative.

Table 5 includes the daily emissions projected for site construction. Note that all emissions are within their respective threshold values and the impact is less than significant.

Table 5
COMPARISON OF PROJECTED CONSTRUCTION EMISSIONS AND DAILY CRITERIA VALUES
(pounds/day)

Source	ROG	NOx	CO	SO_2	PM_{10} Dust	PM_{10} Exhaust	PM_{10} Total	$PM_{2.5}$ Dust	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Total
Demolition										
Off Road Diesel	4.29	45.66	35.03	0.04	0.33	2.29	2.62	0.05	2.14	2.19
On Road Diesel	0.14	2.19	1.74	0.01	0.13	0.03	0.16	0.04	0.03	0.06
Worker Trips	0.07	0.09	1.04	0.00	0.17	0.00	0.17	0.04	0.00	0.05
Totals	4.50	47.94	37.81	0.05	0.63	2.32	2.95	0.13	2.17	2.30
Site Preparation										
Off Road Diesel	5.07	54.63	41.11	0.04	3.66	2.94	6.60	2.01	2.70	4.71
Worker Trips	0.08	0.11	1.25	0.00	0.20	0.00	0.20	0.05	0.00	0.06
Totals	5.15	54.74	42.36	0.04	3.86	2.94	6.80	2.06	2.70	4.77
Grading										
Off Road Diesel	3.67	38.45	26.08	0.03	1.33	2.20	3.53	0.68	2.02	2.70
Worker Trips	0.07	0.09	1.04	0.00	0.17	0.00	0.17	0.04	0.00	0.05
Totals	3.74	38.54	27.12	0.03	1.50	2.20	3.70	0.72	2.02	2.75
Building Construction										
Off Road Diesel	3.41	28.51	18.51	0.03	0.00	1.97	1.97	0.00	1.85	1.85
Vendor Trips	0.07	0.63	0.87	0.00	0.04	0.01	0.05	0.01	0.01	0.02
Worker Trips	0.21	0.28	3.12	0.01	0.50	0.00	0.51	0.13	0.00	0.14
Totals	3.69	29.42	22.50	0.04	0.54	1.98	2.53	0.14	1.86	2.01
Asphalt Paving										
Off Road Diesel	1.66	16.80	12.48	0.02	0.00	1.01	1.01	0.00	0.93	0.93
Worker Trips	0.08	0.11	1.26	0.00	0.22	0.00	0.23	0.06	0.00	0.06
Asphalt Totals	1.74	16.91	13.74	0.02	0.22	1.01	1.24	0.06	0.93	0.99
Coating										
Off-Gas	42.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off Road Diesel	0.33	2.19	1.87	0.00	0.00	0.17	0.17	0.00	0.17	0.17
Worker Trips	0.04	0.05	0.57	0.00	0.10	0.00	0.10	0.03	0.00	0.03
Coating Totals	43.32	2.24	2.44	0.00	0.10	0.17	0.27	0.03	0.17	0.20
Daily Threshold	75	100	550	150	→	→	150	→	→	55
Exceeds Threshold?	No	No	No	No			No			No

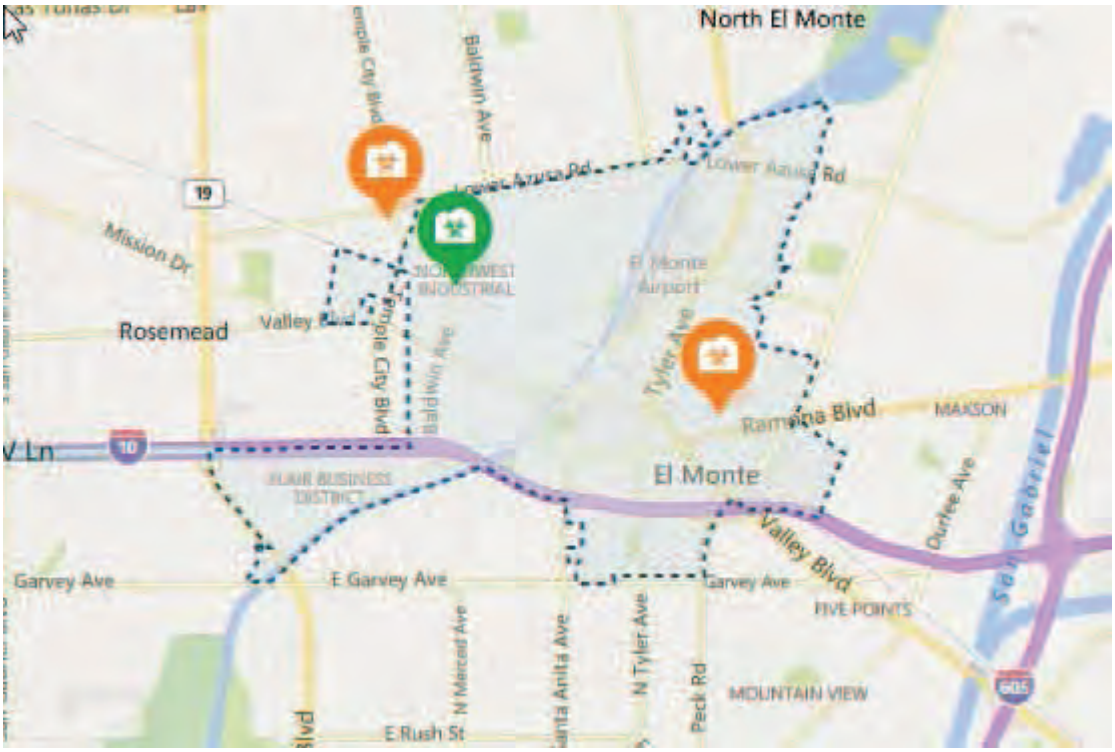
Notes:
The CalEEMod model projects summer and winter emissions and the higher of the two values is included in the table.

Soil Contaminants

The 3.12 acre project site is currently paved with no easy way to examine the underlying soil conditions. Past uses of the site include a dry cleaner, automotive repair building, and El Monte Union High School facility. Traditionally, these types of land uses included the storage of hazardous materials including fuels, waste oil, and

solvents. Additionally, the project area is included within a designated "Superfund Site," though there are no current plans for clean-up (Figure 1).

Figure 1
SUPERFUND SITE BOUNDARIES



The EPA identifies sites such as El Monte Plating at 11409 Stewart Street (to the southeast) and Crown City Plating at 4350 Temple City Boulevard (to the northwest) because they pose or had once posed a potential risk to human health and/or the environment due to contamination by one or more hazardous wastes. Both El Monte Plating and Crown City Plating are currently registered as Active superfund sites by the EPA. However, they are not on the NPL (National Priorities List), which means the EPA does not consider them to be one of the nation's most hazardous waste sites.

Additionally, Handy And Harman is a superfund site located at 4140 Gibson Road. The EPA identifies sites such as Handy And Harman because they pose or had once posed a potential risk to human health and/or the environment due to contamination by one or more hazardous wastes. Handy And Harman is currently registered as an Archived superfund site by the EPA and does not require any clean up action or further investigation at this time.

The excavation, handling, and movement of the contaminated soil is subject to SCAQMD Rule 1150, which governs excavation of landfill sites, and Rule 1166, which sets limitation of VOC emissions from the removal of VOC-contaminated soil. Rule 1150 notes that no person shall initiate excavation of an active or inactive landfill without an Excavation Management Plan approved by the SCAQMD Executive Officer. This Plan shall, at a minimum, provide information regarding the quantity and characteristics of the material to be excavated and transported, and shall identify mitigation measures to be activated as necessary during excavation to ensure that a public nuisance condition does not occur. Various measures shall be selected after consideration of the physical characteristics of the landfill. Such measures may include gas collection and disposal, baling, encapsulation, covering of the material, chemical neutralizing, or other measures approved by the Executive Officer.

Rule 1166 defines a volatile organic compound (VOC) contaminated soil as that which registers 50 parts per million (ppm) or greater of volatile organic compounds as measured before suppression materials have been applied and at a distance of no more than 3 inches from the surface of the excavated soil with an organic vapor

analyzer calibrated with hexane. In the event soil gas does exceed 50 ppm, Rule 1166 specifies special handling and clean-up requirements. Adherence to Rules 1150 and 1166 is mandatory and provisions of the Rules would ensure that any impact associated with the release of soil gas would be less than significant.

Soil gas includes both methane and non-methane VOC. The greater portion of the soil gas is comprised of methane and is not regulated as a criteria pollutant precursor (i.e., ROG). Because the volume of VOC in the soil gas, and that portion of the VOC that comprises ROG (i.e., non-methane, reactive organic gases) associated with soil gas is unknown and would be speculative, and these emissions would be required to be subject to SCAQMD rule, these soil gas emissions are not included in the construction scenario.

4.2.2 Operational Impacts

Less than Significant Impact. The major source of long-term air quality impacts is that associated with the emissions produced from project-generated vehicle trips. With the exception of wood combustion, stationary sources add only minimally to these values.

Mobile Source Emissions

In accordance with the projections provided by Kunzman, the project is estimated to generate approximately 394 average daily trips (ADT) on a weekday. Because it results in the highest number of average daily vehicle trips, the model uses the Saturday traffic volume (i.e., 418 ADT) in the prediction of the daily emissions. The weekday and Sunday (i.e., 331) ADT values are considered in the annual emissions used in the projection of greenhouse gas emissions.

Emissions associated with project-related trips assume full occupancy in 2017. Since emissions per vehicle are reduced each year due to tightening emissions restrictions and the replacement of older vehicles from the road, the use of 2017 emission factors presents a worst-case analysis with regards to operational air quality impacts. Again, both summer and winter scenarios were modeled and the higher of the two values are included in Table 6.

Stationary Source Emissions

In addition to vehicle trips, the occupants would produce emissions from on-site sources, including the combustion of natural gas for space and water heating and the use other heating sources (e.g., hearths). Additionally, the structures would be maintained and this requires repainting over time, thus resulting in the release of additional VOC (ROG) emissions. Also, the use of consumer aerosol products, such as cleaners, are associated with the project. Finally, the landscape would require maintenance and this equipment produces emissions.

The project includes the operation of 62 residential units comprising approximately 95,417 square feet (including 1,750 feet of specialty retail) of floor area. The resultant emissions are projected by the CalEEMod computer model and included in Table 6. Note all emissions are within their criteria values and the impact is less than significant.

Table 6
COMPARISON OF PROJECTED DAILY OPERATIONAL EMISSIONS AND DAILY CRITERIA VALUES
(pounds/day)

Source	ROG	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Mobile Sources	1.56	4.46	17.23	0.04	2.90	0.82
Natural Gas	0.03	0.23	0.10	0.00	0.02	0.02
Structural Maintenance	0.21	0.00	0.00	0.00	0.00	0.00

Consumer Products	1.89	0.00	0.00	0.00	0.00	0.00
Hearth	16.25	0.41	31.16	0.05	4.74	4.74
Landscape Maintenance	0.16	0.06	5.17	0.00	0.03	0.03
Operational Total	20.10	5.16	53.66	0.09	7.69	5.61
Threshold	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Notes:
The CalEEMod model projects summer and winter emissions. These can differ for mobile sources and the higher of the two values were included in the table.

4.3 Project Potential to Result in a Cumulatively Considerable Increase in Criteria Pollutants

Less than Significant Impact. In accordance with SCAQMD methodology, projects that do not exceed or can be mitigated to less than the daily threshold values do not add significantly to a cumulative impact. Neither the construction nor the operation of the project would exceed the recommended SCAQMD threshold levels and this impact is less than significant.

4.4 Project Potential to Expose Sensitive Receptors to Substantial Pollutant Concentrations

4.4.1 Short-Term Localized Impacts, Criteria Pollutants

Less than Significant Impact. In addition to the mass daily threshold standards discussed above, project construction has the potential to raise localized ambient pollutant concentrations. This could present a significant impact if these concentrations were to exceed the ambient air quality standards included in Table 1 at receptor locations.

The SCAQMD has developed screening tables for the construction and operation of projects up to five acres in size. These tables are included in the SCAQMD's "Final Localized Significance Threshold Methodology" (June 2003) and are periodically updated on the SCAQMD Internet web site. The most current update was in 2008 and these data are use in the analysis. The emissions values included in the screening tables are based on the emissions produced at the site and do not include off-site mobile source emissions (i.e., trucks and worker vehicles) that spread over a much larger area.

Screening level allowable emissions are calculated from the "mass-rate look-up tables" included in the "Final Localized Significance Threshold Methodology" (Appendix C). Rather than using the entirety of the site, the CalEEMod emissions model bases the area of disturbance on equipment use. Dozers, graders, and crawler tractors are estimated to disturb an area of 0.5 acre while scrapers are estimated to disturb 1.0 acre over an 8-hour work day.

The CalEEMod model estimates that site preparation results in the highest levels of emission using three rubber tired dozers, each estimated at 0.5 acre of disturbance, or 1.5 acres per day in total. This phase would also include four tractor/loader/backhoes and, while these pieces generate on-site emissions, they operate primarily in one area so are not additive to the disturbed area, though their emissions are included in the area disturbed by the three dozers.

The screening tables include sites of 1, 2, and 5 acres with receptors at 25, 50, 100, 200, and 500 meters away. The provided methodology notes that site sizes and receptor distances that lie between those values included in the screening manual may be determined by linear interpolation. The methodology also denotes that the 25 meter distance is the minimum distance to be used, even if receptors are located closer than this distance.

The daily activity associated with site preparation is 1.5 acres and lies between the 1-and 2-acre sizes included in the manual. The most proximate sensitive receptors are those to the northeast at the end of Clark Avenue at a distance of about 115 feet (35 meters).

In the cases of CO and NOx, construction emission levels are so far below the screening values that the project may be compared at the minimal screening size (i.e., 1 acre) and the most proximate receptor location (i.e., 25 meters). In this case, the screening levels for CO and NOx at 25 meters are 623 and 89 pounds per day, respectively, for projects located in Source Receptor Area (SRA) 9 (East San Gabriel Valley). At peak values of 41.11 and 54.63 pounds per day for CO and NOx, respectively, during site preparation, these construction emissions would not create localized impacts.

Because the Basin is a non-attainment area for particulate matter, the thresholds for both PM_{10} and $PM_{2.5}$ are much more stringent than those for CO and NOx. In the case of PM_{10}, the screening tables show allowable values of 5 and 7 pounds per day for 1- and 2-acre sites, respectively, with receptors at 25 meters.

(5 lb/day + 7 lb/day) / 2 = 6 lb/day threshold for 1.5 acres with receptors at 25 meters

Similarly, for sites of 1.5 acres with receptors at 50 meters, the screening tables show allowable values of 14 and 22 pounds per day for 1- and 2-acre sites, respectively.

(14 lb/day + 22 lb/day) / 2 = 18 lb/day threshold for 1.5 acres with receptors at 50 meters

From these two values, the threshold at 35 meters, for the nearest resident, is calculated.

50 m - 25 m = 25 m

18 lb/day – 6 lb/day = 12 lb/day

12 lb/day / 25 m = 0.5 lb/day/m

35 m – 25 m = 10 m

0.5 lb/m/day x 10 m = 4.8 lb/day

6 lb/day + 4.8 lb/day = 10.8 lb/day

So the PM_{10} threshold for a receptor at 35 meters would be approximately 10.8 pounds per day. At approximately 6.6 pounds per day, on-site PM_{10} would not create significant localized concentrations.

In the case of $PM_{2.5}$, the screening tables show allowable values of 3 and 5 pounds per day for 1- and 2-acre sites, respectively, with receptors at 25 meters.

(3 lb/day + 5 lb/day) / 2 = 4 lb/day threshold for 1.5 acres with receptors at 25 meters

Similarly, for sites of 1.5 acres with receptors at 50 meters, the screening tables show allowable values of 5 and 7 pounds per day for 1- and 2-acre sites, respectively.

(5 lb/day + 7 lb/day) / 2 = 6 lb/day threshold for 1.5 acres with receptors at 50 meters

From these two values, the threshold at 35 meters, for the nearest resident, is calculated.

50 m - 25 m = 25 m

6 lb/day – 4 lb/day = 2 lb/day

2 lb/day / 25 m = 0.1 lb/day/m

35 m – 25 m = 10 m

0.1 lb/m/day x 10 m =0.8 lb/day

4 lb/day + 0.8 lb/day = 4.8 lb/day

Therefore, the $PM_{2.5}$ threshold for a receptor at 35 meters would be approximately 4.8 pounds per day. At about 4.7 pounds per day, on-site $PM_{2.5}$ would not create significant localized concentrations.

4.4.2 Short-Term Localized Impacts, Residue in Fugitive Dust

Less than Significant Impact. Another area of potential concern relates to the nature of materials that may be contained within fugitive dust created during construction activities. Although most dust created through construction is inert, there is the potential for contamination residue from past on-site uses and surface deposition of contaminants from proximate land uses. Residue may be present in the soil and could be stirred up during grading operations.

Petroleum residue, if present, typically acts as a binder to trap fine soil particles that might otherwise escape into the air during handling. These larger particles then settle out of the air much more rapidly than nonagglomerated particles.

Once the existing site paving is removed, in the evidence of obvious areas of either surface or subsurface contamination, a site assessment will be conducted before any construction takes place at that locale. At locations where spillage of fluids has occurred, as evidenced by odor, soil discoloration, etc., the soils will be remediated using appropriate techniques. Removal of petroleum contamination will also alleviate the generation of hydrogen sulfide and its attendant odor.

These activities would fall under the direction of both local and State agencies that would approve on the remediation effort upon completion. As previously discussed, these operations would be subject to SCAQMD Rules 1150 and 1166, and no significant air quality impacts from airborne contaminated dust are foreseen.

4.4.3 Long-Term Localized Impacts, Off-site Criteria Pollutants

Less than Significant Impact. Long-term effects of the proposed project could also be significant if they exceed the CAAQS. As noted for construction, these criteria only apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. CO and NO_2 would be significant if the project were to raise existing levels above those values included in the CAAQS. Again, because the Basin is a non-attainment area for particulate matter, the operational thresholds for both PM_{10} and $PM_{2.5}$ are set at a measurable increase of 2.5 $\mu g/m^3$.

Unlike construction equipment that generates exhaust and dust in a set area, the primary source of emissions from project operations is due to the addition of vehicles on the roadway system. These emissions are then spread over a vast area and do not result in localized concentrations in proximity to the project site. As such, localized modeling for the project operations is not prepared for residential, limited commercial, or light industrial development that does not include a truck terminal.

Because CO is the criteria pollutant that is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, long-term adherence to AAQS is typically demonstrated through an analysis of localized CO concentrations. In the past, areas of vehicle congestion had the potential to create "pockets" of CO called "hot spots." However, the SCAB has now been designated as an Attainment area of

both the State and federal CO standards, and no hot spots have been reported in project area in more than the last 5 years. CO is no longer a localized pollutant of concern near roadways and as such this analysis is no longer necessary.

4.4.4 Long-Term Localized Impacts, On-site Diesel Particulates

Less than Significant Impact. The project is to be located adjacent to the Metrolink Railroad easement and a Health/Risk Assessment (HRA) was conducted to determine if there is a potential impact to site occupants from exposure to diesel particulate matter from the proximate Metrolink operations. The HRA quantified the estimated emissions of several Toxic Air Contaminants (TAC) from the operation of Metrolink railway and applied an air dispersion model to quantify cancer risks and non-cancer hazards from the TAC emissions to the residents of the project.

The HRA concludes that the TAC emissions from the Metrolink locomotive operations would not result in an exceedance of the cancer risk significance thresholds adopted by the South Coast Air Quality Management District's (SCAQMD's) at any residential receptor located within the project.

Additionally, the assessment finds that the TAC emissions from the Metrolink locomotive operations would not result in an exceedance of the non-cancer hazard index significance thresholds adopted by the SCAQMD at any residential receptor located within the project. Any impact from these emissions would be less than significant.

4.5 Project Potential to Create Objectionable Odors

Less than Significant Impact. Project construction would involve the use of heavy equipment creating exhaust pollutants from on-site earth movement and from equipment bringing concrete and other building materials to the site. With regards to nuisance odors, any air quality impacts will be confined to the immediate vicinity of the equipment itself. By the time such emissions reach any sensitive receptor sites away from the project site, they will be diluted to well below any level of air quality concern. An occasional "whiff" of diesel exhaust from passing equipment and trucks accessing the site from public roadways may result. Such brief exhaust odors are an adverse but less-than-significant, air quality impact. Additionally, some odor would be produced from the application of asphalt, paints, and coatings. Any exposure to these common odors would be of short-term duration and, while potentially adverse, are less than significant.

Operational odors could be produced from on-site food preparation. These odors are common in the environment and would not constitute a significant impact.

4.6 Project Potential to Generate Greenhouse Gas Emissions, Either Directly or Indirectly, that may have a Significant Impact on the Environment

Less than Significant Impact. To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, the SCAQMD has convened a GHG CEQA Significance Threshold Working Group. The SCAQMD is in the process of establishing a threshold for GHG emissions to determine a project's regional contribution toward global climate change impacts for California. On December 5, 2008, SCAQMD adopted a threshold of 3,000 metric tons (MTons) of CO_2e per year for residential and commercial projects for which it is the lead agency under CEQA.

With respect to construction, the SCAQMD recommends that the construction emissions be totaled and amortized over a period of 30 years, added to the emissions generated by the project's operation.

Construction

The CalEEMod default estimates that construction would take approximately 299 working days to complete. For the purposes of this analysis, construction is estimated to begin on January 1, 2016 and follow the

CalEEMod default construction schedule with completion on February 22, 2017. Construction activities would consume fuel and result in the generation of greenhouse gases. Construction CO_2e emissions are as projected using the CalEEMod computer model and included in Table 7. Note that even if construction were to be completed in a single calendar year, the total emissions (i.e., 437.47 Mtons of CO_2e), would remain within the 3,000 Mtons threshold, if held to this threshold.

Table 7
CONSTRUCTION-RELATED GREENHOUSE GAS EMISSION BY YEAR
(Mtons/year)

Year	CO_2	CH_4	N_2O	Total CO_2e[1]
2016	412.22	0.09	0.00	414.07
2017	23.28	0.01	0.00	23.40
Total	435.48	0.09	0.00	437.47
Total per Year[2]	14.52	0.10	0.00	14.58

[1] Because different gases have different conversion factors, totals may not equal.
[2] Averaged over a period of 30 years.

Site Operations

In the case of site operations, the majority of greenhouse gas emissions, and specifically CO_2, is due to vehicle travel and energy consumption. As shown in Table 8, the CalEEMod model projects that combined, mobile, area source, energy, waste, and water conveyance would generate 743.12 Mtons of CO_2e on an annual basis. When the construction emissions are amortized over 30 years and added to this value, the total (i.e., 757.70 Mtons of CO_2e) is under the suggested threshold of 3,000 Mtons per year and the impact is less than significant.

Table 8
YEARLY OPERATIONAL GREENHOUSE GAS EMISSIONS
(Mtons/year)

Source	CO_2	CH_4	N_2O	Total CO_2e[1]
Mobile Sources	544.77	0.02	0.00	545.23
Electricity	85.63	0.00	0.00	85.96
Natural Gas	47.82	0.00	0.00	48.11
Hearth	19.24	0.02	0.00	19.79
Landscape Maintenance	1.04	0.00	0.00	1.07
Water Use	25.21	0.14	0.00	29.15
Waste Disposal	6.16	0.36	0.00	13.81
Operational Total	729.87	0.54	0.00	743.12
Construction Amortization	14.52	0.10	0.00	14.58
Overall Total	744.39	0.64	0.00	757.70
Threshold	---	---	---	3,000
Exceeds Threshold?				No

Notes:
[1] Because different gases have different conversion factors, totals may not equal.

4.7. Project potential to conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Less than Significant Impact. An impact can also be potentially significant if the project does not comply with the applicable plans necessary for the reduction of greenhouse gases. Like air quality impacts, projects that generate de minimus levels (i.e., less than 3,000 Mtons of CO_2e per year) and don't result in a significant impact or can be mitigated to less than significant would be deemed to be in compliance of the local policies with respect to GHG. Even so, the project is subject to the requirements of State Assembly Bill 32 and any requirements set forth therein. Like adherence to SCAQMD requirements (e.g., Rule 403 for dust control), adherence to SB32, and any measures outlined therein, would be requisite and as such, are not mitigation under CEQA.

Construction

As demonstrated above, the peak year construction is estimated to generate about 414.07 Mtons of CO_2e with total construction estimated at 437.47 Mtons. These values are well below the 3,000-Mton threshold value and the cumulative impact to climate change is less than significant. As such, construction would not conflict with existing plans and policies.

Site Operations

As shown above, the operation of the project is anticipated to result in about 743.12 Mtons of CO_2e on an annual basis and even when added to the amortized construction emissions of 14.58 Mtons for a total of 757.70 Mtons remains less than the 3,000-Mton per year threshold suggested by the SCAQMD. As such, the impact is less than significant.

5.0 References

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Homefacts.com, *Superfund Sites in 91731*, September 15, 2015

South Coast Air Quality Management District, *A Climatological/Air Quality Profile, California South Coast Air Basin*, Prepared by Ralph W. Keith, 1980

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South Coast Air Quality Management District, *California Emission Estimator Model, Version 2013.2.2*, October 2013

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

South Coast Air Quality Management District, *Final Localized Significance Threshold Methodology*, June 2003

South Coast Air Quality Management District, *Rules and Regulations*, January 1993

South Coast Air Quality Management District, *Sample Construction Scenarios for Projects Less than Five Acres in Size*, February 2005

South Coast Air Quality Management District, *SCAQMD CEQA Air Quality Handbook*, April 1993

Thomas J. Glover, *Pocket Ref*, April 1994

Appendices

Appendix A CalEEMod Model Results for Winter Emissions

Appendix B CalEEMod Model Results for Summer Emissions

Appendix C CalEEMod Model Results for Annual Emissions

Cypress & Ramona Residential

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	62.00	Dwelling Unit	3.06	93,667.00	177
Strip Mall	1.75	1000sqft	0.06	1,750.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site totals 3.12 acres with 95,417 total square feet including 93,667 square feet of residential and 1,750 square feet of specialty retail. The acreage was divided into 3.06 and 0.06 acres, accordingly.

Demolition - Based on the removal of 3.12 acres of asphalt with a depth of 6 inches.

Vehicle Trips - Weekday trip rates are based on Kunzman. Weekend trip rates are scaled to the weekday rates. As per Kunzman, all rates include a 10% reduction.

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	62,000.00	93,667.00
tblLandUse	LotAcreage	3.88	3.06
tblLandUse	LotAcreage	0.04	0.06
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleTrips	ST_TR	7.16	5.68
tblVehicleTrips	ST_TR	42.04	37.84
tblVehicleTrips	SU_TR	6.07	4.82
tblVehicleTrips	SU_TR	20.43	18.39
tblVehicleTrips	WD_TR	6.59	5.23
tblVehicleTrips	WD_TR	44.32	39.89

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.4906	4.1263	3.1371	4.6500e-003	0.1529	0.2653	0.4183	0.0582	0.2488	0.3070	0.0000	412.2161	412.2161	0.0882	0.0000	414.0672
2017	0.4088	0.1997	0.1665	2.7000e-004	3.4000e-003	0.0124	0.0158	9.0000e-004	0.0116	0.0125	0.0000	23.2784	23.2784	5.5700e-003	0.0000	23.3953
Total	**0.8995**	**4.3260**	**3.3035**	**4.9200e-003**	**0.1563**	**0.2778**	**0.4341**	**0.0591**	**0.2604**	**0.3195**	**0.0000**	**435.4945**	**435.4945**	**0.0937**	**0.0000**	**437.4625**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.4906	4.1263	3.1370	4.6500e-003	0.0830	0.2653	0.3483	0.0257	0.2488	0.2744	0.0000	412.2157	412.2157	0.0882	0.0000	414.0668
2017	0.4088	0.1997	0.1665	2.7000e-004	3.4000e-003	0.0124	0.0158	9.0000e-004	0.0116	0.0125	0.0000	23.2784	23.2784	5.5700e-003	0.0000	23.3953
Total	**0.8995**	**4.3260**	**3.3035**	**4.9200e-003**	**0.0864**	**0.2778**	**0.3641**	**0.0266**	**0.2604**	**0.2870**	**0.0000**	**435.4941**	**435.4941**	**0.0937**	**0.0000**	**437.4621**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**44.76**	**0.00**	**16.12**	**55.03**	**0.00**	**10.18**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6066	0.0127	1.0354	6.5000e-004		0.0627	0.0627		0.0627	0.0627	6.5856	13.6997	20.2853	0.0207	4.5000e-004	20.8583
Energy	4.8300e-003	0.0413	0.0176	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	133.4477	133.4477	4.8500e-003	1.6900e-003	134.0738
Mobile	0.2484	0.7615	2.8998	7.0200e-003	0.4665	0.0105	0.4770	0.1250	9.6400e-003	0.1346	0.0000	544.7654	544.7654	0.0223	0.0000	545.2340
Waste						0.0000	0.0000		0.0000	0.0000	6.1628	0.0000	6.1628	0.3642	0.0000	13.8112
Water						0.0000	0.0000		0.0000	0.0000	1.3227	23.8844	25.2071	0.1370	3.4300e-003	29.1478
Total	**0.8598**	**0.8155**	**3.9528**	**7.9300e-003**	**0.4665**	**0.0765**	**0.5430**	**0.1250**	**0.0757**	**0.2006**	**14.0711**	**715.7971**	**729.8682**	**0.5490**	**5.5700e-003**	**743.1251**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6066	0.0127	1.0354	6.5000e-004		0.0627	0.0627		0.0627	0.0627	6.5856	13.6997	20.2853	0.0207	4.5000e-004	20.8583
Energy	4.8300e-003	0.0413	0.0176	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	133.4477	133.4477	4.8500e-003	1.6900e-003	134.0738
Mobile	0.2484	0.7615	2.8998	7.0200e-003	0.4665	0.0105	0.4770	0.1250	9.6400e-003	0.1346	0.0000	544.7654	544.7654	0.0223	0.0000	545.2340
Waste						0.0000	0.0000		0.0000	0.0000	6.1628	0.0000	6.1628	0.3642	0.0000	13.8112
Water						0.0000	0.0000		0.0000	0.0000	1.3227	23.8844	25.2071	0.1369	3.4300e-003	29.1457
Total	**0.8598**	**0.8155**	**3.9528**	**7.9300e-003**	**0.4665**	**0.0765**	**0.5430**	**0.1250**	**0.0757**	**0.2006**	**14.0711**	**715.7971**	**729.8682**	**0.5490**	**5.5700e-003**	**743.1230**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	1/28/2016	5	20	
2	Site Preparation	Site Preparation	1/29/2016	2/4/2016	5	5	
3	Grading	Grading	2/5/2016	2/16/2016	5	8	
4	Building Construction	Building Construction	2/17/2016	1/3/2017	5	230	
5	Paving	Paving	1/4/2017	1/27/2017	5	18	
6	Architectural Coating	Architectural Coating	1/28/2017	2/22/2017	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 189,676; Residential Outdoor: 63,225; Non-Residential Indoor: 2,625; Non-Residential Outdoor: 875 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	151.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	45.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0164	0.0000	0.0164	2.4800e-003	0.0000	2.4800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0429	0.4566	0.3503	4.0000e-004		0.0229	0.0229		0.0214	0.0214	0.0000	37.0974	37.0974	0.0101	0.0000	37.3092
Total	**0.0429**	**0.4566**	**0.3503**	**4.0000e-004**	**0.0164**	**0.0229**	**0.0393**	**2.4800e-003**	**0.0214**	**0.0239**	**0.0000**	**37.0974**	**37.0974**	**0.0101**	**0.0000**	**37.3092**

3.2 Demolition - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3800e-003	0.0223	0.0169	6.0000e-005	1.2900e-003	3.1000e-004	1.6100e-003	3.5000e-004	2.9000e-004	6.4000e-004	0.0000	5.1502	5.1502	4.0000e-005	0.0000	5.1510
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	9.6000e-004	9.9800e-003	2.0000e-005	1.6400e-003	2.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.6039	1.6039	9.0000e-005	0.0000	1.6058
Total	**2.0400e-003**	**0.0233**	**0.0269**	**8.0000e-005**	**2.9300e-003**	**3.3000e-004**	**3.2700e-003**	**7.9000e-004**	**3.0000e-004**	**1.0900e-003**	**0.0000**	**6.7542**	**6.7542**	**1.3000e-004**	**0.0000**	**6.7569**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.3100e-003	0.0000	3.3100e-003	5.0000e-004	0.0000	5.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0429	0.4566	0.3503	4.0000e-004		0.0229	0.0229		0.0214	0.0214	0.0000	37.0973	37.0973	0.0101	0.0000	37.3092
Total	**0.0429**	**0.4566**	**0.3503**	**4.0000e-004**	**3.3100e-003**	**0.0229**	**0.0262**	**5.0000e-004**	**0.0214**	**0.0219**	**0.0000**	**37.0973**	**37.0973**	**0.0101**	**0.0000**	**37.3092**

3.2 Demolition - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3800e-003	0.0223	0.0169	6.0000e-005	1.2900e-003	3.1000e-004	1.6100e-003	3.5000e-004	2.9000e-004	6.4000e-004	0.0000	5.1502	5.1502	4.0000e-005	0.0000	5.1510
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	9.6000e-004	9.9800e-003	2.0000e-005	1.6400e-003	2.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.6039	1.6039	9.0000e-005	0.0000	1.6058
Total	**2.0400e-003**	**0.0233**	**0.0269**	**8.0000e-005**	**2.9300e-003**	**3.3000e-004**	**3.2700e-003**	**7.9000e-004**	**3.0000e-004**	**1.0900e-003**	**0.0000**	**6.7542**	**6.7542**	**1.3000e-004**	**0.0000**	**6.7569**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1366	0.1028	1.0000e-004		7.3500e-003	7.3500e-003		6.7600e-003	6.7600e-003	0.0000	9.2193	9.2193	2.7800e-003	0.0000	9.2777
Total	**0.0127**	**0.1366**	**0.1028**	**1.0000e-004**	**0.0452**	**7.3500e-003**	**0.0525**	**0.0248**	**6.7600e-003**	**0.0316**	**0.0000**	**9.2193**	**9.2193**	**2.7800e-003**	**0.0000**	**9.2777**

3.3 Site Preparation - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	2.9000e-004	2.9900e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4812	0.4812	3.0000e-005	0.0000	0.4818
Total	**2.0000e-004**	**2.9000e-004**	**2.9900e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4812**	**0.4812**	**3.0000e-005**	**0.0000**	**0.4818**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.1500e-003	0.0000	9.1500e-003	5.0300e-003	0.0000	5.0300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1366	0.1028	1.0000e-004		7.3500e-003	7.3500e-003		6.7600e-003	6.7600e-003	0.0000	9.2193	9.2193	2.7800e-003	0.0000	9.2777
Total	**0.0127**	**0.1366**	**0.1028**	**1.0000e-004**	**9.1500e-003**	**7.3500e-003**	**0.0165**	**5.0300e-003**	**6.7600e-003**	**0.0118**	**0.0000**	**9.2193**	**9.2193**	**2.7800e-003**	**0.0000**	**9.2777**

3.3 Site Preparation - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	2.9000e-004	2.9900e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4812	0.4812	3.0000e-005	0.0000	0.4818
Total	**2.0000e-004**	**2.9000e-004**	**2.9900e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4812**	**0.4812**	**3.0000e-005**	**0.0000**	**0.4818**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0147	0.1538	0.1043	1.2000e-004		8.7900e-003	8.7900e-003		8.0900e-003	8.0900e-003	0.0000	11.2266	11.2266	3.3900e-003	0.0000	11.2977
Total	**0.0147**	**0.1538**	**0.1043**	**1.2000e-004**	**0.0262**	**8.7900e-003**	**0.0350**	**0.0135**	**8.0900e-003**	**0.0216**	**0.0000**	**11.2266**	**11.2266**	**3.3900e-003**	**0.0000**	**11.2977**

3.4 Grading - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	3.8000e-004	3.9900e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	1.0000e-005	1.8000e-004	0.0000	0.6416	0.6416	4.0000e-005	0.0000	0.6423
Total	**2.6000e-004**	**3.8000e-004**	**3.9900e-003**	**1.0000e-005**	**6.6000e-004**	**1.0000e-005**	**6.6000e-004**	**1.7000e-004**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**0.6416**	**0.6416**	**4.0000e-005**	**0.0000**	**0.6423**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3100e-003	0.0000	5.3100e-003	2.7300e-003	0.0000	2.7300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0147	0.1538	0.1043	1.2000e-004		8.7900e-003	8.7900e-003		8.0900e-003	8.0900e-003	0.0000	11.2265	11.2265	3.3900e-003	0.0000	11.2977
Total	**0.0147**	**0.1538**	**0.1043**	**1.2000e-004**	**5.3100e-003**	**8.7900e-003**	**0.0141**	**2.7300e-003**	**8.0900e-003**	**0.0108**	**0.0000**	**11.2265**	**11.2265**	**3.3900e-003**	**0.0000**	**11.2977**

3.4 Grading - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	3.8000e-004	3.9900e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	1.0000e-005	1.8000e-004	0.0000	0.6416	0.6416	4.0000e-005	0.0000	0.6423
Total	**2.6000e-004**	**3.8000e-004**	**3.9900e-003**	**1.0000e-005**	**6.6000e-004**	**1.0000e-005**	**6.6000e-004**	**1.7000e-004**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**0.6416**	**0.6416**	**4.0000e-005**	**0.0000**	**0.6423**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3883	3.2497	2.1098	3.0600e-003		0.2243	0.2243		0.2107	0.2107	0.0000	276.0551	276.0551	0.0685	0.0000	277.4929
Total	**0.3883**	**3.2497**	**2.1098**	**3.0600e-003**		**0.2243**	**0.2243**		**0.2107**	**0.2107**	**0.0000**	**276.0551**	**276.0551**	**0.0685**	**0.0000**	**277.4929**

3.5 Building Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.1700e-003	0.0730	0.0948	1.7000e-004	4.8900e-003	1.1000e-003	5.9900e-003	1.4000e-003	1.0100e-003	2.4000e-003	0.0000	15.8869	15.8869	1.2000e-004	0.0000	15.8894
Worker	0.0224	0.0327	0.3412	7.2000e-004	0.0562	5.4000e-004	0.0568	0.0149	5.0000e-004	0.0154	0.0000	54.8540	54.8540	3.1100e-003	0.0000	54.9194
Total	**0.0296**	**0.1057**	**0.4361**	**8.9000e-004**	**0.0611**	**1.6400e-003**	**0.0628**	**0.0163**	**1.5100e-003**	**0.0178**	**0.0000**	**70.7409**	**70.7409**	**3.2300e-003**	**0.0000**	**70.8088**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3883	3.2497	2.1098	3.0600e-003		0.2243	0.2243		0.2107	0.2107	0.0000	276.0548	276.0548	0.0685	0.0000	277.4926
Total	**0.3883**	**3.2497**	**2.1098**	**3.0600e-003**		**0.2243**	**0.2243**		**0.2107**	**0.2107**	**0.0000**	**276.0548**	**276.0548**	**0.0685**	**0.0000**	**277.4926**

3.5 Building Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.1700e-003	0.0730	0.0948	1.7000e-004	4.8900e-003	1.1000e-003	5.9900e-003	1.4000e-003	1.0100e-003	2.4000e-003	0.0000	15.8869	15.8869	1.2000e-004	0.0000	15.8894
Worker	0.0224	0.0327	0.3412	7.2000e-004	0.0562	5.4000e-004	0.0568	0.0149	5.0000e-004	0.0154	0.0000	54.8540	54.8540	3.1100e-003	0.0000	54.9194
Total	**0.0296**	**0.1057**	**0.4361**	**8.9000e-004**	**0.0611**	**1.6400e-003**	**0.0628**	**0.0163**	**1.5100e-003**	**0.0178**	**0.0000**	**70.7409**	**70.7409**	**3.2300e-003**	**0.0000**	**70.8088**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1000e-003	0.0264	0.0181	3.0000e-005		1.7800e-003	1.7800e-003		1.6700e-003	1.6700e-003	0.0000	2.3948	2.3948	5.9000e-004	0.0000	2.4072
Total	**3.1000e-003**	**0.0264**	**0.0181**	**3.0000e-005**		**1.7800e-003**	**1.7800e-003**		**1.6700e-003**	**1.6700e-003**	**0.0000**	**2.3948**	**2.3948**	**5.9000e-004**	**0.0000**	**2.4072**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	5.8000e-004	7.9000e-004	0.0000	4.0000e-005	1.0000e-005	5.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1371	0.1371	0.0000	0.0000	0.1372
Worker	1.8000e-004	2.6000e-004	2.7000e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4631	0.4631	3.0000e-005	0.0000	0.4637
Total	**2.4000e-004**	**8.4000e-004**	**3.4900e-003**	**1.0000e-005**	**5.3000e-004**	**1.0000e-005**	**5.5000e-004**	**1.4000e-004**	**1.0000e-005**	**1.6000e-004**	**0.0000**	**0.6003**	**0.6003**	**3.0000e-005**	**0.0000**	**0.6008**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1000e-003	0.0264	0.0181	3.0000e-005		1.7800e-003	1.7800e-003		1.6700e-003	1.6700e-003	0.0000	2.3948	2.3948	5.9000e-004	0.0000	2.4072
Total	**3.1000e-003**	**0.0264**	**0.0181**	**3.0000e-005**		**1.7800e-003**	**1.7800e-003**		**1.6700e-003**	**1.6700e-003**	**0.0000**	**2.3948**	**2.3948**	**5.9000e-004**	**0.0000**	**2.4072**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	5.8000e-004	7.9000e-004	0.0000	4.0000e-005	1.0000e-005	5.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1371	0.1371	0.0000	0.0000	0.1372
Worker	1.8000e-004	2.6000e-004	2.7000e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.4631	0.4631	3.0000e-005	0.0000	0.4637
Total	**2.4000e-004**	**8.4000e-004**	**3.4900e-003**	**1.0000e-005**	**5.3000e-004**	**1.0000e-005**	**5.5000e-004**	**1.4000e-004**	**1.0000e-005**	**1.6000e-004**	**0.0000**	**0.6003**	**0.6003**	**3.0000e-005**	**0.0000**	**0.6008**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0149	0.1512	0.1124	1.7000e-004		9.0500e-003	9.0500e-003		8.3400e-003	8.3400e-003	0.0000	15.2992	15.2992	4.5600e-003	0.0000	15.3950
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0149**	**0.1512**	**0.1124**	**1.7000e-004**		**9.0500e-003**	**9.0500e-003**		**8.3400e-003**	**8.3400e-003**	**0.0000**	**15.2992**	**15.2992**	**4.5600e-003**	**0.0000**	**15.3950**

3.6 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-004	1.0400e-003	0.0108	3.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	2.0000e-005	5.4000e-004	0.0000	1.8526	1.8526	1.0000e-004	0.0000	1.8547
Total	**7.0000e-004**	**1.0400e-003**	**0.0108**	**3.0000e-005**	**1.9700e-003**	**2.0000e-005**	**1.9900e-003**	**5.2000e-004**	**2.0000e-005**	**5.4000e-004**	**0.0000**	**1.8526**	**1.8526**	**1.0000e-004**	**0.0000**	**1.8547**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0149	0.1512	0.1124	1.7000e-004		9.0500e-003	9.0500e-003		8.3400e-003	8.3400e-003	0.0000	15.2991	15.2991	4.5600e-003	0.0000	15.3950
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0149**	**0.1512**	**0.1124**	**1.7000e-004**		**9.0500e-003**	**9.0500e-003**		**8.3400e-003**	**8.3400e-003**	**0.0000**	**15.2991**	**15.2991**	**4.5600e-003**	**0.0000**	**15.3950**

3.6 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-004	1.0400e-003	0.0108	3.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	2.0000e-005	5.4000e-004	0.0000	1.8526	1.8526	1.0000e-004	0.0000	1.8547
Total	**7.0000e-004**	**1.0400e-003**	**0.0108**	**3.0000e-005**	**1.9700e-003**	**2.0000e-005**	**1.9900e-003**	**5.2000e-004**	**2.0000e-005**	**5.4000e-004**	**0.0000**	**1.8526**	**1.8526**	**1.0000e-004**	**0.0000**	**1.8547**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3866					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9900e-003	0.0197	0.0168	3.0000e-005		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	2.2979	2.2979	2.4000e-004	0.0000	2.3030
Total	**0.3896**	**0.0197**	**0.0168**	**3.0000e-005**		**1.5600e-003**	**1.5600e-003**		**1.5600e-003**	**1.5600e-003**	**0.0000**	**2.2979**	**2.2979**	**2.4000e-004**	**0.0000**	**2.3030**

3.7 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	4.7000e-004	4.8700e-003	1.0000e-005	8.9000e-004	1.0000e-005	9.0000e-004	2.4000e-004	1.0000e-005	2.4000e-004	0.0000	0.8337	0.8337	5.0000e-005	0.0000	0.8346
Total	**3.2000e-004**	**4.7000e-004**	**4.8700e-003**	**1.0000e-005**	**8.9000e-004**	**1.0000e-005**	**9.0000e-004**	**2.4000e-004**	**1.0000e-005**	**2.4000e-004**	**0.0000**	**0.8337**	**0.8337**	**5.0000e-005**	**0.0000**	**0.8346**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3866					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9900e-003	0.0197	0.0168	3.0000e-005		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	2.2979	2.2979	2.4000e-004	0.0000	2.3030
Total	**0.3896**	**0.0197**	**0.0168**	**3.0000e-005**		**1.5600e-003**	**1.5600e-003**		**1.5600e-003**	**1.5600e-003**	**0.0000**	**2.2979**	**2.2979**	**2.4000e-004**	**0.0000**	**2.3030**

3.7 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	4.7000e-004	4.8700e-003	1.0000e-005	8.9000e-004	1.0000e-005	9.0000e-004	2.4000e-004	1.0000e-005	2.4000e-004	0.0000	0.8337	0.8337	5.0000e-005	0.0000	0.8346
Total	**3.2000e-004**	**4.7000e-004**	**4.8700e-003**	**1.0000e-005**	**8.9000e-004**	**1.0000e-005**	**9.0000e-004**	**2.4000e-004**	**1.0000e-005**	**2.4000e-004**	**0.0000**	**0.8337**	**0.8337**	**5.0000e-005**	**0.0000**	**0.8346**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2484	0.7615	2.8998	7.0200e-003	0.4665	0.0105	0.4770	0.1250	9.6400e-003	0.1346	0.0000	544.7654	544.7654	0.0223	0.0000	545.2340
Unmitigated	0.2484	0.7615	2.8998	7.0200e-003	0.4665	0.0105	0.4770	0.1250	9.6400e-003	0.1346	0.0000	544.7654	544.7654	0.0223	0.0000	545.2340

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	324.26	352.16	298.84	1,109,256	1,109,256
Strip Mall	69.81	66.22	32.18	121,614	121,614
Total	394.07	418.38	331.02	1,230,870	1,230,870

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.532559	0.058242	0.178229	0.125155	0.038934	0.006273	0.016761	0.032323	0.002478	0.003154	0.003685	0.000544	0.001663

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	85.6257	85.6257	3.9400e-003	8.1000e-004	85.9608
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	85.6257	85.6257	3.9400e-003	8.1000e-004	85.9608
NaturalGas Mitigated	4.8300e-003	0.0413	0.0176	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	47.8219	47.8219	9.2000e-004	8.8000e-004	48.1130
NaturalGas Unmitigated	4.8300e-003	0.0413	0.0176	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003	0.0000	47.8219	47.8219	9.2000e-004	8.8000e-004	48.1130

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	893174	4.8200e-003	0.0412	0.0175	2.6000e-004		3.3300e-003	3.3300e-003		3.3300e-003	3.3300e-003	0.0000	47.6632	47.6632	9.1000e-004	8.7000e-004	47.9532
Strip Mall	2975	2.0000e-005	1.5000e-004	1.2000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1588	0.1588	0.0000	0.0000	0.1597
Total		**4.8400e-003**	**0.0413**	**0.0176**	**2.6000e-004**		**3.3400e-003**	**3.3400e-003**		**3.3400e-003**	**3.3400e-003**	**0.0000**	**47.8219**	**47.8219**	**9.1000e-004**	**8.7000e-004**	**48.1130**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	893174	4.8200e-003	0.0412	0.0175	2.6000e-004		3.3300e-003	3.3300e-003		3.3300e-003	3.3300e-003	0.0000	47.6632	47.6632	9.1000e-004	8.7000e-004	47.9532
Strip Mall	2975	2.0000e-005	1.5000e-004	1.2000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1588	0.1588	0.0000	0.0000	0.1597
Total		**4.8400e-003**	**0.0413**	**0.0176**	**2.6000e-004**		**3.3400e-003**	**3.3400e-003**		**3.3400e-003**	**3.3400e-003**	**0.0000**	**47.8219**	**47.8219**	**9.1000e-004**	**8.7000e-004**	**48.1130**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	272669	78.0287	3.5900e-003	7.4000e-004	78.3341
Strip Mall	26547.5	7.5970	3.5000e-004	7.0000e-005	7.6268
Total		**85.6257**	**3.9400e-003**	**8.1000e-004**	**85.9608**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	272669	78.0287	3.5900e-003	7.4000e-004	78.3341
Strip Mall	26547.5	7.5970	3.5000e-004	7.0000e-005	7.6268
Total		**85.6257**	**3.9400e-003**	**8.1000e-004**	**85.9608**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6066	0.0127	1.0354	6.5000e-004		0.0627	0.0627		0.0627	0.0627	6.5856	13.6997	20.2853	0.0207	4.5000e-004	20.8583
Unmitigated	0.6066	0.0127	1.0354	6.5000e-004		0.0627	0.0627		0.0627	0.0627	6.5856	13.6997	20.2853	0.0207	4.5000e-004	20.8583

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0387					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3448					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2031	5.1500e-003	0.3896	6.2000e-004		0.0592	0.0592		0.0592	0.0592	6.5856	12.6552	19.2408	0.0196	4.5000e-004	19.7918
Landscaping	0.0201	7.5300e-003	0.6459	3.0000e-005		3.5100e-003	3.5100e-003		3.5100e-003	3.5100e-003	0.0000	1.0445	1.0445	1.0500e-003	0.0000	1.0665
Total	**0.6066**	**0.0127**	**1.0354**	**6.5000e-004**		**0.0627**	**0.0627**		**0.0627**	**0.0627**	**6.5856**	**13.6997**	**20.2853**	**0.0207**	**4.5000e-004**	**20.8583**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0387					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3448					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2031	5.1500e-003	0.3896	6.2000e-004		0.0592	0.0592		0.0592	0.0592	6.5856	12.6552	19.2408	0.0196	4.5000e-004	19.7918
Landscaping	0.0201	7.5300e-003	0.6459	3.0000e-005		3.5100e-003	3.5100e-003		3.5100e-003	3.5100e-003	0.0000	1.0445	1.0445	1.0500e-003	0.0000	1.0665
Total	**0.6066**	**0.0127**	**1.0354**	**6.5000e-004**		**0.0627**	**0.0627**		**0.0627**	**0.0627**	**6.5856**	**13.6997**	**20.2853**	**0.0207**	**4.5000e-004**	**20.8583**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	25.2071	0.1369	3.4300e-003	29.1457
Unmitigated	25.2071	0.1370	3.4300e-003	29.1478

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	4.03955 / 2.54667	24.4303	0.1327	3.3300e-003	28.2486
Strip Mall	0.129627 / 0.0794487	0.7767	4.2600e-003	1.1000e-004	0.8992
Total		**25.2071**	**0.1370**	**3.4400e-003**	**29.1478**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	4.03955 / 2.54667	24.4303	0.1327	3.3200e-003	28.2466
Strip Mall	0.129627 / 0.0794487	0.7767	4.2600e-003	1.1000e-004	0.8992
Total		**25.2071**	**0.1369**	**3.4300e-003**	**29.1457**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.1628	0.3642	0.0000	13.8112
Unmitigated	6.1628	0.3642	0.0000	13.8112

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	28.52	5.7893	0.3421	0.0000	12.9742
Strip Mall	1.84	0.3735	0.0221	0.0000	0.8371
Total		**6.1628**	**0.3642**	**0.0000**	**13.8113**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	28.52	5.7893	0.3421	0.0000	12.9742
Strip Mall	1.84	0.3735	0.0221	0.0000	0.8371
Total		**6.1628**	**0.3642**	**0.0000**	**13.8113**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Cypress & Ramona Residential

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	62.00	Dwelling Unit	3.06	93,667.00	177
Strip Mall	1.75	1000sqft	0.06	1,750.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site totals 3.12 acres with 95,417 total square feet including 93,667 square feet of residential and 1,750 square feet of specialty retail. The acreage was divided into 3.06 and 0.06 acres, accordingly.

Demolition - Based on the removal of 3.12 acres of asphalt with a depth of 6 inches.

Vehicle Trips - Weekday trip rates are based on Kunzman. Weekend trip rates are scaled to the weekday rates. As per Kunzman, all rates include a 10% reduction.

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	62,000.00	93,667.00
tblLandUse	LotAcreage	3.88	3.06
tblLandUse	LotAcreage	0.04	0.06
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleTrips	ST_TR	7.16	5.68
tblVehicleTrips	ST_TR	42.04	37.84
tblVehicleTrips	SU_TR	6.07	4.82
tblVehicleTrips	SU_TR	20.43	18.39
tblVehicleTrips	WD_TR	6.59	5.23
tblVehicleTrips	WD_TR	44.32	39.89

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	5.1572	54.7332	42.3539	0.0477	18.2675	2.9406	21.2080	9.9840	2.7053	12.6894	0.0000	4,841.9140	4,841.9140	1.2382	0.0000	4,867.9160
2017	43.3227	27.1922	21.6256	0.0349	0.5467	1.7943	2.3410	0.1458	1.6850	1.8308	0.0000	3,323.8605	3,323.8605	0.6786	0.0000	3,338.1115
Total	**48.4799**	**81.9254**	**63.9795**	**0.0826**	**18.8141**	**4.7349**	**23.5490**	**10.1299**	**4.3904**	**14.5202**	**0.0000**	**8,165.7744**	**8,165.7744**	**1.9168**	**0.0000**	**8,206.0275**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	5.1572	54.7332	42.3539	0.0477	3.8596	2.9406	6.8002	2.0643	2.7053	4.7697	0.0000	4,841.9140	4,841.9140	1.2382	0.0000	4,867.9160
2017	43.3227	27.1922	21.6256	0.0349	0.5467	1.7943	2.3410	0.1458	1.6850	1.8308	0.0000	3,323.8605	3,323.8605	0.6786	0.0000	3,338.1115
Total	**48.4799**	**81.9254**	**63.9795**	**0.0826**	**4.4063**	**4.7349**	**9.1412**	**2.2101**	**4.3904**	**6.6005**	**0.0000**	**8,165.7744**	**8,165.7744**	**1.9168**	**0.0000**	**8,206.0275**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**76.58**	**0.00**	**61.18**	**78.18**	**0.00**	**54.54**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	18.5082	0.4724	36.3306	0.0499		4.7641	4.7641		4.7634	4.7634	580.7489	1,125.2106	1,705.9596	1.7412	0.0394	1,754.7430
Energy	0.0265	0.2263	0.0966	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.8473	288.8473	5.5400e-003	5.3000e-003	290.6052
Mobile	1.4879	4.2301	17.2010	0.0434	2.8375	0.0624	2.8999	0.7588	0.0575	0.8162		3,702.4969	3,702.4969	0.1468		3,705.5801
Total	**20.0226**	**4.9288**	**53.6282**	**0.0947**	**2.8375**	**4.8449**	**7.6824**	**0.7588**	**4.8391**	**5.5979**	**580.7489**	**5,116.5549**	**5,697.3038**	**1.8935**	**0.0447**	**5,750.9284**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	18.5082	0.4724	36.3306	0.0499		4.7641	4.7641		4.7634	4.7634	580.7489	1,125.2106	1,705.9596	1.7412	0.0394	1,754.7430
Energy	0.0265	0.2263	0.0966	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.8473	288.8473	5.5400e-003	5.3000e-003	290.6052
Mobile	1.4879	4.2301	17.2010	0.0434	2.8375	0.0624	2.8999	0.7588	0.0575	0.8162		3,702.4969	3,702.4969	0.1468		3,705.5801
Total	**20.0226**	**4.9288**	**53.6282**	**0.0947**	**2.8375**	**4.8449**	**7.6824**	**0.7588**	**4.8391**	**5.5979**	**580.7489**	**5,116.5549**	**5,697.3038**	**1.8935**	**0.0447**	**5,750.9284**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	1/28/2016	5	20	
2	Site Preparation	Site Preparation	1/29/2016	2/4/2016	5	5	
3	Grading	Grading	2/5/2016	2/16/2016	5	8	
4	Building Construction	Building Construction	2/17/2016	1/3/2017	5	230	
5	Paving	Paving	1/4/2017	1/27/2017	5	18	
6	Architectural Coating	Architectural Coating	1/28/2017	2/22/2017	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 189,676; Residential Outdoor: 63,225; Non-Residential Indoor: 2,625; Non-Residential Outdoor: 875 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	151.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	45.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.6360	0.0000	1.6360	0.2477	0.0000	0.2477			0.0000			0.0000
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365		4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**	**1.6360**	**2.2921**	**3.9281**	**0.2477**	**2.1365**	**2.3842**		**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

3.2 Demolition - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1330	2.1164	1.5019	5.6400e-003	0.1315	0.0313	0.1628	0.0360	0.0288	0.0648		568.2767	568.2767	4.2000e-003		568.3650
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0668	0.0841	1.0406	2.1800e-003	0.1677	1.5900e-003	0.1693	0.0445	1.4600e-003	0.0459		184.3532	184.3532	0.0100		184.5639
Total	**0.1998**	**2.2005**	**2.5425**	**7.8200e-003**	**0.2991**	**0.0329**	**0.3321**	**0.0805**	**0.0303**	**0.1107**		**752.6299**	**752.6299**	**0.0142**		**752.9289**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3313	0.0000	0.3313	0.0502	0.0000	0.0502			0.0000			0.0000
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365	0.0000	4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**	**0.3313**	**2.2921**	**2.6234**	**0.0502**	**2.1365**	**2.1867**	**0.0000**	**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

3.2 Demolition - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1330	2.1164	1.5019	5.6400e-003	0.1315	0.0313	0.1628	0.0360	0.0288	0.0648		568.2767	568.2767	4.2000e-003		568.3650
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0668	0.0841	1.0406	2.1800e-003	0.1677	1.5900e-003	0.1693	0.0445	1.4600e-003	0.0459		184.3532	184.3532	0.0100		184.5639
Total	**0.1998**	**2.2005**	**2.5425**	**7.8200e-003**	**0.2991**	**0.0329**	**0.3321**	**0.0805**	**0.0303**	**0.1107**		**752.6299**	**752.6299**	**0.0142**		**752.9289**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.0663**	**2.9387**	**21.0049**	**9.9307**	**2.7036**	**12.6343**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.3 Site Preparation - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0802	0.1009	1.2487	2.6200e-003	0.2012	1.9000e-003	0.2031	0.0534	1.7500e-003	0.0551		221.2238	221.2238	0.0120		221.4767
Total	**0.0802**	**0.1009**	**1.2487**	**2.6200e-003**	**0.2012**	**1.9000e-003**	**0.2031**	**0.0534**	**1.7500e-003**	**0.0551**		**221.2238**	**221.2238**	**0.0120**		**221.4767**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.6584	0.0000	3.6584	2.0110	0.0000	2.0110			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036	0.0000	4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**3.6584**	**2.9387**	**6.5971**	**2.0110**	**2.7036**	**4.7145**	**0.0000**	**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.3 Site Preparation - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0802	0.1009	1.2487	2.6200e-003	0.2012	1.9000e-003	0.2031	0.0534	1.7500e-003	0.0551		221.2238	221.2238	0.0120		221.4767
Total	**0.0802**	**0.1009**	**1.2487**	**2.6200e-003**	**0.2012**	**1.9000e-003**	**0.2031**	**0.0534**	**1.7500e-003**	**0.0551**		**221.2238**	**221.2238**	**0.0120**		**221.4767**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.6669	38.4466	26.0787	0.0298		2.1984	2.1984		2.0225	2.0225		3,093.7889	3,093.7889	0.9332		3,113.3860
Total	**3.6669**	**38.4466**	**26.0787**	**0.0298**	**6.5523**	**2.1984**	**8.7507**	**3.3675**	**2.0225**	**5.3900**		**3,093.7889**	**3,093.7889**	**0.9332**		**3,113.3860**

3.4 Grading - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0668	0.0841	1.0406	2.1800e-003	0.1677	1.5900e-003	0.1693	0.0445	1.4600e-003	0.0459		184.3532	184.3532	0.0100		184.5639
Total	**0.0668**	**0.0841**	**1.0406**	**2.1800e-003**	**0.1677**	**1.5900e-003**	**0.1693**	**0.0445**	**1.4600e-003**	**0.0459**		**184.3532**	**184.3532**	**0.0100**		**184.5639**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3269	0.0000	1.3269	0.6819	0.0000	0.6819			0.0000			0.0000
Off-Road	3.6669	38.4466	26.0787	0.0298		2.1984	2.1984		2.0225	2.0225	0.0000	3,093.7889	3,093.7889	0.9332		3,113.3860
Total	**3.6669**	**38.4466**	**26.0787**	**0.0298**	**1.3269**	**2.1984**	**3.5253**	**0.6819**	**2.0225**	**2.7045**	**0.0000**	**3,093.7889**	**3,093.7889**	**0.9332**		**3,113.3860**

3.4 Grading - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0668	0.0841	1.0406	2.1800e-003	0.1677	1.5900e-003	0.1693	0.0445	1.4600e-003	0.0459		184.3532	184.3532	0.0100		184.5639
Total	**0.0668**	**0.0841**	**1.0406**	**2.1800e-003**	**0.1677**	**1.5900e-003**	**0.1693**	**0.0445**	**1.4600e-003**	**0.0459**		**184.3532**	**184.3532**	**0.0100**		**184.5639**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.5 Building Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0590	0.6126	0.7117	1.5400e-003	0.0437	9.5800e-003	0.0532	0.0124	8.8100e-003	0.0212		154.1544	154.1544	1.1300e-003		154.1782
Worker	0.2004	0.2523	3.1216	6.5400e-003	0.5030	4.7600e-003	0.5078	0.1334	4.3700e-003	0.1378		553.0596	553.0596	0.0301		553.6918
Total	**0.2594**	**0.8648**	**3.8333**	**8.0800e-003**	**0.5466**	**0.0143**	**0.5610**	**0.1458**	**0.0132**	**0.1590**		**707.2140**	**707.2140**	**0.0312**		**707.8700**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**	**0.0000**	**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.5 Building Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0590	0.6126	0.7117	1.5400e-003	0.0437	9.5800e-003	0.0532	0.0124	8.8100e-003	0.0212		154.1544	154.1544	1.1300e-003		154.1782
Worker	0.2004	0.2523	3.1216	6.5400e-003	0.5030	4.7600e-003	0.5078	0.1334	4.3700e-003	0.1378		553.0596	553.0596	0.0301		553.6918
Total	**0.2594**	**0.8648**	**3.8333**	**8.0800e-003**	**0.5466**	**0.0143**	**0.5610**	**0.1458**	**0.0132**	**0.1590**		**707.2140**	**707.2140**	**0.0312**		**707.8700**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0539	0.5584	0.6682	1.5400e-003	0.0437	8.5300e-003	0.0522	0.0124	7.8500e-003	0.0203		151.6928	151.6928	1.1000e-003		151.7158
Worker	0.1801	0.2281	2.8283	6.5400e-003	0.5030	4.5600e-003	0.5076	0.1334	4.2000e-003	0.1376		532.3624	532.3624	0.0278		532.9467
Total	**0.2340**	**0.7866**	**3.4965**	**8.0800e-003**	**0.5467**	**0.0131**	**0.5598**	**0.1458**	**0.0121**	**0.1579**		**684.0551**	**684.0551**	**0.0289**		**684.6625**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**	**0.0000**	**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0539	0.5584	0.6682	1.5400e-003	0.0437	8.5300e-003	0.0522	0.0124	7.8500e-003	0.0203		151.6928	151.6928	1.1000e-003		151.7158
Worker	0.1801	0.2281	2.8283	6.5400e-003	0.5030	4.5600e-003	0.5076	0.1334	4.2000e-003	0.1376		532.3624	532.3624	0.0278		532.9467
Total	**0.2340**	**0.7866**	**3.4965**	**8.0800e-003**	**0.5467**	**0.0131**	**0.5598**	**0.1458**	**0.0121**	**0.1579**		**684.0551**	**684.0551**	**0.0289**		**684.6625**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269		1,873.8264	1,873.8264	0.5588		1,885.5609
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6554**	**16.8035**	**12.4837**	**0.0186**		**1.0056**	**1.0056**		**0.9269**	**0.9269**		**1,873.8264**	**1,873.8264**	**0.5588**		**1,885.5609**

3.6 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0801	0.1014	1.2570	2.9100e-003	0.2236	2.0300e-003	0.2256	0.0593	1.8700e-003	0.0612		236.6055	236.6055	0.0124		236.8652
Total	**0.0801**	**0.1014**	**1.2570**	**2.9100e-003**	**0.2236**	**2.0300e-003**	**0.2256**	**0.0593**	**1.8700e-003**	**0.0612**		**236.6055**	**236.6055**	**0.0124**		**236.8652**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269	0.0000	1,873.8264	1,873.8264	0.5588		1,885.5609
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6554**	**16.8035**	**12.4837**	**0.0186**		**1.0056**	**1.0056**		**0.9269**	**0.9269**	**0.0000**	**1,873.8264**	**1,873.8264**	**0.5588**		**1,885.5609**

3.6 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0801	0.1014	1.2570	2.9100e-003	0.2236	2.0300e-003	0.2256	0.0593	1.8700e-003	0.0612		236.6055	236.6055	0.0124		236.8652
Total	**0.0801**	**0.1014**	**1.2570**	**2.9100e-003**	**0.2236**	**2.0300e-003**	**0.2256**	**0.0593**	**1.8700e-003**	**0.0612**		**236.6055**	**236.6055**	**0.0124**		**236.8652**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	42.9544					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**43.2867**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.7 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0360	0.0456	0.5657	1.3100e-003	0.1006	9.1000e-004	0.1015	0.0267	8.4000e-004	0.0275		106.4725	106.4725	5.5700e-003		106.5893
Total	**0.0360**	**0.0456**	**0.5657**	**1.3100e-003**	**0.1006**	**9.1000e-004**	**0.1015**	**0.0267**	**8.4000e-004**	**0.0275**		**106.4725**	**106.4725**	**5.5700e-003**		**106.5893**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	42.9544					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**43.2867**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.7 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0360	0.0456	0.5657	1.3100e-003	0.1006	9.1000e-004	0.1015	0.0267	8.4000e-004	0.0275		106.4725	106.4725	5.5700e-003		106.5893
Total	**0.0360**	**0.0456**	**0.5657**	**1.3100e-003**	**0.1006**	**9.1000e-004**	**0.1015**	**0.0267**	**8.4000e-004**	**0.0275**		**106.4725**	**106.4725**	**5.5700e-003**		**106.5893**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.4879	4.2301	17.2010	0.0434	2.8375	0.0624	2.8999	0.7588	0.0575	0.8162		3,702.4969	3,702.4969	0.1468		3,705.5801
Unmitigated	1.4879	4.2301	17.2010	0.0434	2.8375	0.0624	2.8999	0.7588	0.0575	0.8162		3,702.4969	3,702.4969	0.1468		3,705.5801

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	324.26	352.16	298.84	1,109,256	1,109,256
Strip Mall	69.81	66.22	32.18	121,614	121,614
Total	394.07	418.38	331.02	1,230,870	1,230,870

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.532559	0.058242	0.178229	0.125155	0.038934	0.006273	0.016761	0.032323	0.002478	0.003154	0.003685	0.000544	0.001663

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0265	0.2263	0.0966	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.8473	288.8473	5.5400e-003	5.3000e-003	290.6052
NaturalGas Unmitigated	0.0265	0.2263	0.0966	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.8473	288.8473	5.5400e-003	5.3000e-003	290.6052

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Strip Mall	8.15068	9.0000e-005	8.0000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.9589	0.9589	2.0000e-005	2.0000e-005	0.9647
Condo/Townhouse	2447.05	0.0264	0.2255	0.0960	1.4400e-003		0.0182	0.0182		0.0182	0.0182		287.8884	287.8884	5.5200e-003	5.2800e-003	289.6405
Total		**0.0265**	**0.2263**	**0.0966**	**1.4400e-003**		**0.0183**	**0.0183**		**0.0183**	**0.0183**		**288.8473**	**288.8473**	**5.5400e-003**	**5.3000e-003**	**290.6052**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	2.44705	0.0264	0.2255	0.0960	1.4400e-003		0.0182	0.0182		0.0182	0.0182		287.8884	287.8884	5.5200e-003	5.2800e-003	289.6405
Strip Mall	0.00815068	9.0000e-005	8.0000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.9589	0.9589	2.0000e-005	2.0000e-005	0.9647
Total		**0.0265**	**0.2263**	**0.0966**	**1.4400e-003**		**0.0183**	**0.0183**		**0.0183**	**0.0183**		**288.8473**	**288.8473**	**5.5400e-003**	**5.3000e-003**	**290.6052**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	18.5082	0.4724	36.3306	0.0499		4.7641	4.7641		4.7634	4.7634	580.7489	1,125.2106	1,705.9596	1.7412	0.0394	1,754.7430
Unmitigated	18.5082	0.4724	36.3306	0.0499		4.7641	4.7641		4.7634	4.7634	580.7489	1,125.2106	1,705.9596	1.7412	0.0394	1,754.7430

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2118					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8893					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	16.2462	0.4122	31.1638	0.0496		4.7361	4.7361		4.7353	4.7353	580.7489	1,116.0000	1,696.7489	1.7319	0.0394	1,745.3383
Landscaping	0.1609	0.0602	5.1668	2.7000e-004		0.0281	0.0281		0.0281	0.0281		9.2106	9.2106	9.2500e-003		9.4048
Total	**18.5082**	**0.4724**	**36.3306**	**0.0499**		**4.7641**	**4.7641**		**4.7634**	**4.7634**	**580.7489**	**1,125.2106**	**1,705.9596**	**1.7412**	**0.0394**	**1,754.7430**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2118					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8893					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	16.2462	0.4122	31.1638	0.0496		4.7361	4.7361		4.7353	4.7353	580.7489	1,116.0000	1,696.7489	1.7319	0.0394	1,745.3383
Landscaping	0.1609	0.0602	5.1668	2.7000e-004		0.0281	0.0281		0.0281	0.0281		9.2106	9.2106	9.2500e-003		9.4048
Total	**18.5082**	**0.4724**	**36.3306**	**0.0499**		**4.7641**	**4.7641**		**4.7634**	**4.7634**	**580.7489**	**1,125.2106**	**1,705.9596**	**1.7412**	**0.0394**	**1,754.7430**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Cypress & Ramona Residential

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	62.00	Dwelling Unit	3.06	93,667.00	177
Strip Mall	1.75	1000sqft	0.06	1,750.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site totals 3.12 acres with 95,417 total square feet including 93,667 square feet of residential and 1,750 square feet of specialty retail. The acreage was divided into 3.06 and 0.06 acres, accordingly.

Demolition - Based on the removal of 3.12 acres of asphalt with a depth of 6 inches.

Vehicle Trips - Weekday trip rates are based on Kunzman. Weekend trip rates are scaled to the weekday rates. As per Kunzman, all rates include a 10% reduction.

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	62,000.00	93,667.00
tblLandUse	LotAcreage	3.88	3.06
tblLandUse	LotAcreage	0.04	0.06
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleTrips	ST_TR	7.16	5.68
tblVehicleTrips	ST_TR	42.04	37.84
tblVehicleTrips	SU_TR	6.07	4.82
tblVehicleTrips	SU_TR	20.43	18.39
tblVehicleTrips	WD_TR	6.59	5.23
tblVehicleTrips	WD_TR	44.32	39.89

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	5.1605	54.7442	42.2777	0.0476	18.2675	2.9406	21.2080	9.9840	2.7053	12.6894	0.0000	4,830.2314	4,830.2314	1.2382	0.0000	4,856.2334
2017	43.3241	27.2308	21.5960	0.0345	0.5467	1.7944	2.3411	0.1458	1.6851	1.8309	0.0000	3,292.6767	3,292.6767	0.6787	0.0000	3,306.9284
Total	**48.4845**	**81.9750**	**63.8737**	**0.0821**	**18.8141**	**4.7350**	**23.5491**	**10.1299**	**4.3904**	**14.5203**	**0.0000**	**8,122.9081**	**8,122.9081**	**1.9168**	**0.0000**	**8,163.1618**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	5.1605	54.7442	42.2777	0.0476	3.8596	2.9406	6.8002	2.0643	2.7053	4.7697	0.0000	4,830.2314	4,830.2314	1.2382	0.0000	4,856.2334
2017	43.3241	27.2308	21.5960	0.0345	0.5467	1.7944	2.3411	0.1458	1.6851	1.8309	0.0000	3,292.6767	3,292.6767	0.6787	0.0000	3,306.9284
Total	**48.4845**	**81.9750**	**63.8737**	**0.0821**	**4.4063**	**4.7350**	**9.1413**	**2.2101**	**4.3904**	**6.6006**	**0.0000**	**8,122.9081**	**8,122.9081**	**1.9168**	**0.0000**	**8,163.1618**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**76.58**	**0.00**	**61.18**	**78.18**	**0.00**	**54.54**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	18.5082	0.4724	36.3306	0.0499		4.7641	4.7641		4.7634	4.7634	580.7489	1,125.2106	1,705.9596	1.7412	0.0394	1,754.7430
Energy	0.0265	0.2263	0.0966	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.8473	288.8473	5.5400e-003	5.3000e-003	290.6052
Mobile	1.5608	4.4574	17.2284	0.0414	2.8375	0.0627	2.9002	0.7588	0.0577	0.8164		3,541.3342	3,541.3342	0.1469		3,544.4199
Total	**20.0955**	**5.1561**	**53.6556**	**0.0927**	**2.8375**	**4.8451**	**7.6826**	**0.7588**	**4.8394**	**5.5981**	**580.7489**	**4,955.3922**	**5,536.1411**	**1.8936**	**0.0447**	**5,589.7681**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	18.5082	0.4724	36.3306	0.0499		4.7641	4.7641		4.7634	4.7634	580.7489	1,125.2106	1,705.9596	1.7412	0.0394	1,754.7430
Energy	0.0265	0.2263	0.0966	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.8473	288.8473	5.5400e-003	5.3000e-003	290.6052
Mobile	1.5608	4.4574	17.2284	0.0414	2.8375	0.0627	2.9002	0.7588	0.0577	0.8164		3,541.3342	3,541.3342	0.1469		3,544.4199
Total	**20.0955**	**5.1561**	**53.6556**	**0.0927**	**2.8375**	**4.8451**	**7.6826**	**0.7588**	**4.8394**	**5.5981**	**580.7489**	**4,955.3922**	**5,536.1411**	**1.8936**	**0.0447**	**5,589.7681**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	1/28/2016	5	20	
2	Site Preparation	Site Preparation	1/29/2016	2/4/2016	5	5	
3	Grading	Grading	2/5/2016	2/16/2016	5	8	
4	Building Construction	Building Construction	2/17/2016	1/3/2017	5	230	
5	Paving	Paving	1/4/2017	1/27/2017	5	18	
6	Architectural Coating	Architectural Coating	1/28/2017	2/22/2017	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 189,676; Residential Outdoor: 63,225; Non-Residential Indoor: 2,625; Non-Residential Outdoor: 875 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	151.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	45.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.6360	0.0000	1.6360	0.2477	0.0000	0.2477			0.0000			0.0000
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365		4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**	**1.6360**	**2.2921**	**3.9281**	**0.2477**	**2.1365**	**2.3842**		**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

3.2 Demolition - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1408	2.1908	1.7408	5.6300e-003	0.1315	0.0314	0.1629	0.0360	0.0289	0.0649		566.9426	566.9426	4.2600e-003		567.0320
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0695	0.0932	0.9771	2.0600e-003	0.1677	1.5900e-003	0.1693	0.0445	1.4600e-003	0.0459		174.0047	174.0047	0.0100		174.2154
Total	**0.2103**	**2.2841**	**2.7179**	**7.6900e-003**	**0.2991**	**0.0330**	**0.3321**	**0.0805**	**0.0304**	**0.1108**		**740.9473**	**740.9473**	**0.0143**		**741.2474**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3313	0.0000	0.3313	0.0502	0.0000	0.0502			0.0000			0.0000
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365	0.0000	4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**	**0.3313**	**2.2921**	**2.6234**	**0.0502**	**2.1365**	**2.1867**	**0.0000**	**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

3.2 Demolition - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1408	2.1908	1.7408	5.6300e-003	0.1315	0.0314	0.1629	0.0360	0.0289	0.0649		566.9426	566.9426	4.2600e-003		567.0320
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0695	0.0932	0.9771	2.0600e-003	0.1677	1.5900e-003	0.1693	0.0445	1.4600e-003	0.0459		174.0047	174.0047	0.0100		174.2154
Total	**0.2103**	**2.2841**	**2.7179**	**7.6900e-003**	**0.2991**	**0.0330**	**0.3321**	**0.0805**	**0.0304**	**0.1108**		**740.9473**	**740.9473**	**0.0143**		**741.2474**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.0663**	**2.9387**	**21.0049**	**9.9307**	**2.7036**	**12.6343**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.3 Site Preparation - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0834	0.1119	1.1725	2.4700e-003	0.2012	1.9000e-003	0.2031	0.0534	1.7500e-003	0.0551		208.8056	208.8056	0.0120		209.0585
Total	**0.0834**	**0.1119**	**1.1725**	**2.4700e-003**	**0.2012**	**1.9000e-003**	**0.2031**	**0.0534**	**1.7500e-003**	**0.0551**		**208.8056**	**208.8056**	**0.0120**		**209.0585**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.6584	0.0000	3.6584	2.0110	0.0000	2.0110			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036	0.0000	4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**3.6584**	**2.9387**	**6.5971**	**2.0110**	**2.7036**	**4.7145**	**0.0000**	**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.3 Site Preparation - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0834	0.1119	1.1725	2.4700e-003	0.2012	1.9000e-003	0.2031	0.0534	1.7500e-003	0.0551		208.8056	208.8056	0.0120		209.0585
Total	**0.0834**	**0.1119**	**1.1725**	**2.4700e-003**	**0.2012**	**1.9000e-003**	**0.2031**	**0.0534**	**1.7500e-003**	**0.0551**		**208.8056**	**208.8056**	**0.0120**		**209.0585**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.6669	38.4466	26.0787	0.0298		2.1984	2.1984		2.0225	2.0225		3,093.7889	3,093.7889	0.9332		3,113.3860
Total	**3.6669**	**38.4466**	**26.0787**	**0.0298**	**6.5523**	**2.1984**	**8.7507**	**3.3675**	**2.0225**	**5.3900**		**3,093.7889**	**3,093.7889**	**0.9332**		**3,113.3860**

3.4 Grading - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0695	0.0932	0.9771	2.0600e-003	0.1677	1.5900e-003	0.1693	0.0445	1.4600e-003	0.0459		174.0047	174.0047	0.0100		174.2154
Total	**0.0695**	**0.0932**	**0.9771**	**2.0600e-003**	**0.1677**	**1.5900e-003**	**0.1693**	**0.0445**	**1.4600e-003**	**0.0459**		**174.0047**	**174.0047**	**0.0100**		**174.2154**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3269	0.0000	1.3269	0.6819	0.0000	0.6819			0.0000			0.0000
Off-Road	3.6669	38.4466	26.0787	0.0298		2.1984	2.1984		2.0225	2.0225	0.0000	3,093.7889	3,093.7889	0.9332		3,113.3860
Total	**3.6669**	**38.4466**	**26.0787**	**0.0298**	**1.3269**	**2.1984**	**3.5253**	**0.6819**	**2.0225**	**2.7045**	**0.0000**	**3,093.7889**	**3,093.7889**	**0.9332**		**3,113.3860**

3.4 Grading - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0695	0.0932	0.9771	2.0600e-003	0.1677	1.5900e-003	0.1693	0.0445	1.4600e-003	0.0459		174.0047	174.0047	0.0100		174.2154
Total	**0.0695**	**0.0932**	**0.9771**	**2.0600e-003**	**0.1677**	**1.5900e-003**	**0.1693**	**0.0445**	**1.4600e-003**	**0.0459**		**174.0047**	**174.0047**	**0.0100**		**174.2154**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.5 Building Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0651	0.6279	0.8665	1.5300e-003	0.0437	9.6800e-003	0.0533	0.0124	8.9000e-003	0.0213		152.8745	152.8745	1.1600e-003		152.8989
Worker	0.2085	0.2797	2.9312	6.1700e-003	0.5030	4.7600e-003	0.5078	0.1334	4.3700e-003	0.1378		522.0140	522.0140	0.0301		522.6462
Total	**0.2736**	**0.9077**	**3.7977**	**7.7000e-003**	**0.5466**	**0.0144**	**0.5611**	**0.1458**	**0.0133**	**0.1591**		**674.8885**	**674.8885**	**0.0313**		**675.5452**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**	**0.0000**	**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.5 Building Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0651	0.6279	0.8665	1.5300e-003	0.0437	9.6800e-003	0.0533	0.0124	8.9000e-003	0.0213		152.8745	152.8745	1.1600e-003		152.8989
Worker	0.2085	0.2797	2.9312	6.1700e-003	0.5030	4.7600e-003	0.5078	0.1334	4.3700e-003	0.1378		522.0140	522.0140	0.0301		522.6462
Total	**0.2736**	**0.9077**	**3.7977**	**7.7000e-003**	**0.5466**	**0.0144**	**0.5611**	**0.1458**	**0.0133**	**0.1591**		**674.8885**	**674.8885**	**0.0313**		**675.5452**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0592	0.5721	0.8219	1.5300e-003	0.0437	8.6200e-003	0.0523	0.0124	7.9300e-003	0.0204		150.4305	150.4305	1.1300e-003		150.4541
Worker	0.1870	0.2530	2.6450	6.1700e-003	0.5030	4.5600e-003	0.5076	0.1334	4.2000e-003	0.1376		502.4409	502.4409	0.0278		503.0253
Total	**0.2462**	**0.8251**	**3.4668**	**7.7000e-003**	**0.5467**	**0.0132**	**0.5598**	**0.1458**	**0.0121**	**0.1580**		**652.8714**	**652.8714**	**0.0290**		**653.4794**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**	**0.0000**	**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0592	0.5721	0.8219	1.5300e-003	0.0437	8.6200e-003	0.0523	0.0124	7.9300e-003	0.0204		150.4305	150.4305	1.1300e-003		150.4541
Worker	0.1870	0.2530	2.6450	6.1700e-003	0.5030	4.5600e-003	0.5076	0.1334	4.2000e-003	0.1376		502.4409	502.4409	0.0278		503.0253
Total	**0.2462**	**0.8251**	**3.4668**	**7.7000e-003**	**0.5467**	**0.0132**	**0.5598**	**0.1458**	**0.0121**	**0.1580**		**652.8714**	**652.8714**	**0.0290**		**653.4794**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269		1,873.8264	1,873.8264	0.5588		1,885.5609
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6554**	**16.8035**	**12.4837**	**0.0186**		**1.0056**	**1.0056**		**0.9269**	**0.9269**		**1,873.8264**	**1,873.8264**	**0.5588**		**1,885.5609**

3.6 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0831	0.1124	1.1755	2.7400e-003	0.2236	2.0300e-003	0.2256	0.0593	1.8700e-003	0.0612		223.3071	223.3071	0.0124		223.5668
Total	**0.0831**	**0.1124**	**1.1755**	**2.7400e-003**	**0.2236**	**2.0300e-003**	**0.2256**	**0.0593**	**1.8700e-003**	**0.0612**		**223.3071**	**223.3071**	**0.0124**		**223.5668**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269	0.0000	1,873.8264	1,873.8264	0.5588		1,885.5609
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6554**	**16.8035**	**12.4837**	**0.0186**		**1.0056**	**1.0056**		**0.9269**	**0.9269**	**0.0000**	**1,873.8264**	**1,873.8264**	**0.5588**		**1,885.5609**

3.6 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0831	0.1124	1.1755	2.7400e-003	0.2236	2.0300e-003	0.2256	0.0593	1.8700e-003	0.0612		223.3071	223.3071	0.0124		223.5668
Total	**0.0831**	**0.1124**	**1.1755**	**2.7400e-003**	**0.2236**	**2.0300e-003**	**0.2256**	**0.0593**	**1.8700e-003**	**0.0612**		**223.3071**	**223.3071**	**0.0124**		**223.5668**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	42.9544					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**43.2867**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.7 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0374	0.0506	0.5290	1.2300e-003	0.1006	9.1000e-004	0.1015	0.0267	8.4000e-004	0.0275		100.4882	100.4882	5.5700e-003		100.6051
Total	**0.0374**	**0.0506**	**0.5290**	**1.2300e-003**	**0.1006**	**9.1000e-004**	**0.1015**	**0.0267**	**8.4000e-004**	**0.0275**		**100.4882**	**100.4882**	**5.5700e-003**		**100.6051**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	42.9544					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**43.2867**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.7 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0374	0.0506	0.5290	1.2300e-003	0.1006	9.1000e-004	0.1015	0.0267	8.4000e-004	0.0275		100.4882	100.4882	5.5700e-003		100.6051
Total	**0.0374**	**0.0506**	**0.5290**	**1.2300e-003**	**0.1006**	**9.1000e-004**	**0.1015**	**0.0267**	**8.4000e-004**	**0.0275**		**100.4882**	**100.4882**	**5.5700e-003**		**100.6051**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5608	4.4574	17.2284	0.0414	2.8375	0.0627	2.9002	0.7588	0.0577	0.8164		3,541.3342	3,541.3342	0.1469		3,544.4199
Unmitigated	1.5608	4.4574	17.2284	0.0414	2.8375	0.0627	2.9002	0.7588	0.0577	0.8164		3,541.3342	3,541.3342	0.1469		3,544.4199

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	324.26	352.16	298.84	1,109,256	1,109,256
Strip Mall	69.81	66.22	32.18	121,614	121,614
Total	394.07	418.38	331.02	1,230,870	1,230,870

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.532559	0.058242	0.178229	0.125155	0.038934	0.006273	0.016761	0.032323	0.002478	0.003154	0.003685	0.000544	0.001663

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0265	0.2263	0.0966	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.8473	288.8473	5.5400e-003	5.3000e-003	290.6052
NaturalGas Unmitigated	0.0265	0.2263	0.0966	1.4400e-003		0.0183	0.0183		0.0183	0.0183		288.8473	288.8473	5.5400e-003	5.3000e-003	290.6052

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Strip Mall	8.15068	9.0000e-005	8.0000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.9589	0.9589	2.0000e-005	2.0000e-005	0.9647
Condo/Townhouse	2447.05	0.0264	0.2255	0.0960	1.4400e-003		0.0182	0.0182		0.0182	0.0182		287.8884	287.8884	5.5200e-003	5.2800e-003	289.6405
Total		**0.0265**	**0.2263**	**0.0966**	**1.4400e-003**		**0.0183**	**0.0183**		**0.0183**	**0.0183**		**288.8473**	**288.8473**	**5.5400e-003**	**5.3000e-003**	**290.6052**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	2.44705	0.0264	0.2255	0.0960	1.4400e-003		0.0182	0.0182		0.0182	0.0182		287.8884	287.8884	5.5200e-003	5.2800e-003	289.6405
Strip Mall	0.00815068	9.0000e-005	8.0000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.9589	0.9589	2.0000e-005	2.0000e-005	0.9647
Total		**0.0265**	**0.2263**	**0.0966**	**1.4400e-003**		**0.0183**	**0.0183**		**0.0183**	**0.0183**		**288.8473**	**288.8473**	**5.5400e-003**	**5.3000e-003**	**290.6052**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	18.5082	0.4724	36.3306	0.0499		4.7641	4.7641		4.7634	4.7634	580.7489	1,125.2106	1,705.9596	1.7412	0.0394	1,754.7430
Unmitigated	18.5082	0.4724	36.3306	0.0499		4.7641	4.7641		4.7634	4.7634	580.7489	1,125.2106	1,705.9596	1.7412	0.0394	1,754.7430

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2118					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8893					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	16.2462	0.4122	31.1638	0.0496		4.7361	4.7361		4.7353	4.7353	580.7489	1,116.0000	1,696.7489	1.7319	0.0394	1,745.3383
Landscaping	0.1609	0.0602	5.1668	2.7000e-004		0.0281	0.0281		0.0281	0.0281		9.2106	9.2106	9.2500e-003		9.4048
Total	**18.5082**	**0.4724**	**36.3306**	**0.0499**		**4.7641**	**4.7641**		**4.7634**	**4.7634**	**580.7489**	**1,125.2106**	**1,705.9596**	**1.7412**	**0.0394**	**1,754.7430**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2118					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8893					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	16.2462	0.4122	31.1638	0.0496		4.7361	4.7361		4.7353	4.7353	580.7489	1,116.0000	1,696.7489	1.7319	0.0394	1,745.3383
Landscaping	0.1609	0.0602	5.1668	2.7000e-004		0.0281	0.0281		0.0281	0.0281		9.2106	9.2106	9.2500e-003		9.4048
Total	**18.5082**	**0.4724**	**36.3306**	**0.0499**		**4.7641**	**4.7641**		**4.7634**	**4.7634**	**580.7489**	**1,125.2106**	**1,705.9596**	**1.7412**	**0.0394**	**1,754.7430**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Cypress & Ramona Residential Project

Health Risk Assessment Report

11127 Ramona Boulevard, City of El Monte, California

Prepared for:

City of El Monte

ECONOMIC DEVELOPMENT DEPARTMENT PLANNING DIVISION

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August 24, 2015

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ACRONYMS AND ABBREVIATIONS

µg/m3	micrograms per cubic meter
AERMOD	American Meteorological Society/United States Environmental Protection Agency Regulatory Model
ARB	California Air Resources Board
CEQA	California Environmental Quality Act
DPM	diesel particulate matter
EMFAC	Emission Factors Model
EPA	United States Environmental Protection Agency
IBC	El Monte Business Complex
OEHHA	California Office of Environmental Health and Hazards Assessment
SCAQMD	South Coast Air Quality Management District
TAC	toxic air contaminant

SECTION 1: EXECUTIVE SUMMARY

This health risk assessment (HRA) was prepared to evaluate whether the potential health risk impacts resulting from emissions of toxic air contaminants (TACs) from Metrolink locomotive exhaust would significantly impact the residents of the proposed Cypress & Ramona Residential Project (project). The California Air Resources Board (ARB) has identified toxic air contaminants, including diesel particulate matter (DPM), as carcinogenic substances, based on their potential to cause cancer, premature death, and other health problems. Those most vulnerable are children whose lungs are still developing and the elderly who may have other serious health problems.

An HRA is a guide that helps to determine if current or future exposure to a chemical or substance could affect the health of a population. The State of California Office of Environmental Health Hazard Assessment (OEHHA) develops methods for conducting health risk assessments. As defined under the Air Toxics "Hotspots" Information and Assessment Act of 1987 (AB 2588 [Chapter 1252, Statutes of 1987], California Health and Safety Code Section 44306), "A health risk assessment means a detailed comprehensive analysis prepared pursuant to Section 44361 to evaluate and predict the dispersion of hazardous substances in the environment and the potential for exposure of human populations and to assess and quantify both the individual and population-wide health risks associated with those levels of exposure" (OEHHA 1987).

This HRA quantified the estimated emissions of several TACs from the operation of Metrolink railway and applied an air dispersion model to quantify cancer risks and non-cancer hazards from the TAC emissions to the residents of the project.

The results of the HRA support the following conclusions concerning the emissions of TACs from local industrial operations:

- The TAC emissions from the Metrolink locomotive operations would not result in an exceedance of the cancer risk significance thresholds adopted by the South Coast Air Quality Management District's (SCAQMD's) at any residential receptor located within the project.
- The TAC emissions from the Metrolink locomotive operations would not result in an exceedance of the non-cancer hazard index significance thresholds adopted by the SCAQMD at any residential receptor located within the project.

This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The methodology follows the *Air Quality Analysis Handbook* prepared by the SCAQMD (SCAQMD 2015) for quantification of emissions and evaluation of potential impacts to air resources and South Coast Air Quality Management District *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis* (SCAQMD 2003).

SECTION 2: PROJECT DESCRIPTION

2.1 - Project Description and Location

The Project is located at 11127 Ramona Boulevard in the City of E Monte, California. The proposed project entails the development of sixty-two (62) residential units with six common areas at the northeast corner of Ramona and Valley Boulevards in the City of El Monte. The Project site is 3.12 acres (136,0340 square feet) in size and currently undeveloped. Exhibit **1: Regional Location Map**

provides the regional location of the project, while Exhibit 2 displays the project site plan. The project site plan is shown in Exhibit 3.

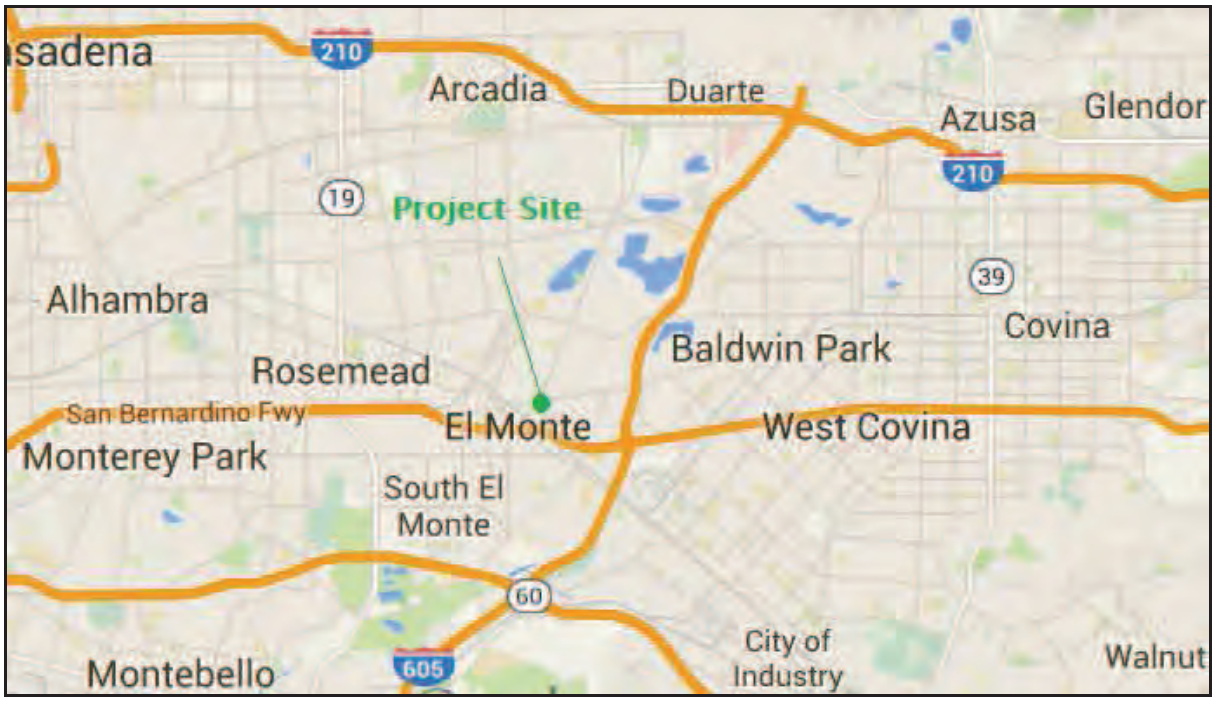

Exhibit 1: Regional Location Map

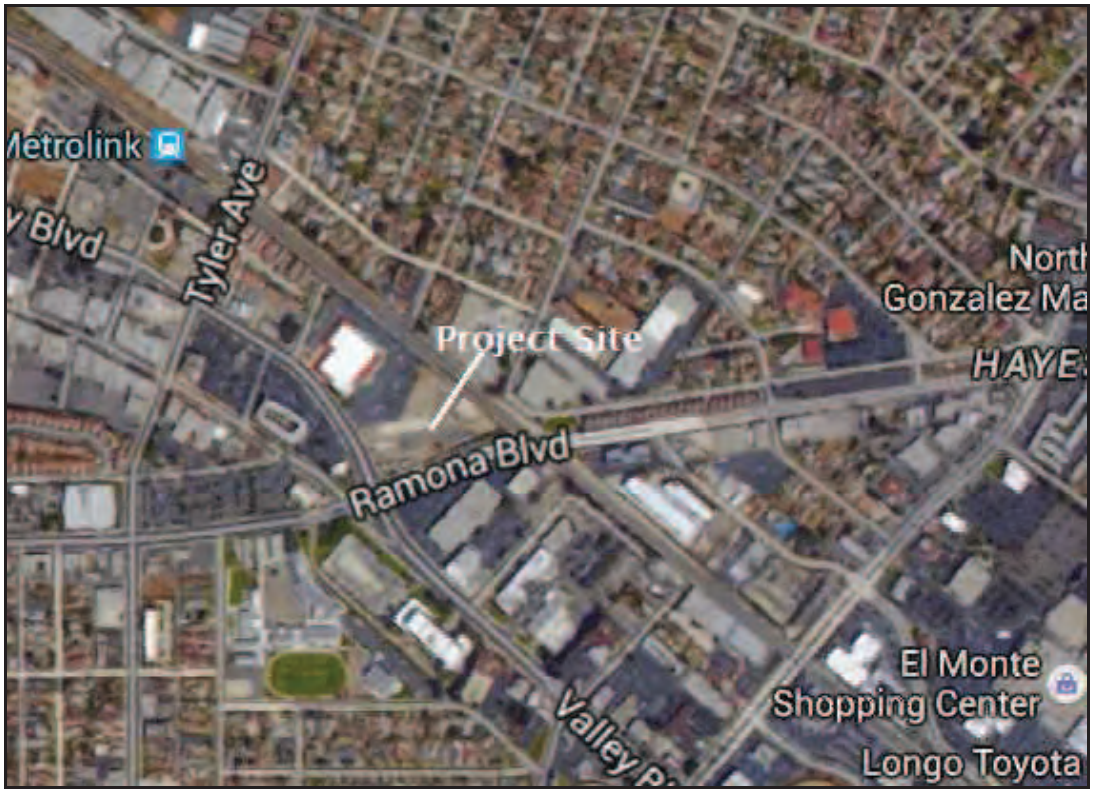

Exhibit 2: Project Aerial Location Map

Exhibit 3: Site Plan

SECTION 3: ENVIRONMENTAL AND REGULATORY SETTING

3.1 - Environmental Setting

The project would be located in the City of El Monte and is within the South Coast Air Basin (basin). To the west of the basin is the Pacific Ocean. To the north and east of the basin are the San Gabriel, San Bernardino, and San Jacinto Mountains, while the southern limit of the basin is the San Diego County line. The basin consists of Orange County, all of Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The air quality in the basin is impacted by dominant airflows, topography, atmospheric inversions, location, season, and time of day.

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the region form natural horizontal barriers to the dispersion of air contaminants. Air pollution created in the coastal areas and around the Los Angeles area is transported inland until it reaches the mountains, where the combination of mountains and inversion layers generally prevent further dispersion. This poor ventilation results in a gradual degradation of air quality from the coastal areas to inland areas. Air stagnation may occur during the early evening and early morning periods of transition between day and nighttime flows. The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. If the Santa Ana winds are strong, they can surpass the sea breeze, which blows from the ocean to the land, and carry the suspended dust and pollutants out to the ocean. If the winds are weak, they are opposed by the sea breeze and cause stagnation, resulting in high pollution events. The primary wind direction near the project site is from the west, as shown in the wind rose in

Exhibit **4** as measured at the SCAQMD Azusa air monitoring station, which is located approximately 8 miles northeast of the project.

The annual average temperature varies little throughout much of the basin, ranging from the low to middle 60s, measured in degrees Fahrenheit. With more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas where the project site is located. The climatological station closest to the project site is located in San Gabriel Fire Department about 4.0 miles west of the project. The area average maximum daily temperatures typically range from the high-60s to the high-80s while the area average minimum daily temperatures range from the low-40s in

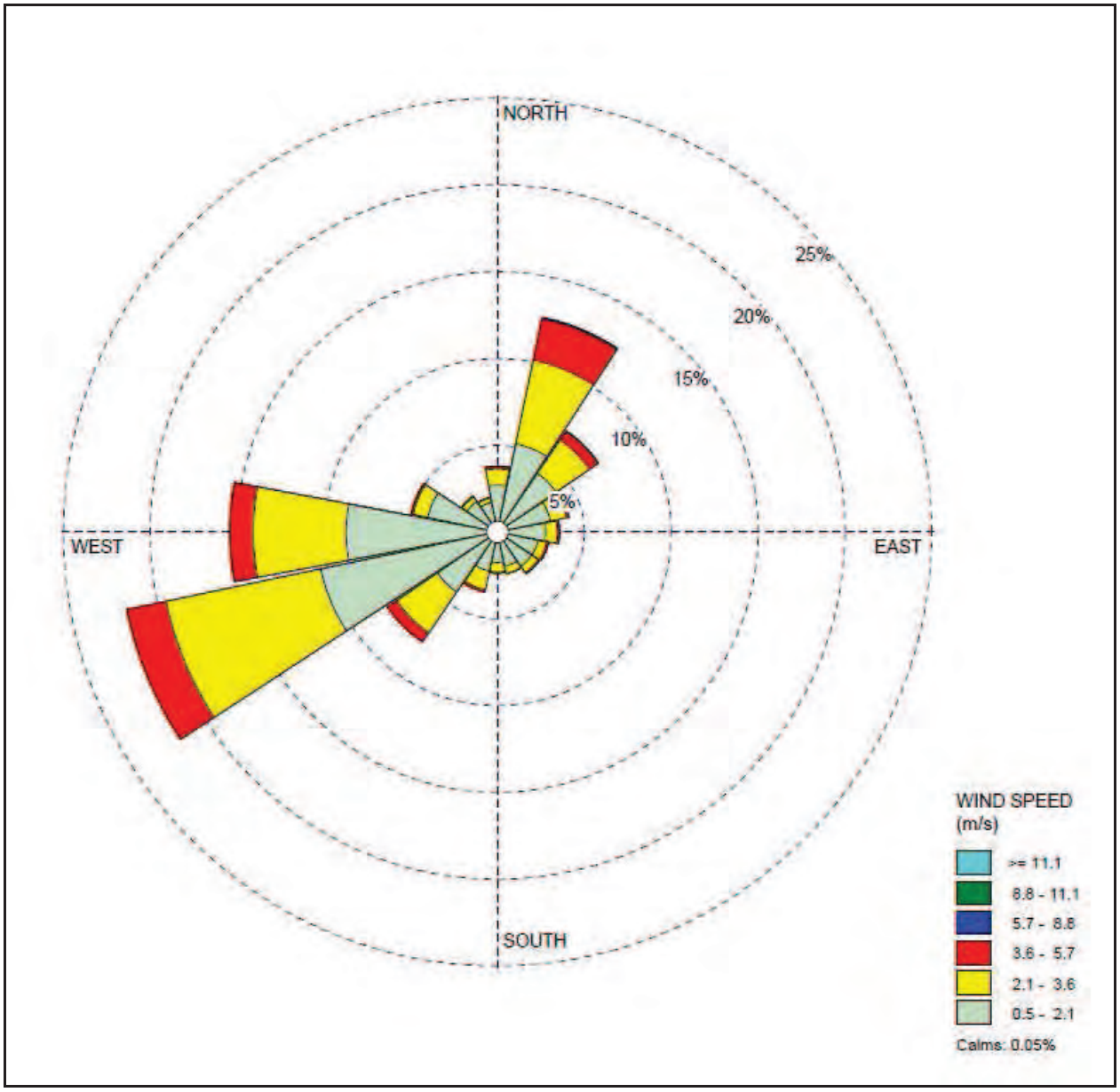

Exhibit 4: Wind Rose – Azusa

winter to the low-60s in summer (Western Regional Climate Center 2014). The majority of the annual rainfall in the area occurs between November and March. The average annual precipitation at San Gabriel is 17.2 inches. Summer rainfall is minimal and is generally limited to scattered thunderstorms in the coastal regions and slightly heavier showers in the eastern portion of the basin along the coastal side of the mountains.

Temperature inversions limit the vertical depth through which mixing of pollution occurs. Among the most common temperature inversions in the basin are radiation inversions, which form on clear winter nights when cold air off mountains sink to the valley floor while the air aloft over the valley remains warm. These inversions, in conjunction with calm winds, trap pollutants near the source. Other types of temperature inversions that affect the basin include marine, subsidence, and high-pressure inversions. Summers are often periods of hazy visibility and occasionally unhealthful air, while air quality impacts in the winter tend to be highly localized and can consist of odors from agricultural operations.

3.2 - Regulatory Setting – Toxic Air Contaminants

3.2.1 - National and State

An important group of substances found in ambient air is referred to as Hazardous Air Pollutants (HAPs) under the Federal Clean Air Act, and to Toxic Air Contaminants under the California Clean Air Act. These contaminants tend to be localized and are found in relatively low concentrations in ambient air. However, they can result in adverse chronic health effects if exposure to low concentrations occurs for long periods. They are regulated at the local, state, and federal level. HAPs are the air contaminants identified by the United States Environmental Protection Agency (EPA) as known or suspected to cancer, serious illness, birth defects, or death. Many of these contaminants originate from human activities, such as fuel combustion and solvent use. Mobile Source Air Toxics (MSATs) are a

subset of the 188 HAPs. Of the 21 HAPs identified by EPA as MSATs, a priority list of six priority HAPs that include diesel exhaust, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene was established. While vehicle miles traveled in the United States is expected to increase by 64 percent over the period 2000 to 2020, emissions of MSATs are anticipated to decrease substantially as a result of efforts to control mobile source emissions (by 57 percent to 67 percent, depending on the contaminant).

Particulate matter from diesel exhaust is the predominant TAC in urban air and is estimated to represent about two-thirds of the cancer risk from TACs (based on the statewide average). According to ARB, diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by ARB and are listed as carcinogens either under State Proposition 65 or under the Federal Hazardous Air Pollutants programs. The health effects of DPM are provided in Table 1.

Table 1: Health Effects of DPM

TAC	Health Effects
DPM	In its comprehensive assessment of diesel exhaust, OEHHA analyzed more than 30 studies of people who worked around diesel equipment, including truck drivers, railroad workers, and equipment operators. The studies showed these workers were more likely to develop lung cancer than workers who were not exposed to diesel emissions. These studies provide strong evidence that long-term occupational exposure to diesel exhaust increases the risk of lung cancer. Using information from OEHHA's assessment, the ARB estimates that diesel-particle levels measured in California's air in 2000 could cause 540 "excess" cancers (beyond what would occur if there were no diesel particles in the air) in a population of 1 million people over a 70-year lifetime. Exposure to diesel exhaust can have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made

	people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks.
Source: ARB, 1998; ARB, 2000; NTP 2005; OEHHA, 2002.	

The ARB Statewide comprehensive air toxics program was established in the early 1980s. The TAC Identification and Control Act (Assembly Bill [AB] 1807, Tanner 1983) created California's program to reduce exposure to air toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly 1987) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

Under AB 1807, the ARB is required to use certain criteria in the prioritization for the identification and control of air toxics. In selecting substances for review, the ARB must consider criteria relating to "the risk of harm to public health, amount or potential amount of emissions, manner of, and exposure to, usage of the substance in California, persistence in the atmosphere, and ambient concentrations in the community." AB 1807 also requires the ARB to use available information gathered from the AB 2588 program to include in the prioritization of compounds. In September 1992, the Hot Spots Act was amended by Senate Bill 1731, which required facilities that pose a significant health risk to reduce their risk through a risk management plan.

To address the management of risks associated with DPM, the ARB adopted the *Diesel Risk Reduction Plan* in September 2000 (ARB 2000). The Plan recommended many emission control measures to reduce the risks associated with DPM and achieve the goal of a 75-percent reduction in DPM levels by 2010 and an 85-percent reduction by 2020 from the 2000 levels. Emission control measures and programs are aimed at reducing DPM emissions from on-road engines, off-road

engines, portable engines, stationary sources, and more generally from large sources of DPM emissions such as marine ports and rail yards.

3.2.2 - SCAQMD

The SCAQMD conducted a detailed TAC emission inventory, air sampling, and dispersion modeling study called the *Multiple Air Toxics Exposure Study* in the South Coast Air Basin (MATES-IV) (SCAQMD 2014). The MATES Studies provided information on the importance of various TACs in terms of their relative health risks as well as their spatial magnitude and distribution across the Basin. The MATES-IV information can be used to characterize the "background" health risks from both regional and local TAC emission sources. The MATES-IV program results indicate that the cancer risks in the area where the project site is located are estimated to be 583 in one million, of which DPM contributes approximately 68 percent of the total cancer risk. The remaining portion of the total cancer risk is comprised mainly of exposures to benzene, formaldehyde, acrolein, and 1,3-butadiene.

SECTION 4: ASSESSMENT MODELING METHODOLOGY

4.1 - Emission Assumptions

4.1.1 - TAC Emissions Sources

This assessment focused on estimating potential health risk impacts to the residents of the project from TAC emissions from locomotive emissions from the Metrolink rail located within half a mile on each side of the project. The assessment focused on TAC emission sources: reported stationary source TAC emissions and mobile sources of DPM emissions.

Mobile Source Emission Factors

Emission factors provide the means for estimating emissions as function of travel distance or idling time. The emission factors were derived from the EPA's Locomotive Emission Factors for passenger trains. Since, as will be discussed in Section 4.3 below, cancer risk is determined over a lifetime exposure period of 70 years, mobile source emissions were calculated from the annual average emission factors from different model years for the 70-year exposure period associated with evaluating exposures to project related residential uses. The project expects an initial occupancy in 2016. Therefore, for the assessment of health risks to sensitive/residential receptors, the DPM emissions factors derived from the ARB EMFAC model as diesel PM_{10} were developed as an average of locomotive emission factors from the project's initial occupancy year of 2016 to 70 years after occupancy (2086). This averaging of emissions takes into account the fact that emissions from locomotives are expected to significantly decline in future years as a result of vehicle turnover and implementation of existing mobile source emission control rules in place from the ARB. Note that the EPA emission rates does not provide emission factors beyond the year 2040. Therefore, the fleet emission factors for 2040 were assumed to remain constant until the year 2086. This is a

conservative measure, as it assumes no fleet turnover or cleaner technology with lower emissions would be incorporated after 2040.

4.2 - Air Dispersion Model Assumptions

The assessment of the health impacts from the TACs made use of several modeling tools for such purposes. The estimation of health risk impacts from DPM emissions was accomplished using the USEPA AERMOD model, which is the air dispersion model accepted by the SCAQMD for performing air quality impact analyses (USEPA 2005). AERMOD predicts pollutant concentrations from point, area, volume, line, and flare sources with variable emissions in terrain from flat to complex with the inclusion of building downwash effects from buildings on pollutant dispersion. It captures the essential atmospheric physical processes and provides reasonable estimates over a wide range of meteorological conditions and modeling scenarios.

4.2.1 - General Model Assumptions

The basic options used in the dispersion modeling are summarized in Table 2.

Table 2: General Model Assumptions

Feature	Operations
Terrain processing	Flat terrain
Emission source configuration	Based on locomotive source configurations consistent with CARB HRAs for Railyards
Regulatory Dispersion Options	Default Assumptions Used
Land Use	Urban
Coordinate System	UTM
DPM Assessment Methodology	Average over the meteorological data time period of 2008-2012

Feature	Operations
Receptor height	0 meters

4.2.2 - Emission Source Characterization

Locomotive emission sources also requires geometrical and emission release specifications for use in the air dispersion model. The source characterization parameters which include use of volume sources, release heights, lateral and vertical dimensions are consistent with the methodologies used in the California Air Resources Board's *Roseville Rail Yard Study*.

4.2.3 - Meteorological Data

Hourly meteorological data are also required to operate the AERMOD model to determine the direction and rate of dispersion of emissions released into the atmosphere. Meteorological data for use in the air dispersion model was obtained from the SCAQMD (SCAQMD 2015) for its Azusa Air Monitoring Station for the years 2008-2012, the most recent period of valid data provided by the SCAQMD for performing air dispersion modeling assessments.

4.2.4 - Sensitive Receptor

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases. Residential areas are considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Therefore, the residences located within the project are considered sensitive receptors. The assessment requires that a network of receptors be

specified such that the impacts can be computed at the various locations within the network.

4.3 - Health Risk Assessment Assumptions

Health risks within the context of this analysis are represented as the increase in cancer risk associated with exposure to TAC emission sources adjacent to the project. These emissions arise from locomotive exhaust while operating near the project site. The assumptions applied in calculating cancer risk from the various TACs are based on the methodology published by the SCAQMD and the OEHHA.

The methodology assumes that a person is exposed continuously to a source of TAC emissions over a 70-year lifetime period. Therefore, cancer risk is expressed as the probability of an individual developing cancer due to exposure to TAC emissions at the above-referenced durations, out of a population of 1 million individuals. Thus, a receptor calculated to have a cancer risk of 1 in one million means that this receptor has a probability of 1 in 1 million of developing cancer from the continuous exposure to diesel particulate matter. Clearly, this methodology provides a very conservative estimate of health risk, since an individual will not typically reside in any one location for a 70-year period and be continuously exposed over that period.

In addition to potential cancer risks, TACs can result in short-term and long-term non-cancer impacts. The SCAQMD also specify a significance threshold for chronic (long-term) non-cancer impacts, which is represented by a hazard index. A discussion of this hazard index is provided below.

4.3.1 - Risk Assessment Methodology

Exposure to TACs has the potential to cause health risks in terms of excess risk of cancer and non-cancer health effects as discussed below.

Cancer Health Risk Assessment Methodology

For DPM

The cancer risk from DPM is calculated by multiplying the annual average DPM concentrations calculated using the AERMOD model at each receptor location and an inhalation exposure factor, as in Equation (EQ-) 1 below (OEHHA 2003).

Cancer Risk = Inhalation cancer potency factor (CPF) *x* Dose-inhalation (EQ-1)

Where:

Cancer Risk = Total individual lifetime excess cancer risk defined as the cancer risk a hypothetical individual faces if exposed to carcinogenic emissions from emission sources; this risk is defined as an excess risk because it is above and beyond the background cancer risk to the population contributed by emission sources; cancer risk is expressed in terms of risk per million exposed individuals.

Inhalation cancer potency factor (CPF) = 1.1 (milligrams per kilogram per day)-1 for DPM;

Dose-inhalation = C_{air} *x* (DBR *x* A *x* EF *x* ED *x* 10^{-6} /AT) x 10^{6} (EQ-2)

C_{air} is the annual average TAC concentrations calculated from the AERMOD model in micrograms per cubic meter (•g/m^3). The other values listed in EQ-2 are shown in Table 3.

Table 3: Inhalation Exposure Factor Values for Residential Receptors

Receptor	CPF – DPM (mg/kg/day)$^{-1}$	DBR (liters/kg/day)	EF (days/yr)	ED (yrs)	AT (days)
Sensitive/Residential	1.1	Adjusted based on age	350	70	25,550

Notes:
CPF = cancer potency factor; DPM = diesel particulate matter; DBR = daily breathing rate; EF = exposure frequency;
ED = exposure duration; AT = average time period over which the exposure is averaged.
Source: SCAQMD 2005.

Applying EQ-1 and EQ-2 with the values for the various factors shown in Table 3, the Cancer Risk for DPM is then calculated as:

$$\text{Cancer Risk}_{DPM} = C_{DPM} \times 318.5 \text{ (risk per million for residential receptor)} \quad \text{(EQ-3)}$$

Where:

Cancer Risk$_{DPM}$ = cancer risk from DPM emissions

C_{DPM} = average DPM concentration from the AERMOD model in µg/m^3

Age sensitivity factors, revised breathing and the fraction away from home factors based on the OEHHA's *Air Toxics Hot Spots Program Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments* dated February 2015.

Non-Cancer Health Risk Characterization

Chronic Non-Cancer Impacts

Exposures to TACs can also cause chronic (long-term) related non-cancer illnesses such as reproductive effects, respiratory effects, eye sensitivity, immune effects, kidney effects, blood effects, central nervous system, birth defects, or other adverse environmental effects. Risk characterization for non-cancer health risks from DPM is expressed as a hazard index (HI). The HI is a ratio of the predicted concentration of DPM to a concentration of DPM considered acceptable to public health professionals, termed the Reference Exposure Level (REL). The mathematical expression for the HI is provided in EQ-4.

$$H_I = C_{air}/REL_i \quad \text{(EQ-4)}$$

Where:

H_I = chronic hazard quotient for DPM
C_{air} = Annual average concentration of DPM (μg/m^3)
REL = Chronic Reference Exposure Level for DPM (μg/m^3)

The California OEHHA has assigned a chronic non-cancer REL of 5 μg/m^3 for DPM (OEHHA 2015). DPM has effects on the respiratory system. The REL differ for the other toxic contaminants. The chronic non-cancer health impacts for the stationary source TAC emissions was derived from the HARP model.

Acute Non-Cancer Impacts

The OEHHA has not defined a non-cancer acute reference exposure level for DPM. As such, acute exposures will not be discussed further in this Report.

SECTION 5: HEALTH RISK ANALYSIS IMPACT RESULTS

This section calculates the health risk impacts from the TAC emission associated with the operation of the Braun facility on the residential receptors located within the project.

5.1 - Significance Thresholds

While the final determination of whether a project is significant is within the purview of the Lead Agency pursuant to Section 15064(b) of the CEQA Guidelines, SCAQMD as a commenting agency recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. If the Lead Agency finds that the project has the potential to exceed these air pollution thresholds, the project should be considered to have significant air quality impacts. The following SCAQMD-recommended significance thresholds were applied in this analysis (SCAQMD 2011b). These significance thresholds are also contained within the IBC Compatibility Development Standards.

- Maximum Incremental Cancer Risk: 10 in 1 million at the nearest residential receptor;
- Hazard Index: 1.0 or greater.

While the SCAQMD has limited acceptable levels of risk of one in one hundred thousand (10 in a million) for individual emitting facilities, the SCAQMD has not published acceptable levels of cancer risk for siting of sensitive receptors. The SCAQMD has published the MATES IV report, which provides total cumulative risk by geographic location. MATES IV presents the most comprehensive assessment of total cancer risk by location.

5.2 - Health Risk Assessment Results

The results of the health risk assessment from the local industrial facility DPM and toxics emissions are summarized in Table 4. As noted in this table, the cancer risk at the maximally impacted residential receptor located within the project attributable to Metrolink locomotive exhaust emissions is 1.2 in one million, which is less than the SCAQMD cancer risk significance thresholds of 10 in one million (or 1 in 100,000).

Table 4: Health Risk at the Maximally Impacted Sensitive Receptor

Location	Health Risk	Significance Threshold	Exceeds Significance Threshold?
Lifetime Cancer Risk (Risk per Million)	1.2	10	No
Chronic Non-cancer Exposure	0.0003	1	No
Acute Exposure	Not Applicable	Not Applicable	Not Applicable
Source: See Attachment C for the health risk assessment model output			

The estimated chronic non-cancer risk hazard index at the maximally impacted residence receptor is 0.0003 respectively, which are substantially less than the SCAQMD significance hazard index of 1.0.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

SECTION 6: REFERENCES

The following references were used in the preparation of this analysis and are referenced in the text and/or were used to provide the author with background information necessary for the preparation of thresholds and content.

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NOISE IMPACT ANALYSIS

THE VALLEY AND RAMONA RESIDENTIAL PROJECT

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Project No.: P15-046 N

NOISE SETTING

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally considered to be unwanted sound. Sound is characterized by various parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level.

The decibel (dB) scale is used to quantify sound pressure levels. Although decibels are most commonly associated with sound, "dB" is a generic descriptor that is equal to ten times the logarithmic ratio of any physical parameter versus some reference quantity. For sound, the reference level is the faintest sound detectable by a young person with good auditory acuity.

Since the human ear is not equally sensitive to all sound frequencies within the entire auditory spectrum, human response is factored into sound descriptions by weighting sounds within the range of maximum human sensitivity more heavily in a process called “A-weighting,” written as dB(A). Any further reference in this discussion to decibels written as "dB" should be understood to be A-weighted.

Time variations in noise exposure are typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called LEQ), or alternately, as a statistical description of the sound pressure level that is exceeded over some fraction of a given observation period. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Ldn (day-night) or the Community Noise Equivalent Level (CNEL). The CNEL metric has gradually replaced the Ldn factor, but the two descriptors are essentially identical.

CNEL-based standards are generally applied to transportation-related sources because local jurisdictions are pre-empted from exercising direct noise control over vehicles on public streets, aircraft, trains, etc. The City of El Monte therefore regulates the noise exposure of the receiving property through land use controls.

The descriptors and criteria for assessing noise impact vary according to land use categories. For land uses where people live and sleep (e.g., residential neighborhoods, hospitals, and hotels), the CNEL/Ldn sound level is the assessment parameter. However, as opposed to the CNEL daily average, the Single Event Level (SEL) during a single noise event is a descriptor of a single noise event, and used to describe noise from train passing a location along the track. SEL is an intermediate value in the calculation of both Leq and Ldn. It represents a receiver's cumulative noise exposure from an event (train pass-by) and represents the total A-weighted sound during the event normalized to a 1-second interval.

For “stationary” noise sources, or noise sources emanating from private property, such as a parking structure, the City does have legal authority to establish noise performance standards designed to not adversely impact adjoining uses. These standards are typically articulated in the jurisdictional Municipal Code. These standards recognize the varying noise sensitivity of both transmitting and

receiving land uses. The property line noise performance standards are normally structured according to land use and time-of-day.

NOISE COMPATIBILITY GUIDELINES

The City of El Monte considers noise compatibility standards in evaluating land use projects. A proposed land use must be shown to be compatible with the ambient noise environment, particularly for noise sources over which direct City control is preempted by other agencies. Such sources include vehicle traffic on public streets, aircraft or trains. Since the City cannot regulate the noise level from the source, it exercises its land use decision authority to insure that noise/land use incompatibility is minimized.

As shown in Figure 1, community noise exposures are recommended as normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable for various classes of land use sensitivity. The City of El Monte guidelines recommend an exterior noise exposure of less than 60 dB CNEL in usable outdoor space for residential noise sensitive uses as “normally acceptable” and up to 70 dB CNEL are considered “conditionally acceptable” and may be permitted if noise mitigation is included in the design.

Although the El Monte guidelines allows exterior noise levels of up to 70 dB CNEL, a noise level of 65 dB is the level at which ambient noise begins to interfere with one's ability to carry on a normal conversation at reasonable separation without raising one's voice. A noise exposure of 65 dB CNEL is typically recommended as the exterior noise land use compatibility guideline for new residential dwellings in California. CNEL-based standards generally apply to usable outdoor recreational space at backyards, patios or balconies. Interior exposures of noise-sensitive uses are controlled through adequate structural attenuation.

Because retail/commercial/office uses are not occupied on a 24-hour basis, the exterior noise exposure standard for less sensitive land uses is generally less stringent. Unless commercial projects include noise-sensitive uses such as outdoor dining, noise exposure is generally not considered a commercial facility siting constraint for typical project area noise exposures. The City of El Monte noise compatibility guidelines recommend 70 dB CNEL as “normally acceptable” and 75 dB CNEL as a “conditionally acceptable” exterior noise exposure for commercial uses such as any retail or office uses.

An interior CNEL of 45 dB is mandated by the State of California Noise Insulation Standards (CCR, Title 24, Part 6, Section T25-28) for multiple family dwellings and hotel and motel rooms. In 1988, the State Building Standards Commission expanded that standard to include all habitable rooms in any residential use, included single-family dwelling units. Since normal noise attenuation within residential structures with closed windows is 25-30 dB, an exterior noise exposure of 70-75 dB CNEL allows the interior standard to be met without any specialized structural attenuation (dual paned windows, etc.), but with closed windows and fresh air supply systems or air conditioning in order to maintain a comfortable living environment. An interior noise threshold of 50 dB CNEL is typically applied to commercial uses.

Figure 1
City of El Monte Noise Compatibility Guidelines

Land Use	Community Noise Exposure (Ldn or CNEL)						
		55	60	65	70	75	80
Residential							
Transient Lodging – Motel, Hotel							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters[1]							
Sports Arena, Outdoor Spectator Sports[1]							
Playgrounds, Parks							
Golf Course, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business Commercial, and Professional							
Industrial, Manufacturing, Utilities, Agriculture							

Source: Modified by Cotton/Bridges/Associates from 1998 State of California General Plan Guidelines.

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

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

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

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

NOISE STANDARDS

For noise generated on one property affecting an adjacent use, the City of El Monte limits the amount of noise crossing the boundary between the two uses. For regulated on-site sources of noise generation, the El Monte noise ordinance prescribes limits that are considered an acceptable exposure for residential uses in proximity to regulated noise sources. The L_{50} metric used in the El Monte noise ordinance is the level exceeded 50% of the measurement period of thirty minutes in an hour. One-half of all readings may exceed this average standard with larger excursions from the average allowed for progressively shorter periods. The larger the deviation, the shorter the allowed duration up to a never-to-exceed 20 dB increase above the 50th percentile standard. Nighttime noise levels limits are reduced by 5 dB to reflect the increased sensitivity to noise occurring during that time period.

The City L_{50} noise standard is 65 dB during the day (7 a.m. – 10 p.m.), and 60 dB at night (10 p.m. – 7 a.m.). These noise standards are shown in Table 1. The Municipal Code also states that if a residential use is located within a commercial or industrial zone, the ambient noise level shall not exceed fifty (50) dBA between the hours of ten p.m. and seven a.m.

Jurisdictions typically allow for a relaxation of standards if baseline noise levels already exceed the Table 1 values. If the ambient noise level is greater than the identified noise standards, the noise standard becomes the ambient noise level without the offending noise.

The Ordinance also restricts hours of construction to hours of lesser noise sensitivity with heavy equipment to operate only from 6 a.m. to 7 p.m. during the week and on 8 a.m. to 7 p.m. on Saturdays and Sundays. Construction is not permitted on Federal Holidays.

Table 1
EL MONTE NOISE ORDINANCE LIMITS
(Exterior Noise Level not to be Exceeded)

Zone	Day 7:00 a.m. to 10:00 p.m.	Night 10:00 p.m. to 7:00 a.m.
Single-family	50 dBA	45 dBA
Multifamily	55 dBA	50 dBA
Commercial	65 dBA	60 dBA
Industrial	70 dBA	70 dBA

Source: El Monte Municipal Code Section 8.36.040

The not to exceed value for these standards is as follows:

1) The noise standard for a cumulative period of more than thirty (30) minutes in any hour; or
2) The noise standard plus five (5) dB(A) for a cumulative period of more than five (5) but less than fifteen (15) minutes in any hour; or
3) The noise standard plus ten (10) dB(A) for a cumulative period of more than one (1) but less than five (5) minutes in any hour; or
4) The noise standard plus fifteen (15) dB(A) for a cumulative period of more than one (1) minute in any hour

BASELINE NOISE LEVELS

Noise measurements were made in order to document existing baseline levels in the area, particularly train noise along the adjacent rail line to serve as a basis to determine noise exposure from ambient noise activities upon the proposed project. Long term (24-hour) noise measurements were conducted on Wednesday, July 1, to Thursday, July 2, 2015, at four on-site locations.

Long-term noise measurement locations were selected to document the daily trend in noise levels generated by Valley and Ramona Boulevard traffic but primarily from the adjacent rail line. Train horn noise was observed to be audible at the project site. Measurement locations are shown in Figure 2. The monitoring results are shown in Table 2.

Closest to Ramona Boulevard, noise levels were the lowest, in part due to the progressive grade separation as Ramona Boulevard descends under the railroad tracks. Observed noise levels are 65.4 dB CNEL at 70 feet to the roadway centerline. Noise levels adjacent to Valley Boulevard were higher, approximately 71.6 dB CNEL at 50 feet from the roadway centerline.

Noise from trains and their associated horns and whistles are a particular concern to the proposed use. Noise levels along the train tracks at the northern site perimeter were highest presumably due to noise from trains and train horns. Noise readings are 74-78 dB CNEL at a distance of 30 feet from the track centerline as recorded at Meters 2 and 3.

Given that noise levels may vary by location due to use of horns and distance separation to Ramona and Valley Boulevard, the above values are considered very consistent and are considered to provide an accurate characterization of the existing acoustic baseline. From this data we may infer that baseline noise levels are high in proximity to the railroad tracks and Valley Boulevard and that mitigation could be necessary to meet the El Monte recommended noise compatibility guidelines.

Figure 2

Noise Monitor Locations

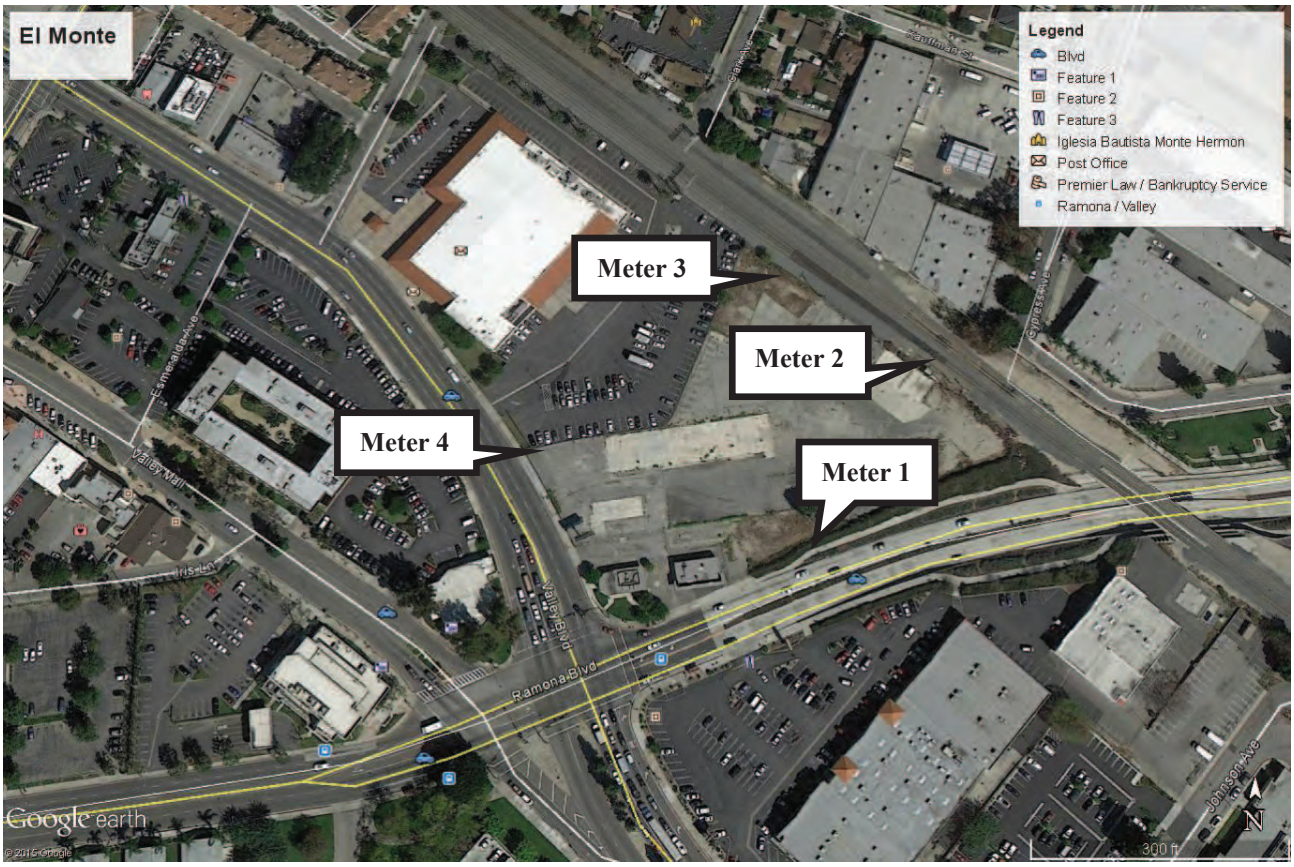


Table 2 Noise Measurements
Existing Hourly Leq's (dB)

Time Interval	Leqs Meter 1	Leqs Meter 2	Leqs Meter 3	Leqs Meter 4
15:00-16:00	59.8	65.7	67.4	66.8
16:00-17:00	59.4	59.9	62.9	66.7
17:00-18:00	61.4	62.7	66.3	66.2
18:00-19:00	61.9	65.6	68.8	65.6
19:00-20:00	58.9	67.2	61.4	64.6
20:00-21:00	56.9	63.3	59.7	63.7
21:00-22:00	56.8	61.1	58.9	62.4
22:00-23:00	57.6	61.8	59.9	61.2
23:00-24:00	52.5	62.2	52.3	59.6
0:00-1:00	58.9	71.1	66.8	58.9
1:00-2:00	59.9	75.8	71.7	58.3
2:00-3:00	64.1	76.4	71.1	65.3
3:00-4:00	46.6	53.2	45.5	57.2
4:00-5:00	48.3	58.8	47.8	58.3
5:00:6:00	55.7	74.5	69.1	64.2
6:00-7:00	58.5	62.3	66.3	66.3
7:00-8:00	63.6	67.9	79.5	67.1
8:00-9:00	59.1	59.1	59.7	67.3
9:00-10:00	59.4	67.7	65.6	66.3
10:00-11:00	60.5	70.0	65.2	66.5
11:00-12:00	60.6	71.4	69.5	66.2
12:00-13:00	58.4	64.6	60.0	67.8
13:00-14:00	61.9	72.9	69.0	66.5
14:00-15:00	59.4	70.2	62.8	70.0
CNEL	65.4	77.6	74.0	69.9

NOISE IMPACTS

IMPACT SIGNIFICANCE CRITERIA

Noise impacts are considered significant if:

1. They create violations of noise standards, or,

2. They substantially worsen an already excessive noise environment, or,

3. They substantially increase an existing quiet environment even if noise standards are not violated by the proposed action.

Three characteristic noise sources are typically identified with land use intensification such as that proposed for the development of the El Monte Valley and Ramona project. Construction activities, especially heavy equipment, will create short-term noise increases near the project site. Such impacts would be important for any nearby noise-sensitive receptors, such as any existing residential uses. Upon completion, project-related traffic will cause an incremental increase in area-wide noise levels throughout the project area. Traffic noise impacts are analyzed to insure that the project does not adversely impact the acoustic environment of the surrounding community. Finally, the project site is evaluated to insure that the proposed uses are not exposed to an unacceptable level of noise resulting from the ambient noise environment acting on the project. For this project the adjacent railroad and roadways would be the potential sources of noise.

According to the current CEQA Appendix G guidelines, noise impacts are considered potentially significant if they cause:

a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Noise levels exceeding the City of El Monte Noise Standards would be considered significant.

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

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

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

CEQA Guidelines also identify potential impact significance due to aircraft noise. El Monte Airport is located along the Rio Hondo River less than one mile from the proposed project site. The General Plan Update Public Health and Safety Element (2011) notes that no residential uses, even those much closer to the airport than the proposed Valley and Ramona project site, fall within the 65 dB

CNEL airport noise contour. Aircraft noise is not considered a siting constraint for the proposed project.

The term "substantial increase" is not defined by any responsible agency. The limits of perceptibility by ambient grade instrumentation (sound meters) or by humans in a laboratory environment is around 1.5 dB. Under ambient conditions, people generally do not perceive that noise has clearly changed until there is a 3 dB difference. A threshold of 3 dB is commonly used to define "substantial increase." An increase of +3 dBA CNEL in traffic noise would be consistent a significant impact.

CONSTRUCTION NOISE IMPACTS

Temporary construction noise impacts vary markedly because the noise strength of construction equipment ranges widely as a function of the equipment used and its activity level. Short-term construction noise impacts tend to occur in discrete phases dominated by large, earth-moving equipment sources for demolition and grading. During construction and paving, equipment is generally less noisy.

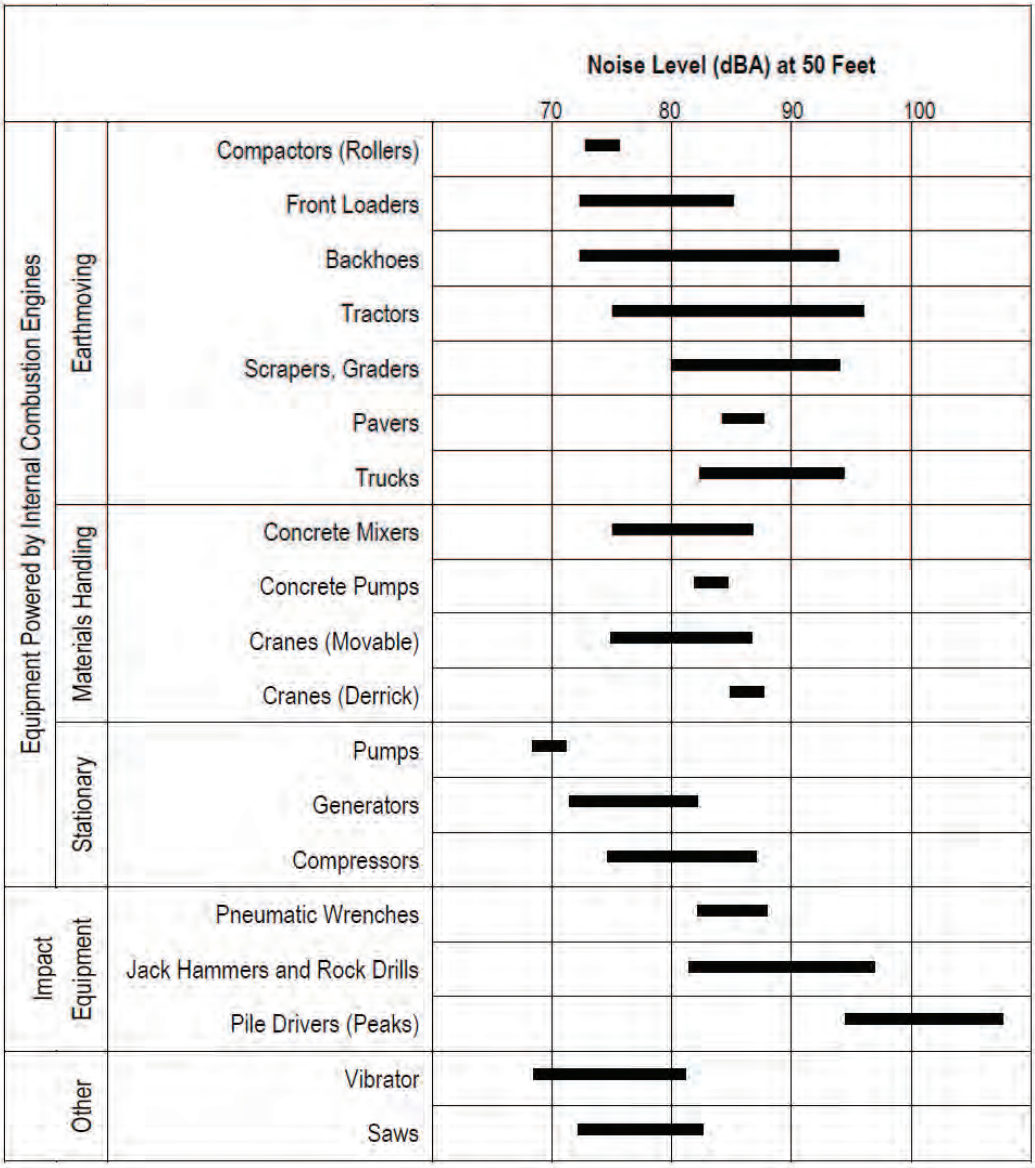
Construction noise tends to occur in discrete phases dominated initially by demolition and/or earth-moving sources and later for finish construction and paving. Figure 3 shows the typical range of construction activity noise generation as a function of equipment used in various building phases. The earth-moving sources are seen to be the noisiest with equipment noise ranging up to about 90 dB(A) at 50 feet from the source. Spherically radiating point sources of noise emissions are atmospherically attenuated by a factor of 6 dB per doubling of distance, or about 6 dB in 100 feet of propagation. The impact radius pre-supposes a clear line-of-sight and no other machinery or equipment noise that would mask project construction noise. With buildings and other barriers to interrupt line-of-sight conditions, the potential “noise envelope” around individual construction sites is reduced. Construction noise impacts are, therefore, somewhat less than that predicted under idealized input conditions.

There are no sensitive uses directly adjacent to the proposed project site. The closest land use is the post office located to the northwest at more than 200 feet from the closest project perimeter. A parking lot separates the post office from the project site. It is not likely that the heaviest equipment would operate closest to the property line, but construction noise at the post office building could be as high as 73 dB during grading and paving activities and 65 dB during construction of the building pads. Since all post office activity is conducted indoors, the exterior to interior mitigation of approximately 30 dB will provide adequate noise protection to post office staff and customers.

Construction noise impacts are minimized by compliance to the allowable hours of operation of 6 a.m. to 7 p.m. during the week and on 8 a.m. to 7 p.m. on Saturdays and Sundays in the Municipal Code. Construction is not permitted on Federal Holidays. The temporary nature of construction noise and reasonable distance set-back from noisiest activities are expected to maintain short-term construction noise impacts at less-than-significant levels.

Figure 3

Typical Construction Equipment Noise Generation Levels



Source: EPA PB 206717, Environmental Protection Agency, December 31, 1971, "Noise from Construction Equipment and Operations."

CONSTRUCTION ACTIVITY VIBRATION

Construction activities generate ground-borne vibration when heavy equipment travels over unpaved surfaces or when it is engaged in soil movement. The effects of ground-borne vibration include discernable movement of building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. Within the "soft" sedimentary surfaces of much of Southern California, ground vibration is quickly damped out. Because vibration is typically not an issue, very few jurisdictions have adopted vibration significance thresholds. Vibration thresholds have been adopted for major public works construction projects, but these relate mostly to structural protection (cracking foundations or stucco) rather than to human annoyance.

Vibration is most commonly expressed in terms of the root mean square (RMS) velocity of a vibrating object. RMS velocities are expressed in units of vibration decibels. The range of vibration decibels (VdB) is as follows:

65 VdB	-	threshold of human perception
72 VdB	-	annoyance due to frequent events
80 VdB	-	annoyance due to infrequent events
100 VdB	-	minor cosmetic damage

To determine potential impacts of the project's construction activities, estimates of vibration levels induced by the construction equipment at various distances are presented below:

	Approximate Vibration Levels (VdB)*			
Equipment	**25 feet**	**50 feet**	**100 feet**	**200 feet**
Large Bulldozer	87	81	75	69
Loaded Truck	86	80	74	68
Jackhammer	79	73	67	61
Small Bulldozer	58	52	46	40

* (FTA Transit Noise & Vibration Assessment, Chapter 12, Construction, 1995)

The on-site construction equipment that will create the maximum potential vibration is a large bulldozer. The stated vibration source level in the FTA Handbook for such equipment is 81 VdB at 50 feet from the source. With typical vibrational energy spreading loss, the vibration annoyance standard is met at 56 feet. The post office is more than 200 feet from the project site. At this distance, vibrations levels will be less than even the annoyance threshold and well below the damage threshold. Construction activity vibration impacts are judged as less-than-significant.

OFF-SITE PROJECT-RELATED VEHICULAR NOISE IMPACTS

Long-term noise concerns from the residential and commercial uses at the project site can be derived from vehicular operations on project area roadways. These concerns were addressed using the California specific vehicle noise curves (CALVENO) in the federal roadway noise model (the FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108). The model calculates the

Leq noise level for a reference set of input conditions, and then makes a series of adjustments for site-specific traffic volumes, distances, speeds, or noise barriers.

Table 3 summarizes the 24-hour CNEL level at 50 feet from the roadway centerline along area roadway segments. The noise analysis utilizes data from the project traffic analysis, prepared by the traffic consultant for this project. Two traffic years were evaluated; existing conditions ("with project" and "without project"), and year 2017, ("with project" and "without project").

As shown in Table 3, project implementation in the existing and opening year does little to change the traffic noise environment. Because the area is mostly built out, addition of project traffic to area roadways does little to the traffic noise environment. The project area will experience limited traffic volume changes and the amount of traffic generated by the proposed project is diluted by significant background traffic volumes. The largest project related impact is +0.1 dB CNEL. The cumulative analysis, which compares "future with project" to "existing" conditions, shows a maximum impact of +1.2 dB CNEL at 50 feet from roadway centerline. These increases are much less than the +3 dB significance threshold. Project only related traffic noise increases and cumulative traffic noise increases are less-than-significant.

Table 3
Traffic Noise Impact Analysis
(dBA CNEL at 50 feet from centerline)

Segment		Existing No Project	Existing With Project	2017 No Project	2017 With Project
Valley Blvd/	W of Tyler	70.4	70.5	71.6	71.6
	Tyler-Ramona	70.3	70.4	71.3	71.3
	S of Ramona	70.1	70.2	70.8	70.8
Ramona Blvd/	W of Tyler	67.4	67.5	67.8	67.8
	Tyler-Valley	68.3	68.4	68.6	68.6
	E of Valley	69.4	69.4	70.1	70.1
Tyler Ave/	N of Valley	67.2	67.3	67.6	67.6
	Valley-Ramona	67.4	67.5	67.8	67.9
	S of Ramona	67.3	67.4	67.8	67.9

Project Impact
(dBA CNEL at 50 feet from centerline)

		Project Only Impact	Cumulative Impact*
Valley Blvd/	W of Tyler	0.1	1.2
	Tyler-Ramona	0.1	1.0
	S of Ramona	0.1	0.7
Ramona Blvd/	W of Tyler	0.1	0.4
	Tyler-Valley	0.1	0.3
	E of Valley	0.0	0.7
Tyler Ave/	N of Valley	0.1	0.4
	Valley-Ramona	0.1	0.5
	S of Ramona	0.1	0.6

*The difference between “2017 with project” and “existing” traffic noise levels

ON SITE RAIL AND VIBRATION IMPACTS

Rail Vibration

Railroads generate ground-borne vibration that may be perceptible at on-site uses. Construction of residential units in close proximity to railroad tracks can cause rattling windows and throbbing floors. Ground-borne vibration is generally not a problem for buildings near railroad tracks at- or above-grade, because the airborne noise from trains typically overshadows effects of vibration. Vibration noise becomes an issue in cases where airborne noise is particularly blocked, such as for buildings near tunnels. Vibration is most commonly expressed in terms of the root mean square (RMS) velocity of a vibrating object.

According to the El Monte General Plan EIR, Impact Section 5.9-4 9-3 the following requirement applies to this project:

- Prior to the issuance of building permits, any project that involves a vibration-sensitive use directly adjacent to the Union Pacific Railroad shall retain an acoustical engineer to evaluate potential for trains to create perceptible levels of vibration indoors. If vibration-related impacts are found, mitigation measures, such as use of concrete, iron, steel, or masonry materials to ensure that levels of vibration amplification are within acceptable limits to building occupants, shall be implemented. Pursuant to the Federal Transit Administration vibration-annoyance criteria, these acceptable limits are 78 VdB during the daytime and 72 VdB during the nighttime for residential uses, 84 VdB for office uses, and 90 VdB for workshops.

Train vibration depends upon a variety of factors. The weight of the train, the travel speed, the condition of the track and the character of the subsoil all affect the observed vibration level. The USDOT (US Department of Transportation) Guideline called "Transit Noise and Vibration Impact Assessment" (May, 2006) suggests a significance threshold of 80 VdB for train vibrations if there are fewer than 70 train movements per day. There are currently approximately 36 daily Metrolink trains passing by the project site and this is not expected to increase substantially in the future. The number of freight trains utilizing the tracks is not available. However, because the El Monte standards of 78 VdB daytime and 72 VdB nighttime for residential uses was more conservative than the USDOT recommendation, the El Monte thresholds were used for this analysis.

As shown in Figure 4, use of DOT data predicts vibration levels of 87 VdB at 40 feet from the track for locomotive powered passenger and freight trains traveling at 50 mph. The site buildings are setback approximately 40 feet from the closest train tracks (60 feet to the track centerline). Vibration levels from heavy rail systems depend upon train travel speed. Freight trains are restricted to a 30 mph speed limit in areas of at-grade crossings. The RMS vibration level at 30 mph is approximately 3 VdB less than at 50 mph. A reference vibration level of 84 VdB has therefore been assumed for the closest building footprints of the proposed project to the nearest tracks.

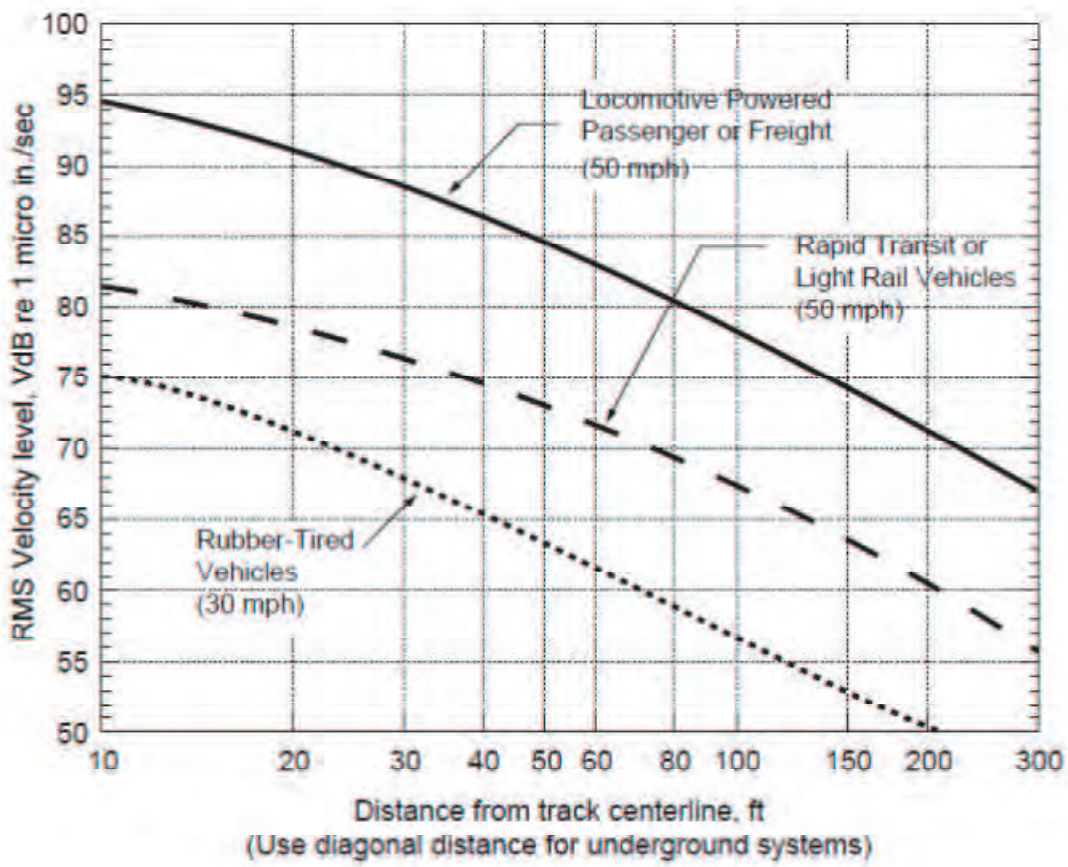
Vibration generally reduces as it propagates though a building. In addition large masonry buildings with spread footings have a low response to ground vibration. The following coupling losses are generally observed in the indicated types of construction per USDOT Guidelines:

Wood Frame	-5 VdB
1-2 Story Commercial	-7 VdB
3-4 Story Masonry	-10 VdB
Large Masonry on Piles	-10 VdB
Large Masonry on Spread Footings	-13 VdB

For this project a -10 dB coupling loss "credit" was taken per building since the proposed buildings are at three stories high. Freight train vibration levels of 84 VdB at 40 feet from the track for a locomotive-powered freight train traveling at 30 mph would exceed the VdB significance threshold without the effects of coupling losses.

Figure 4

Generalize Ground Surface Vibration Curves



These vibration estimates are at slab level. The slab level for units adjacent to the railroad track will be garage and storage space. The upstairs residential uses will not experience the full vibration level that is observed at slab level. Floor/ceiling assemblies and floor coverings (especially carpet) will absorb a portion of the vibration energy. Vibration reduction "credit" for hard floor surfaces (tile, light weight concrete, etc.) is -2 VdB at ground levels and increases by an additional -2 dB upstairs. Measurements of impact isolation show that carpets and pads reduce vibration by more than 10 VdB.

Counteracting absorption effects, the USDOT guidelines suggest a +6 VdB factor be included to account for amplification due to resonance of floors, walls and ceilings. Table 4 summarizes the appropriate credits and losses, and shows that vibration levels experienced by a person standing indoors for living space on levels 2 and 3. With the use of carpeted floors, the thresholds suggested in the El Monte EIR for residential use of 78 VdB daytime and 72 VdB nighttime will not be exceeded. Vibration levels for hard surfaces could be slightly above the recommended levels, but are well below the structural damage threshold for stucco or similar materials which requires vibration levels close to 100 VdB. It should be noted that the federal vibration guidelines for infrequent events (<70 day) are 80 VdB. Neither daytime nor nocturnal train passage vibration levels will exceed the federal 80 VdB annoyance threshold on second or third story residential floors.

Additionally all units facing the railroad tracks should be equipped with dual-paned windows with upgraded seals for noise control. These more robust windows will have little tendency to rattle. Vibration effects within residential units passing through floors or windows will be less-than-significant.

Table 4
Interior Vibration Levels (VdB)
(at 50 feet to track centerline)

	1st Story Hard Floor	**1stStory Carpet & Pad**	**2nd Story Hard Floor**	**2nd Story Carpet & Pad**	**3rd Story Hard Floor**	**3rd Story Carpet & Pad**
Max. Unmitigated Vibration	84	84	84	84	84	84
Coupling Losses	-7	-7	-7	-7	-7	-7
Building Resonance	+6	+6	+6	+6	+6	+6
Floor-to-Floor Absorption	0	0	-2	-2	-4	-4
Floor Covering	-2	-10	-2	-10	-2	-10
Net Vibration	81	73	79	71	77	69

ON-SITE NOISE IMPACTS

Although the City of El Monte guidelines allows exterior noise levels of up to 70 dB CNEL, a noise level of 65 dB is the level at which ambient noise begins to interfere with one's ability to carry on a normal conversation and was applied for use in evaluating project impacts.

Valley Boulevard Roadway Noise

Valley Boulevard abuts the project site on the southwest. Along the Valley Boulevard frontage the ground floor of the work/live units will be commercial use with residential use upper levels. The future with project traffic noise along Valley Boulevard is expected to be slightly more than 70 dB CNEL at 50 feet from centerline. The upper level residential uses have balconies/decks fronting Valley Boulevard. These balconies will have a 60 foot setback from the Valley Boulevard centerline. Noise levels for balcony use are expected to be slightly less than 69 dB CNEL at build out at the indicated setback distance.

Larger balconies are planned along the front of the units, facing the interior of the project site. These balconies will be noise protected by the structure itself and would be expected to achieve a 65 dB CNEL level with no mitigation.

However, if individual patios or balconies with a line-of-sight to Valley Boulevard are required to meet established noise compatibility guidelines, noise protection would be required. The project balconies could be equipped with a shield which would break the line-of-sight between the receiver and noise source while still permitting view. A combination solid base and upper transparent noise shield (e.g., plexi-glass) along the perimeter of the residential patios facing the roadway would reduce noise by 5 dBA. This would facilitate a noise level at the receiving use of 65 dB CNEL and would meet the City of El Montes noise compatibility guideline permissible after consideration of mitigation.

Therefore, one of the mitigation measures is proposed:

- Consider residential patios or balconies facing the interior of the project site to meet the recreational space requirement and not any patio of balcony with line of sight to Valley Boulevard; or,

- Equip residential patios or balconies with a line of sight to Valley Boulevard with transparent glass or plastic shields that reduce noise. Shields would need to be 5 feet tall and fill the entire roadway frontage. Such an enclosure would meet a 65 dB CNEL standard.

Ramona Boulevard Roadway Noise

The future noise level along the Ramona Boulevard frontage is expected to reach 68.6 dB CNEL at 50 feet from roadway centerline. The closest unit to Ramona Boulevard has a 78 foot setback while the other structures would have a much larger separation. At 78 feet from roadway centerline, traffic noise levels would decay to less than 67 dB CNEL. However, the decks on the Ramona Boulevard adjacent structures are recessed and afforded a substantial degree of noise protection. Since a

recessed area would be blocked on the sides, directional noise would be reduced by at least 3 dB. Therefore, it is not anticipated that traffic noise from Ramona Boulevard would provide a constraint to development and no mitigation is required to meet exterior noise thresholds.

On-Site Railroad Noise for Recreational Uses

The Union Pacific Railroad/Metrolink rail line handles commuter rail and freight trains. Of the two, freight rail noise is the more dominant, though a less frequent, noise source. Based on 2015 train schedules, 18 inbound and 18 outbound Metrolink trains traverse the line each day. No precise numbers of daily freight trains could be provided. Although the noise metric used to address train noise is a CNEL or a daily average, the single event noise intrusion potential is high.

On-site noise monitoring indicated maximum noise levels of 74-78 dB CNEL at a distance of approximately 30 feet from the track centerline. The amount of trains is not likely to substantially increase in the future. Although the reference noise level is not expected to change future train noise may be reduced by "quiet zone" programs to reduce horn use for at-grade crossings. For purposes of analysis, rail growth and any possible off-set were assumed to remain the same as existing conditions.

The property line of the dwellings adjacent to the railroad would be located approximately 50 feet from the centerline of the tracks. A rear yard depth of 10 feet would result in a 60 foot setback to the nearest residential facade. Since the noise measurements were observed at a distance of 30 feet from the track centerline, the reference noise level was adjusted for setback distance. The anticipated noise loading would be 76 dB at the residential property line and 75 dB CNEL at the closest facade. In light of noise measurements conducted as part of this study and the distance from the proposed project's residential units to the railroad tracks, noise impacts from the railroad tracks would be significant without noise reduction mitigation.

Depending on the height and location relative to the tracks, sound barriers can achieve between 5 and 15 dB of noise reduction. The primary requirements for an effective sound barrier are that the barrier must (1) be high enough and long enough to break the line-of-sight between the sound source and the receiver, (2) be of an impervious material, and (3) not have any gaps or holes between the panels or at the bottom.

A 14-foot sound wall at the residential project property line will provide at least 10 dB of train noise reduction. This would reduce an exterior noise level of 75 dB to approximately 65 dB within the rear yard for a recreational user for a receiver at grade with the railroad tracks and residential building slabs. However, the backyards are proposed to be sloped to reduce the aesthetic impact of a 14-foot high CMU or stucco wall. The sloping yard will experience slightly less noise attenuation as the source-receiver height differential decreases. Train noise reduction will decrease to -6 dB CNEL. The loudest area of the yards will be at 69 dB CNEL. This level still is within the 70 dB CNEL that is considered a "conditionally acceptable" exposure for outdoor recreational uses after application of reasonable and feasible noise attenuation measures.

Upper level decks will be oriented on the front of the buildings, facing interior to the site. These decks are recessed such that there will be additional noise protection. Therefore, deck orientation and the recessed placement will provide for a noise level of less than 65 dB CNEL such that no additional noise protection is warranted. The proposed noise wall and orientation of the interior facing decks will provide recreational space with a less-than-significant noise exposure.

Interior Noise for Railroad Adjacent Dwellings

A main noise concern from railroad noise is the interior noise level. The requirement for habitable interior space is a noise level less than 45 dB CNEL. Acoustical design of the building façade offers a noise mitigation option to reduce noise for any dwelling with a line of sight to the tracks. Therefore, acoustical upgrades capable of reducing interior noise to 45 dB CNEL in any noise sensitive space (bedrooms or living rooms) would be required.

Units adjacent to the track are designed such that only stairwells and bathrooms front the tracks. No habitable rooms will face the track. Bedrooms and living areas are oriented towards the front of the structure. No habitable rooms will have any windows, doors or decks with a clear line-of-sight to the rail line. The residual noise loading for the track adjacent homes is 70 dB. Mitigation of noise levels can typically be achieved with the following upgraded structural features such that reductions up to 25-30 dB are typically attainable while still allowing for discretionary window opening.

- All facades must be constructed with substantial weight and insulation;
- Sound-rated windows providing noise reduction performance similar to that of the façade must be included for habitable rooms;
- Sound-rated doors or storm doors providing noise reduction performance similar to that of the façade must be included for all exterior entries;
- Acoustic baffling of vents is required for chimneys, fans and gable ends;
- Installation of a mechanical ventilation system affording comfort under closed window conditions is required; and

Because the exterior tier of development will shield any interior units, acoustic upgrades are needed on only the front and side faces of the outermost tier of residences. Standard construction including mandatory use of dual-paned windows as required by the California Building Code, will achieve required interior levels of less than 45 dB CNEL. Because window closure is a necessary condition to meet the noise standard, the code requires the provision of supplemental ventilation, including a fresh air intake that provides 30 CPM of fresh outside air. In order to not compromise acoustic protection integrity of the HVAC systems, the fresh air inlet should be located on the building facades away from the track.

CNEL is an imperfect metric for noise nuisance from train activity. CNEL is a weighted 24-hour average that correlates well to annoyance, speech interference, or sleep disturbance for semi-continuous sources such as on-road traffic. Trains and perhaps airplanes are characterized by extended periods of essentially no sound punctuated by a sudden short period noise spike. Train noise nuisance is exacerbated by the required use of train horns for safety near at-grade crossings. While the Ramona Boulevard crossing is grade-separated, other nearby crossings require warning

bells and train horns that may generate over 100 dB in the forward moving direction. Although CNEL has been used as the analysis metric for the noise impact study, it is an imperfect descriptor for single event noise.

To the extent possible, structural noise protection incorporated into units abutting the tracks should be over-designed beyond minimum requirements. While "standard" dual-paned windows will be adequate to meet the interior noise standard for habitable rooms (no such rooms will directly face the tracks), side windows on these buildings in living or sleeping areas should be premium dual-paned with a minimum sound transmission class (STC) rating of 33 or higher.

Interior Noise Roadway Adjacent Dwellings

Noise protection capable of ensuring a 45 dB CNEL interior standard is required for dwellings exposed to traffic noise from adjacent roadways. The calculated noise level based upon future traffic volume is 69 dB CNEL at dwellings adjacent to Valley Boulevard and 67 dB for units adjacent to Ramona Boulevard.

For typical wood-framed construction with stucco and gypsum board wall assemblies, the exterior to interior noise level reduction is as follows:

Partly open windows – 12 dB

Closed single-paned windows – 20 dB

Closed dual-paned windows – 30 dB

Use of dual-paned windows is required by the California Building Code (CBC) for energy conservation in new residential construction. Interior noise standards would therefore be met with closed windows. Interior standards will be met as long as residents have the option to close their windows. Where window closure is needed to shut out noise, supplemental ventilation is required by the CBC with some specified gradation of fresh air. Central air conditioning with a fresh air inlet on a whole house fan would meet this requirement.

A supplemental acoustical analysis should be submitted in conjunction with the issuance of building permits to verify that adequate structural noise protection exists in perimeter residences adjoining the railroad tracks to meet the 45 dBA CNEL interior standard. As discussed, supplemental ventilation (most likely air conditioning with a fresh make-up air inlet) is required in any livable space where window closure to shut out transportation noise is needed to meet interior standards.

SITE OPERATIONAL NOISE

The project proposes a several live work units with a possible retail/office component being downstairs and residential use upstairs. These small retail uses would not generate much noise and is not anticipated to negatively impact sensitive uses. The retail component would not entail activities that extend into the late night. The remaining residential uses are considered passive and not a source of noise disturbance.

CONCLUSIONS

On-Site Railroad Impacts

Rail activity vibration may exceed the City of El Monte nocturnal annoyance threshold for hard-surfaced floors for the proposed homes abutting the tracks. Nocturnal residential activities occur mainly in areas of carpeting where the standard is not exceeded. The federal nuisance standard for infrequent events (<70 trains per day) would not be exceeded on either carpeted or hard floor surfaces. The inability to meet the more restrictive nocturnal City vibration standards on hard floor surfaces is not considered a significant impact.

Railroad traffic may create noise levels of 65-68 dB CNEL in the planned recreational areas between the nearest building facades to the tracks and the recommended 14-foot high property line sound wall. Levels up to 70 dB CNEL are considered "conditionally acceptable" in the City of El Monte General Plan if all reasonable and feasible mitigation has been applied. A 14-foot high wall meets that test. If the wall were any higher, its noise protection benefit progressively decreases such that 14 feet high is considered reasonable and feasible. Because of the unusual nocturnal weighting penalty in the CNEL metric, a substantial fraction of the calculated CNEL derives from nocturnal freight trains and less so from mostly daytime Metrolink activity. Since the recreational areas are typically not used at night, and since the General Plan standard for outdoor recreational uses is met, exterior noise impacts from train traffic are considered mitigated to a less-than-significant level by the planned 14-foot high sound wall at the project/train track interface.

Interior noise levels at the proposed units closest to the tracks will be reduced to the 45 dB CNEL interior standard for habitable rooms by standard construction practice with closed windows and locating non-habitable rooms (kitchens, baths, hallways, stairwells, etc.) along the building facades directly facing the tracks. The option to close windows to shut out noise requires the provision of supplemental ventilation. Although the interior CNEL-based standard can be met without any extra-ordinary acoustical measures, single event noise may be intrusive even if the interior standard is met. Window upgrades from "standard" to "premium" are recommended for habitable rooms for the units closest to the tracks.

The following measures are recommended:

- All windows throughout the project will be dual-paned glass and all upstairs living and bedrooms of units abutting the tracks shall be equipped with supplemental ventilation supplying at least 30 CFM of fresh make-up air (Building Code requirement), and
- Upstairs side windows of living or bedrooms in units abutting the tracks shall be rated at STC=33 or better (single event noise nuisance reduction).

Roadway Traffic Noise Impact

Project-related off-site traffic noise impacts on existing streets are less than significant.

Traffic noise from Valley Boulevard may exceed City standards for outdoor recreational at balcony/deck space fronting the roadway. Enclosure of unit balconies facing Valley Boulevard with a 5-foot transparent glass or plastic shield will reduce noise by 5 dB CNEL and thereby achieve 65 dB CNEL. Alternatively recreational space may be considered to be the larger decks facing interior to the complex. This area is noise protected by the perimeter structures such that noise levels are expected to be well within the 65 dB CNEL contour.

Therefore, one of the mitigation measures is proposed:

- Consider residential balconies or decks facing the interior of the project site to meet the recreational space requirement and not any balcony or deck with line of sight to Valley Boulevard; or,
- Equip residential patios or balconies with a line of sight to Valley Boulevard with transparent glass or plastic shields that reduce noise. Shields would need to be 5 feet tall and fill the entire roadway frontage. Such an enclosure would meet a 65 dB CNEL standard.

Habitable residential interior space will be adequately noise protected to achieve 45 dB with only the ability to close windows at perimeter units. Construction of the recommended 5-foot transparent glass or plastic shield enclosure along each balcony with a line-of-sight to Valley Boulevard would add an extra level of protection. Where window closure is needed for policy compliance, supplemental fresh air ventilation will be provided at rates specified in the California Building Code.

Interior noise levels at any proposed commercial component of live-work uses will meet the recommended 50 dB CNEL noise level with closed windows and standard construction.

Construction Noise Impact

Short-term construction noise intrusion shall be mitigated by compliance with the City of El Monte Noise Ordinance. The allowed hours of construction are from 6 a.m. to 7 p.m. Monday through Friday and 8 a.m. to 7 p.m. on Saturdays and Sundays. Construction nuisance noise at the nearest sensitive use is nevertheless minimized by the following suggested conditions:

- All equipment shall be equipped with properly operating and maintained mufflers.
- Equipment and materials shall be staged in areas that will create the greatest distance between construction-related noise sources and the noise-sensitive receptors nearest the project site during all project construction.
- All construction-related activities shall be restricted to the construction hours outlined in the City's Noise Ordinance.

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

December 3, 2015

Ms. Joann Lombardo
COMPREHENSIVE PLANNING SERVICES
P.O. Box 15592
Newport Beach, CA 92659

Dear Ms. Lombardo:

INTRODUCTION

The firm of Kunzman Associates, Inc. is pleased to provide this supplemental information in response to the City of El Monte Public Works Department comments received on December 1, 2015 (see Appendix A) regarding The Cypress & Ramona Residential Project Traffic Impact Analysis prepared by Kunzman Associates, Inc. on October 8, 2015.

COMMENT 1

Provide a section that states the committed and/or programmed roadway improvements within the study area, if any.

RESPONSE TO COMMENT 1

Based upon the City of El Monte guidelines, the study area intersections do not have significant impacts for Opening Year (2017) With Project traffic conditions for either proposed project access alternative. As such, mitigation measures are not warranted. The Capital Improvement Program for Fiscal Year 2015-2016 has been provided by City of El Monte Public Works Department staff. According to this report, there is currently a Tyler Avenue/Ramona Boulevard bicycle plan but roadway improvements such as widening are not proposed within the study area.

COMMENT 2

The post development level of service for the access point on Valley Blvd. was determined to be acceptable. Please discuss the other criteria in determining why a traffic signal is not warranted at this location.

RESPONSE TO COMMENT 2

As shown in Table 2 of the traffic impact analysis, the proposed development is projected to generate approximately 27 morning peak hour trips and 35 evening peak hour trips. The California Department of

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Transportation Warrant 3 Peak Hour traffic signal warrant analysis, as specified in the California Manual of Uniform Traffic Control Devices (2014 Update) indicates that when the major street has a peak hour vehicle total of 1,300 vehicles or more (total of both approaches), the minor street needs to have at least 75 peak hour trips for the high volume approach. Being that the aforementioned major street volumes for this warrant encumber the worst-case analysis, and consequentially the minor street approach volumes given for this traffic signal warrant express the least applicable amount of vehicles since the graph is curvilinear, it is not possible for the intersection to warrant a traffic signal with less than 75 peak hour trips. In addition, the Valley Boulevard access is restricted to right turns in/out only.

COMMENT 3

There was no discussion or analysis of the safety of the adjacent intersection at Valley Blvd./Ramona Ave. or the roadway on Valley Blvd. and on Ramona Ave.

RESPONSE TO COMMENT 3

As stated on page 4 of the traffic impact analysis, it is recommended that project frontage along Valley Boulevard and Ramona Boulevard be constructed to its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary. This includes dedications for future street widening. As such, sidewalks, landscaping, driveways, etc. shall be constructed in accordance with City of El Monte standards including adherence to the Americans With Disabilities Act (ADA).

The intersection of Valley Boulevard and Ramona Avenue is not bounded on any quadrant by the proposed project. While the project site lies northeast of the Valley Boulevard and Ramona Boulevard intersection, the property (two small existing retail buildings) that immediately fronts the northeast corner of the intersection is not owned by the project applicant.

It has been a pleasure to serve your needs on this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 973-8383.

Sincerely,

KUNZMAN ASSOCIATES, INC.

Bryan Crawford
Senior Associate

#6208

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VALLEY & RAMONA

TRAFFIC IMPACT ANALYSIS

October 8, 2015

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

KUNZMAN ASSOCIATES, INC.

VALLEY & RAMONA

TRAFFIC IMPACT ANALYSIS

October 8, 2015

Prepared by:

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VALLEY & RAMONA

TRAFFIC IMPACT ANALYSIS

This report contains the traffic impact analysis for the Valley & Ramona project. The project site is located at 11127 Ramona Boulevard in the City of El Monte. The proposed project consists of 62 dwelling units of townhomes with 4 live/work units utilizing 1,750 square feet of specialty retail.

The traffic report contains documentation of existing traffic conditions, trips generated by the project, distribution of the project trips to roads outside the project, calculation of existing plus project traffic conditions[1], and an analysis of existing plus project plus cumulative traffic conditions. Each of these topics is contained in a separate section of the report. The first section is "Findings", and subsequent sections expand upon the findings. In this way, information on any particular aspect of the study can be easily located by the reader.

Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with those terms unique to transportation engineering, a glossary of terms is provided within Appendix A.

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[1] The existing plus project conditions has been analyzed to comply with the Sunnyvale West Neighborhood Association v. City of Sunnyvale CEQA court case. This scenario assumes the full development of the proposed project and full absorption of the proposed project trips on the circulation system at the present time. This scenario is provided for informational purposes only, and will not be used for impact determinations or mitigation.

I. Findings

This section summarizes the existing traffic conditions, project traffic impacts, and the proposed mitigation measures.

A. Definition of Deficiency and Significant Impact

The following definitions of deficiencies and significant impacts have been developed in accordance with the County of Los Angeles Congestion Management Program requirements and the City of El Monte General Plan Circulation Element.

The definition of an intersection deficiency has been obtained from the City of El Monte General Plan Circulation Element. The City of El Monte General Plan Circulation Element states that peak hour intersection operations of Level of Service D or better are generally acceptable, except that Level of Service E may occur under the following circumstances:

- Intersections/roadways at, or adjacent to, freeway ramps
- Intersections/roadways on major corridors and transit routes
- Intersections/roadways on truck routes
- Intersections/roadways in or adjacent to commercial districts

In the City of El Monte, an impact is considered significant for signalized intersections if the project related increase in the volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service F for all intersections on major corridors, truck routes, commercial corridors or adjacent to freeway ramps. A significant impact occurs when the project related increase in volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service E for all intersections which are not on major corridors, truck routes, commercial corridors or adjacent to freeway ramps.

In the City of El Monte, an impact is considered significant for unsignalized intersections if the project related increase in traffic delay equals or exceeds two percent (0.02), causing or worsening Level of Service E for those intersections.

B. Existing Traffic Conditions

1. The project site is currently undeveloped and is not generating significant trips.

2. This traffic impact analysis considers two alternatives. Alternative 1 consists of a project access on Valley Boulevard and an emergency access only on Ramona Boulevard. Alternative 2 consists of an access on Valley Boulevard and an access on Ramona Boulevard.

3. Based on the City of El Monte scoping agreement (see Appendix B), the study area includes the following intersections:

Tyler Avenue (NS) at:
Ramona Boulevard (EW) - #1
Valley Boulevard (EW) - #2

Valley Boulevard (NS) at:
Project Access (EW) - #3
Ramona Boulevard (EW) - #4

Project Access (NS) at:
Ramona Boulevard (EW) - #5 (Alternative 2 only)

4. The study area intersections currently operate within acceptable Levels of Service during the peak hours for Existing traffic conditions (see Table 1).

C. Traffic Impacts

1. The proposed project consists of 62 dwelling units of townhomes with 4 live/work units utilizing 1,750 square feet of specialty retail.

2. The proposed development is projected to generate a total of approximately 394 daily vehicle trips, 27 vehicles per hour will occur during the weekday morning peak hour, and 35 vehicles per hour will occur during the weekday evening peak hour (see Table 2).

3. The study area intersections are projected to operate within acceptable Levels of Service during the peak hours for Existing Plus Project traffic conditions (see Tables 3 and 4).

4. The project does not significantly impact the study area intersections for Existing Plus Project traffic conditions (see Tables 5 and 6).

5. Other developments within approximately one and a half mile radius of the study area have been identified to evaluate cumulative traffic conditions (see Table 7).

6. The study area intersections are projected to operate within acceptable Levels of Service during the peak hours for Opening Year (2017) Without Project traffic conditions (see Table 8).

7. The study area intersections are projected to operate within acceptable Levels of Service during the peak hours for Opening Year (2017) With Project traffic conditions (see Tables 9 and 10).

8. The project does not significantly impact the study area intersections for Opening Year (2017) With Project traffic conditions (see Tables 11 and 12).

D. Recommendations

Site specific circulation and vehicular access recommendations are depicted on Figures 53 and 54. The City of El Monte has requested that this project be analyzed with two alternatives. Alternative 1 is the Proposed Project with vehicular access for the site provided via Valley Boulevard. An emergency access has been requested by the City of El Monte on Ramona Boulevard for Alternative 1. This emergency access consists of a gated emergency vehicle access and is not shown on the site plan as it a requested alternative from the City of El Monte Planning Department. Alternative 2 consists of the vehicular access on Valley Boulevard and a secondary vehicular access on Ramona Boulevard. The access on Ramona Boulevard has been requested for analysis by the City of El Monte and is not shown on the site plan as it is not part of the proposed design.

1. Construct Valley Boulevard from the north project boundary to the south project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary. While Valley Boulevard is not anticipated to be widened beyond its current configuration, the City of El Monte is requiring a 5 foot dedication for potential future street widening.

2. Construct Ramona Boulevard from the west project boundary to the east project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary. While Ramona Boulevard is not anticipated to be widened beyond its current configuration, the City of El Monte is studying whether or not to widen Ramona Boulevard but this potential future widening would not impact the project frontage.

3. Sight distance at the project access(es) shall comply with standard California Department of Transportation and City of El Monte sight distance standards. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City and approved as consistent with this measure prior to issue of grading permits.

4. The project shall provide sufficient parking spaces to meet the City of El Monte parking code requirements or as approved by the City of El Monte via a future parking study in order to service on-site parking.

5. On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

6. As is the case for any roadway design, the City of El Monte should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

II. Congestion Management Program Methodology

This section discusses the County Congestion Management Program. The purpose, prescribed methodology, and definition of a significant traffic impact are discussed.

A. County Congestion Management Program

The Congestion Management Program is a result of Proposition 111 which was a statewide initiative approved by the voters in June 1990. The proposition allowed for a nine cent per gallon state gasoline tax increase over a five year period.

Proposition 111 explicitly stated that the new gas tax revenues were to be used to fix existing traffic problems and was not to be used to promote future development. For a city to get its share of the Proposition 111 gas tax, it has to follow certain procedures specified by the State Legislature. The legislation requires that a Traffic Impact Analysis be prepared for new development. The Traffic Impact Analysis is prepared to monitor and fix traffic problems caused by new development.

The Legislature requires that adjacent jurisdictions use a standard methodology for conducting a Traffic Impact Analysis. To assure that adjacent jurisdictions use a standard methodology in preparing Traffic Impact Analyses, one common procedure is that all cities within a county, and the county agency itself, adopt and use one standard methodology for conducting Traffic Impact Analyses.

Although each county has developed standards for preparing Traffic Impact Analysis's, Traffic Impact Analysis requirements do vary in detail from one county to another, but not in overall intent or concept. The general approach selected by each county for conducting Traffic Impact Analysis's has common elements.

The general approach for conducting a Traffic Impact Analysis is that existing weekday peak hour traffic is counted and the percent of roadway capacity currently used is determined. Then growth in traffic is accounted for and added to existing traffic and the percent of roadway capacity used is again determined. Then the project traffic is added and the percent of roadway capacity used is again determined. If the new project adds traffic to an overcrowded facility, then the new project has to mitigate the traffic impact so that the facility operates at a level that is no worse than before the project traffic was added.

If the project size is below a certain minimum threshold level, then a project does not have to have a Traffic Impact Analysis prepared, once it is shown or agreed that the project is below the minimum threshold. If a project is bigger than the minimum threshold size, then a Traffic Impact Analysis is required.

B. Prescribed Methodology for a Traffic Impact Analysis

The Traffic Impact Analysis must include all monitored intersections to which the project adds traffic above a certain minimum amount. In Los Angeles County, the monitored

intersections are contained in Appendix A of the Congestion Management Program for the County of Los Angeles.

In Los Angeles County, the minimum project added traffic that is needed before an intersection has to be studied is if the project adds 50 two way trips in either the morning or evening weekday peak hour.

If a project adds more traffic than the minimum threshold amount to an intersection, then that intersection has to be analyzed for deficiencies.

If the intersection has to be analyzed for deficiencies, then mitigation is required if the existing traffic plus anticipated traffic growth plus project traffic does cause the Intersection Capacity Utilization to go above a certain point.

The definition of an intersection deficiency has been obtained from the City of El Monte General Plan Circulation Element. The City of El Monte General Plan Circulation Element states that peak hour intersection operations of Level of Service D or better are generally acceptable, except that Level of Service E may occur under the following circumstances:

- Intersections/roadways at, or adjacent to, freeway ramps
- Intersections/roadways on major corridors and transit routes
- Intersections/roadways on truck routes
- Intersections/roadways in or adjacent to commercial districts

In the City of El Monte, an impact is considered significant for signalized intersections if the project related increase in the volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service F for all intersections on major corridors, truck routes, commercial corridors or adjacent to freeway ramps. A significant impact occurs when the project related increase in volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service E for all intersections which are not on major corridors, truck routes, commercial corridors or adjacent to freeway ramps.

In the City of El Monte, an impact is considered significant for unsignalized intersections if the project related increase in traffic delay equals or exceeds two percent (0.02), causing or worsening Level of Service E for those intersections.

An intersection mitigation measure shall either fix the deficiency, or reduce the Intersection Capacity Utilization so that it is below the level that occurs without the project.

In Los Angeles County, the technique used to calculate Intersection Capacity Utilization is as follows. Lane capacity is 1,600 vehicles per lane per hour of green time for through and turns lanes, except that a capacity of 2,880 vehicles per lane per hour of green time is used for dual turn lanes. A total yellow clearance time of 10 percent is added.

Project trips are generated using rates and procedures contained in the Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012. The project trip distributions are provided by the reviewing agency or are agreed to in advance of the Traffic Impact

Analysis being prepared. The Traffic Impact Analysis has to be prepared by a licensed Traffic Engineer.

This traffic analysis has been prepared in accordance with the Traffic Impact Analysis requirements except as noted. The Traffic Impact Analysis not only examined the Congestion Management Program system of roads and intersections, but also other roads and intersections.

The project generated trips were added to intersections, and a full intersection analysis was conducted, even when the project added traffic failed to meet the minimum thresholds that require an intersection analysis.

C. Mitigation Measures

If a project is large enough to require that a Traffic Impact Analysis be prepared, and if the project adds traffic to an intersection above a minimum threshold, and if the intersection is operating at above an acceptable level of operation, then the project must mitigate its traffic impact.

Traffic mitigation can be in many forms including adding lanes. Lanes can sometimes be obtained through restriping or elimination of parking, and sometimes require spot roadway widening.

III. Project Description

This section discusses the project's location and proposed development. Figure 1 shows the project location map and Figure 2 illustrates the site plan.

A. Location

The project site is located at 11127 Ramona Boulevard in the City of El Monte.

B. Proposed Project

The proposed project consists of 62 dwelling units of townhomes with 4 live/work units utilizing 1,750 square feet of specialty retail.

The City of El Monte has requested that this project be analyzed with two alternatives. Alternative 1 is the Proposed Project with vehicular access for the site provided via Valley Boulevard. An emergency access has been requested by the City of El Monte on Ramona Boulevard for Alternative 1. This emergency access consists of a gated emergency vehicle access and is not shown on the site plan as it a requested alternative from the City of El Monte Planning Department. Alternative 2 consists of the vehicular access on Valley Boulevard and a secondary vehicular access on Ramona Boulevard. The access on Ramona Boulevard has been requested for analysis by the City of El Monte and is not shown on the site plan as it is not part of the proposed design.

Figure 1
Project Location Map

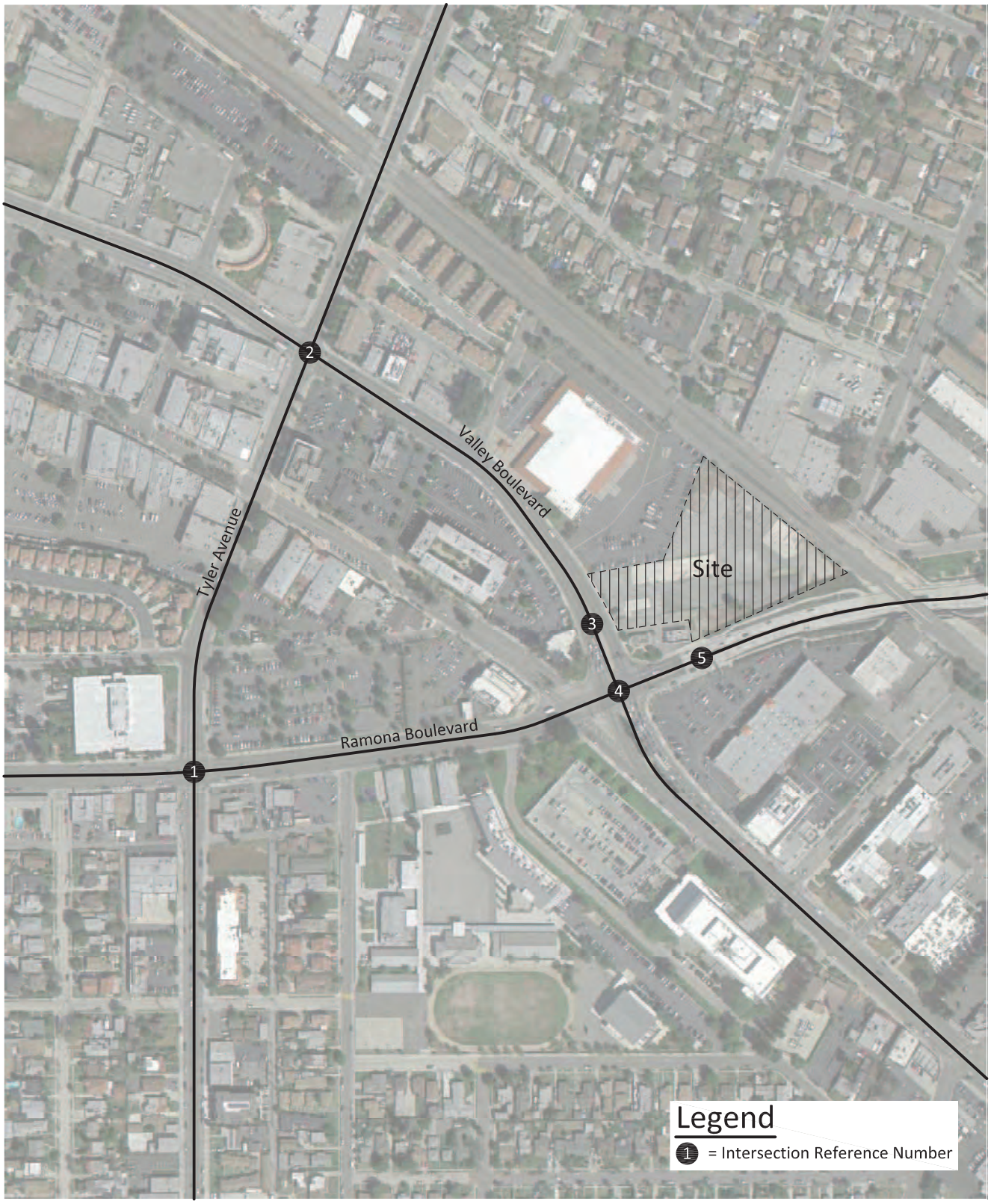

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Figure 2
Site Plan

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IV. Existing Traffic Conditions

The traffic conditions as they exist today are discussed below and illustrated on Figures 3 to 11.

A. Surrounding Street System

Roadways that will be utilized by the development include Tyler Avenue, Valley Boulevard, and Ramona Boulevard.

Tyler Avenue: This north-south roadway currently is two lanes undivided to four lanes undivided in the study area. Tyler Avenue is classified as a Secondary Arterial on the City of El Monte General Plan Circulation Element. It currently carries approximately 8,700 to 9,000 vehicles per day in the study area.

Valley Boulevard: This north-south to east-west roadway currently is four lanes divided in the study area. Valley Boulevard is classified as a Major Arterial on the City of El Monte General Plan Circulation Element. It currently carries approximately 17,000 to 18,200 vehicles per day in the study area.

Ramona Boulevard: This east-west roadway currently is four lanes divided in the study area. Ramona Boulevard is classified as a Secondary Arterial on the City of El Monte General Plan Circulation Element. It currently carries approximately 9,100 to 14,300 vehicles per day in the study area.

B. Existing Travel Lanes and Intersection Controls

Figure 3 identifies the existing roadway conditions for study area roadways. The number of through lanes for existing roadways and the existing intersection controls are identified.

C. Existing Average Daily Traffic Volumes

Figure 4 depicts the Existing average daily traffic volumes. The Existing average daily traffic volumes have been obtained and factored from peak hour counts (see Appendix C) obtained by Kunzman Associates, Inc. using the following formula for each intersection leg:

PM Peak Hour (Approach Volume + Exit Volume) x 10 = Leg Volume.

D. Existing Levels of Service

The technique used to assess the operation of a signalized intersection is known as Intersection Capacity Utilization, as described in Appendix D. To calculate an Intersection Capacity Utilization value, the volume of traffic using the intersection is compared with the capacity of the intersection. An Intersection Capacity Utilization value is usually expressed as a decimal. The decimal represents that portion of the hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity.

The technique used to assess the capacity needs of an unsignalized intersection is known as the Intersection Delay Method (see Appendix D). To calculate delay, the volume of traffic using the intersection is compared with the capacity of the intersection.

The Levels of Service for the existing traffic conditions have been calculated and are shown in Table 1. Existing Levels of Service are based upon manual weekday morning peak hour and weekday evening peak hour intersection turning movement counts made for Kunzman Associates, Inc. in September 2015 (see Figures 5 and 6). Traffic count worksheets are provided in Appendix C.

There are two peak hours in a weekday. The morning peak hour is between 7:00 AM and 9:00 AM, and the evening peak hour is 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.

The study area intersections currently operate within acceptable Levels of Service during the peak hours for Existing traffic conditions (see Table 1). Existing Level of Service worksheets are provided in Appendix D.

E. Existing City of El Monte Circulation Element

Figure 7 shows the current City of El Monte Circulation Element. Both existing and future roadways are included in the circulation Element and are graphically depicted on Figure 7. This figure shows the nature and extent of arterial highways that are needed to adequately serve the ultimate development depicted by the land use element of the General Plan. Figure 8 illustrates the City of El Monte arterial street cross-sections.

F. Transit Service

Transit service is provided by the Los Angeles County Metropolitan Transportation Authority Local Lines 76, 176, and 268 along Tyler Avenue, Local Lines 76, 190, and 194 along Valley Boulevard, and Local Lines 76, 176, and 190 along Ramona Boulevard (see Figure 9). Foothill Transit Route 488 also serves Ramona Boulevard.

G. Bicycle & Pedestrian Facilities

Existing pedestrian facilities adjacent to the project site are shown on Figure 10. The City of El Monte bike paths are illustrated on Figure 11.

Table 1

Existing Intersection Capacity Utilization and Level of Service

Intersection	Jurisdiction	Traffic Control[2]	Intersection Approach Lanes[1]												Peak Hour Level of Service	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Tyler Avenue (NS) at:																
Ramona Boulevard (EW) - #1	El Monte	TS	1	1.5	0.5	1	1	1	1	1.5	0.5	1	1.5	0.5	0.359-A	0.376-A
Valley Boulevard (EW) - #2	El Monte	TS	1	1.5	0.5	1	1.5	0.5	1	1.5	0.5	1	1.5	0.5	0.535-A	0.508-A
Valley Boulevard (NS) at:																
Ramona Boulevard (EW) - #4	El Monte	TS	1	2	1	1	2	1	1	2	0	1	1.5	0.5	0.574-A	0.576-A

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes (de facto right turn lane). L = Left; T = Through; R = Right

[2] TS = Traffic Signal

Figure 3
Existing Through Travel Lanes and Intersection Controls

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Intersection reference numbers are in upper left corner of turning movement boxes.

Figure 4
Existing Average Daily Traffic Volumes

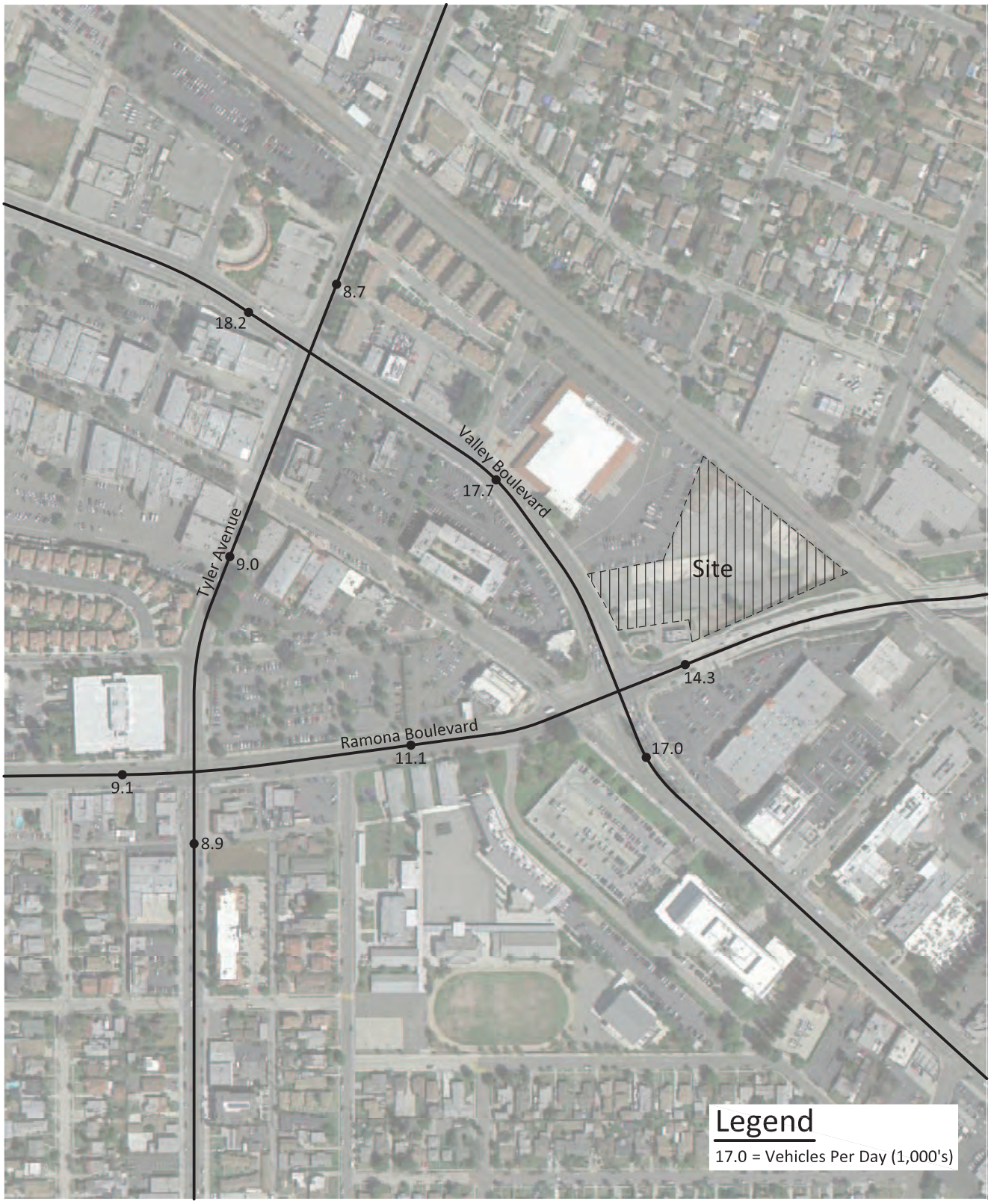

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Figure 5
Existing Morning Peak Hour Intersection Turning Movement Volumes

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KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

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Figure 6
Existing Evening Peak Hour Intersection Turning Movement Volumes

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

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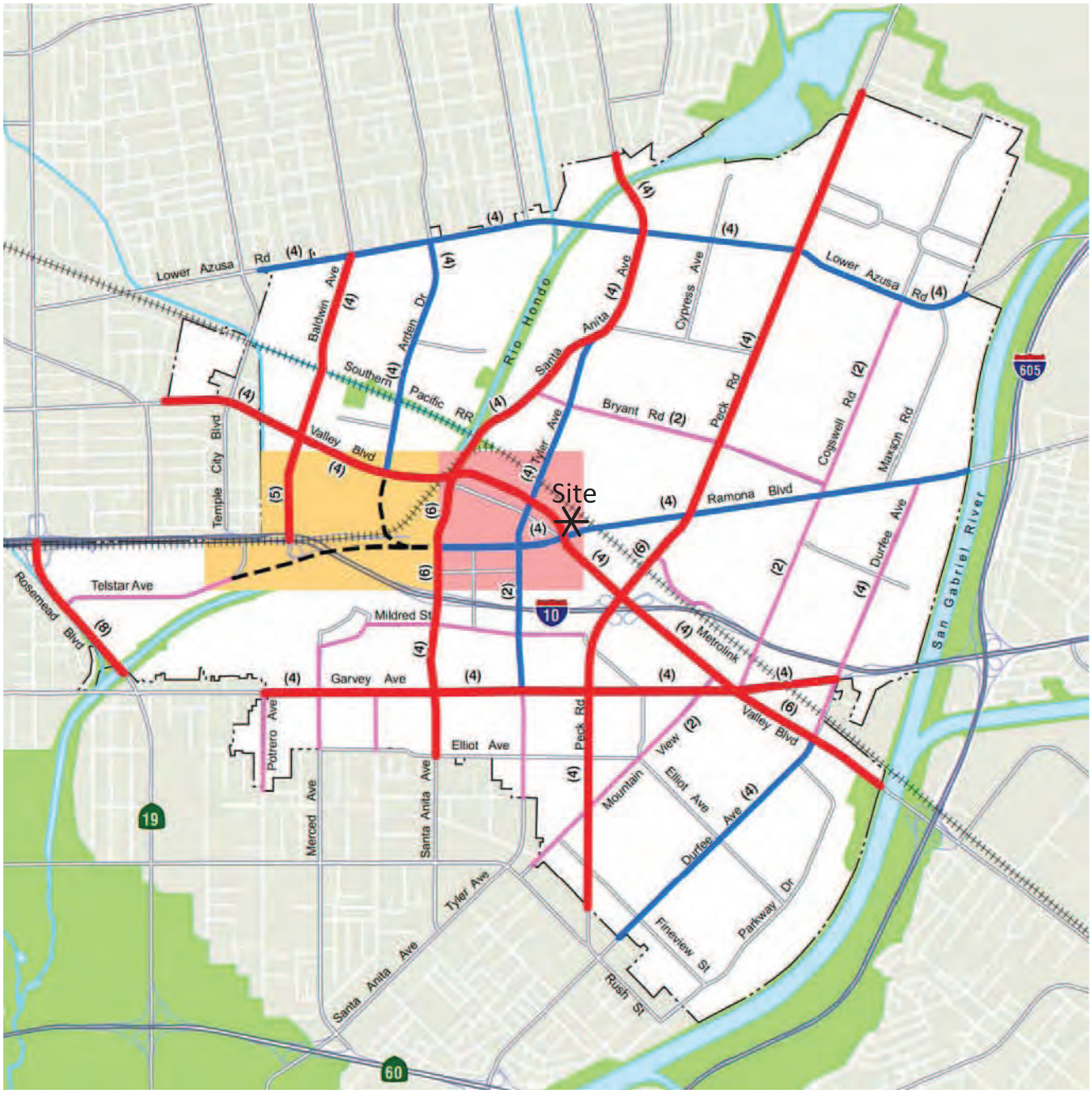
Figure 7
City of El Monte General Plan Circulation Element



Legend

- Major Arterial
- Secondary Arterial
- Collector
- Proposed New Connection
- (4) Number of Lanes (Exc. Turn Lanes)
- SA-1 Special Study Area #1
- SA-2 Special Study Area #2

Source: City of El Monte

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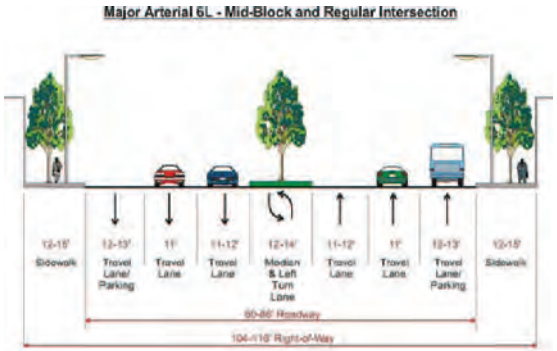
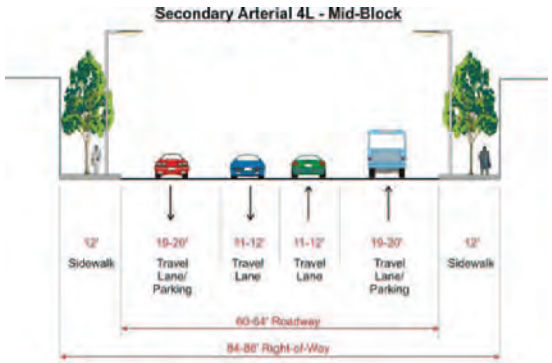
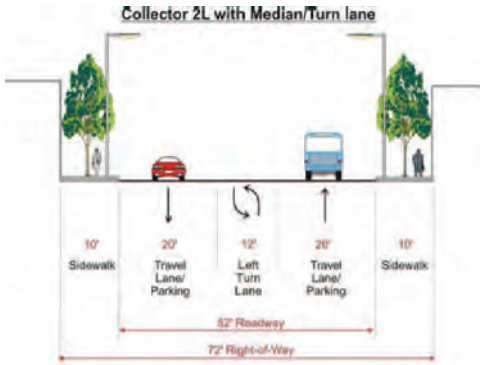
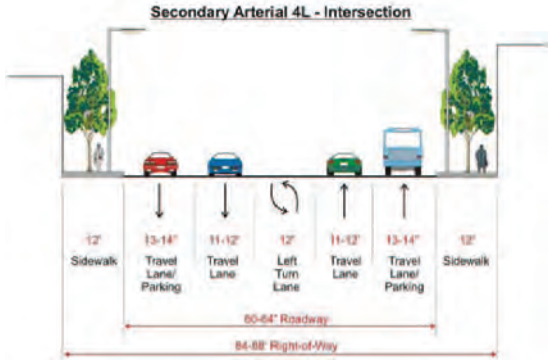
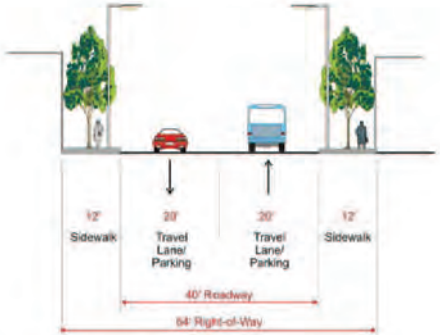
Figure 8
City of El Monte General Plan Roadway Cross-Sections

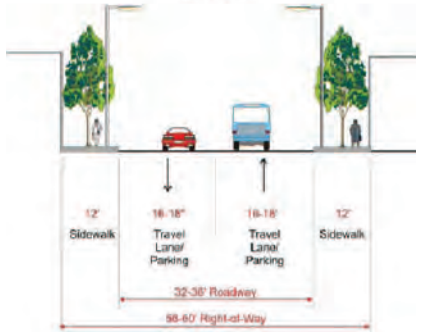












Source: City of El Monte

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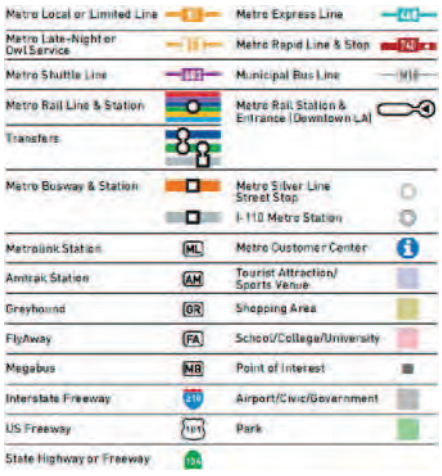
Figure 9
Los Angeles County Metropolitan Transportation Authority System Map

Legend



Source: Los Angeles County

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Figure 10
Existing Pedestrian Facilities

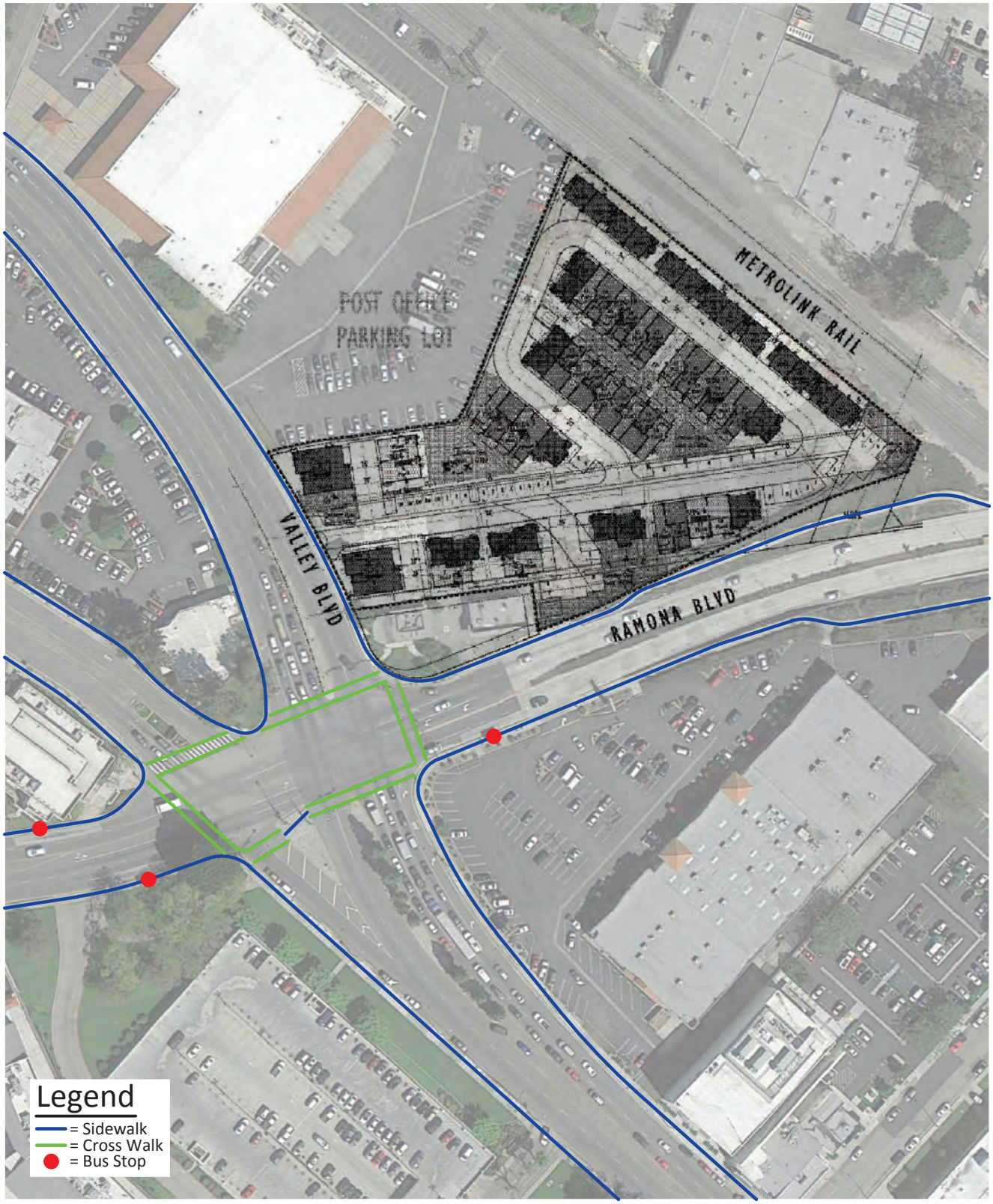

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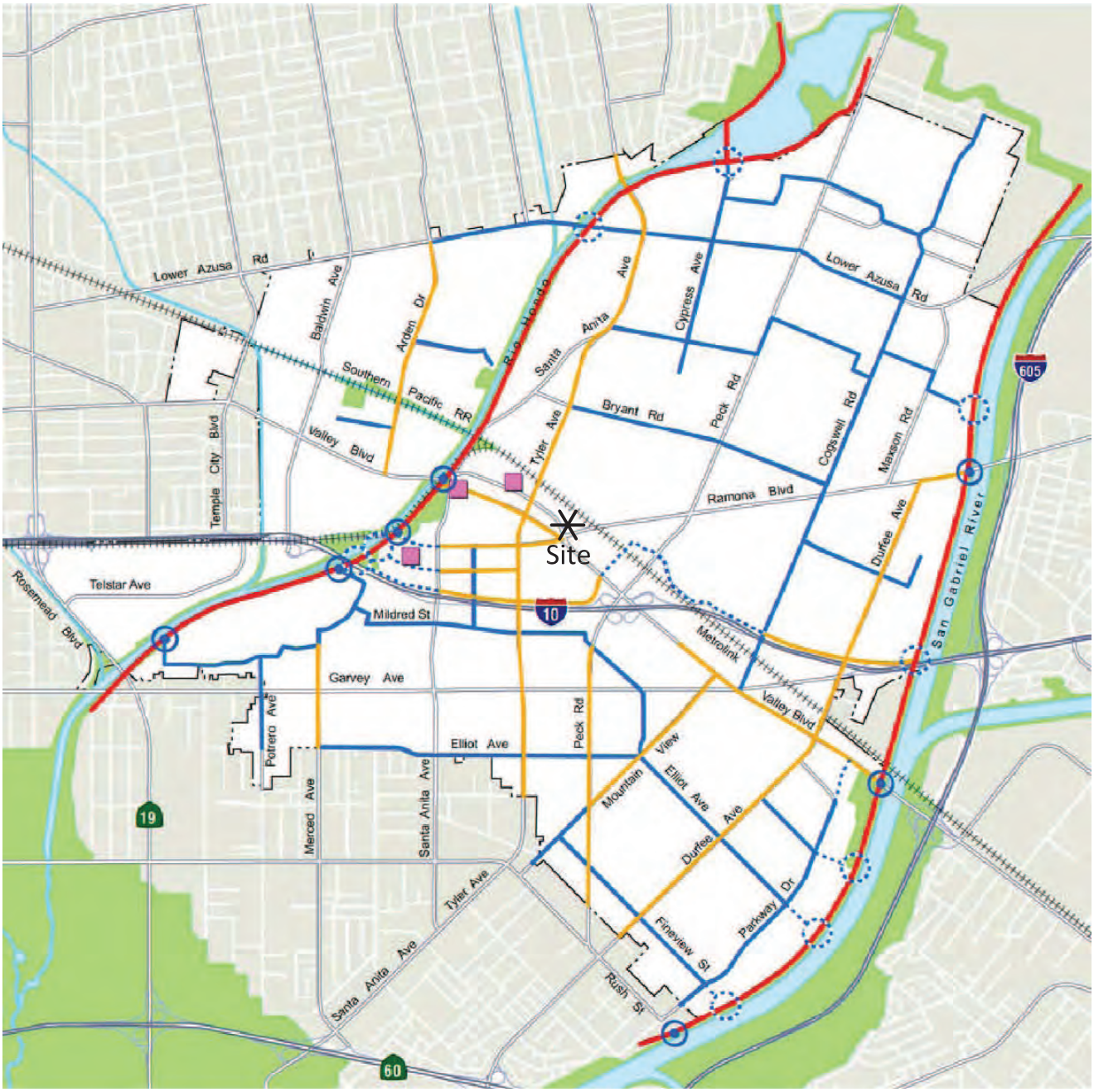
Figure 11
City of El Monte Bike Paths



Legend

- Class I Bikeway/Trail
- Class II Bike Lane
- Class III Bike Boulevard
- Requires New Connection
- Existing Connection to River Bike Path
- New Connection to River Bike Path (Feasibility to be Determined)
- Bicycle Hub

Source: City of El Monte

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V. Project Traffic

The proposed project consists of 62 dwelling units of townhomes with 4 live/work units utilizing 1,750 square feet of specialty retail.

The City of El Monte has requested that this project be analyzed with two alternatives. Alternative 1 is the Proposed Project with vehicular access for the site provided via Valley Boulevard. An emergency access has been requested by the City of El Monte on Ramona Boulevard for Alternative 1. This emergency access consists of a gated emergency vehicle access and is not shown on the site plan as it a requested alternative from the City of El Monte Planning Department. Alternative 2 consists of the vehicular access on Valley Boulevard and a secondary vehicular access on Ramona Boulevard. The access on Ramona Boulevard has been requested for analysis by the City of El Monte and is not shown on the site plan as it is not part of the proposed design.

A. Trip Generation

The trips generated by the project are determined by multiplying an appropriate trip generation rate by the quantities of land uses. Trip generation rates are predicated on the assumption that energy costs, the availability of roadway capacity, the availability of vehicles to drive, and life styles remain similar to what are known today. A major change in these variables may affect trip generation rates.

Trip generation rates were determined for daily traffic, weekday morning peak hour inbound and outbound traffic and weekday evening peak hour inbound and outbound traffic for the proposed land uses. By multiplying the trip generation rates by the land use quantities, the project traffic volumes are determined. Table 2 exhibits the trip generation rates, project peak hour volumes, and project daily traffic volumes for the proposed project. The trip generation rates are from the Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012.

The proposed development is projected to generate a total of approximately 394 daily vehicle trips, 27 vehicles per hour will occur during the weekday morning peak hour, and 35 vehicles per hour will occur during the weekday evening peak hour (see Table 2).

It should be noted that for specialty retail land use, a portion of the trips would come from pass-by trips from adjacent roadways, trips that are currently on the roadway system. In order to analyze pass-by trips, the traffic volumes from the project have not been reduced as a result of pass-by trips.

Traffic volumes shown in Table 2 consist of the total trips generated for each project land use. As a residential trip generated by the project will also be making trips to a specialty retail land use within the project, a double counting of those trips occurs. Traffic volumes from the project site have been reduced by 10% as a result of the internal interaction between the proposed land uses.

B. Trip Distribution

Figures 12 and 13 contain the directional distributions of the project trips for the proposed residential land use for Alternative 1. Figure 14 and 15 contain the directional distributions of the project trips for the proposed specialty retail land use for Alternative 1. Figures 16 and 17 contain the directional distributions of the project trips for the proposed residential land use for Alternative 2. Figure 18 and 19 contain the directional distributions of the project trips for the proposed specialty retail land use for Alternative 2.

To determine the trip distributions for the proposed project, peak hour traffic counts of the existing directional distribution of traffic for existing areas in the vicinity of the site, and other additional information on future development and traffic impacts in the area were reviewed.

C. Trip Assignment

Based on the identified trip generation and distributions, project average daily traffic volumes for Alternative 1 have been calculated and shown on Figure 20. Based on the identified trip generation and distributions, project average daily traffic volumes for Alternative 2 have been calculated and shown on Figure 21. Morning and evening peak hour intersection turning movement volumes expected from the project for Alternative 1 are shown on Figures 22 and 23, respectively. Morning and evening peak hour intersection turning movement volumes expected from the project for Alternative 2 are shown on Figures 24 and 25, respectively.

D. Modal Split

The traffic reducing potential of public transit has not been considered in this report. Essentially the traffic projections are conservative in that public transit and the private bus fleet would reduce the traffic volumes.

Table 2

Project Trip Generation[1]

Land Use	Quantity	Units[2]	Peak Hour						Daily
			Morning			Evening			
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates									
Residential Townhouse		DU	0.07	0.37	0.44	0.35	0.17	0.52	5.81
Specialty Retail		TSF	0.80	0.53	1.33	1.19	1.52	2.71	44.32
Trips Generated									
Residential Townhouse	62	DU	5	23	28	22	11	33	360
Specialty Retail	1.750	TSF	1	1	2	2	3	5	78
Subtotal			6	24	30	24	14	38	438
10% Reduction			-1	-2	-3	-2	-1	-3	-44
Total			5	22	27	22	13	35	394

[1] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Categories 230 and 826.

The San Diego Association of Governments (SANDAG), Traffic Generators, April 2002, was used for the Specialty Retail AM peak hour.

[2] DU = Dwelling Units; TSF = Thousand Square Feet

Figure 12
Project Outbound Trip Distribution (Alternative 1) - Residential

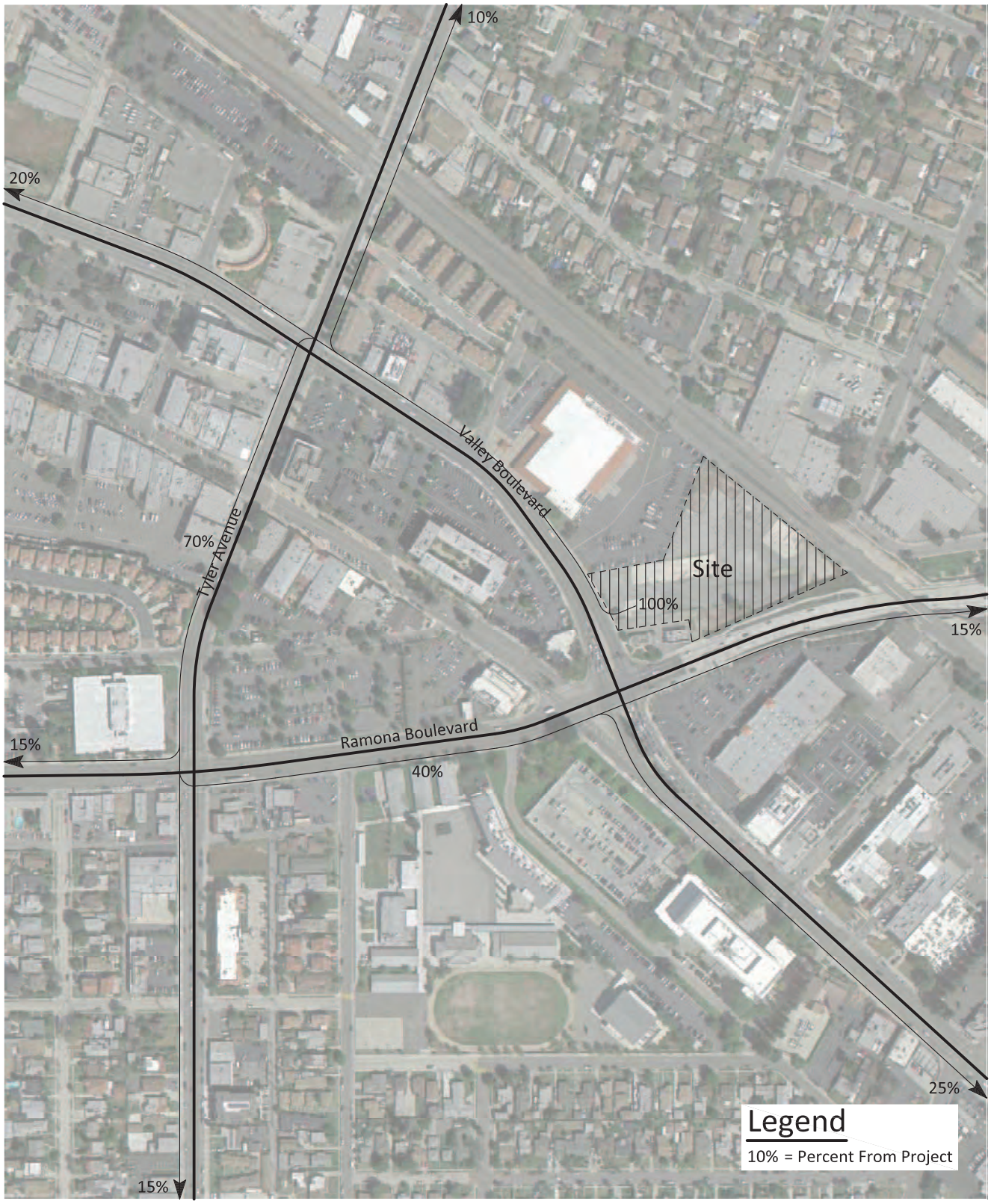

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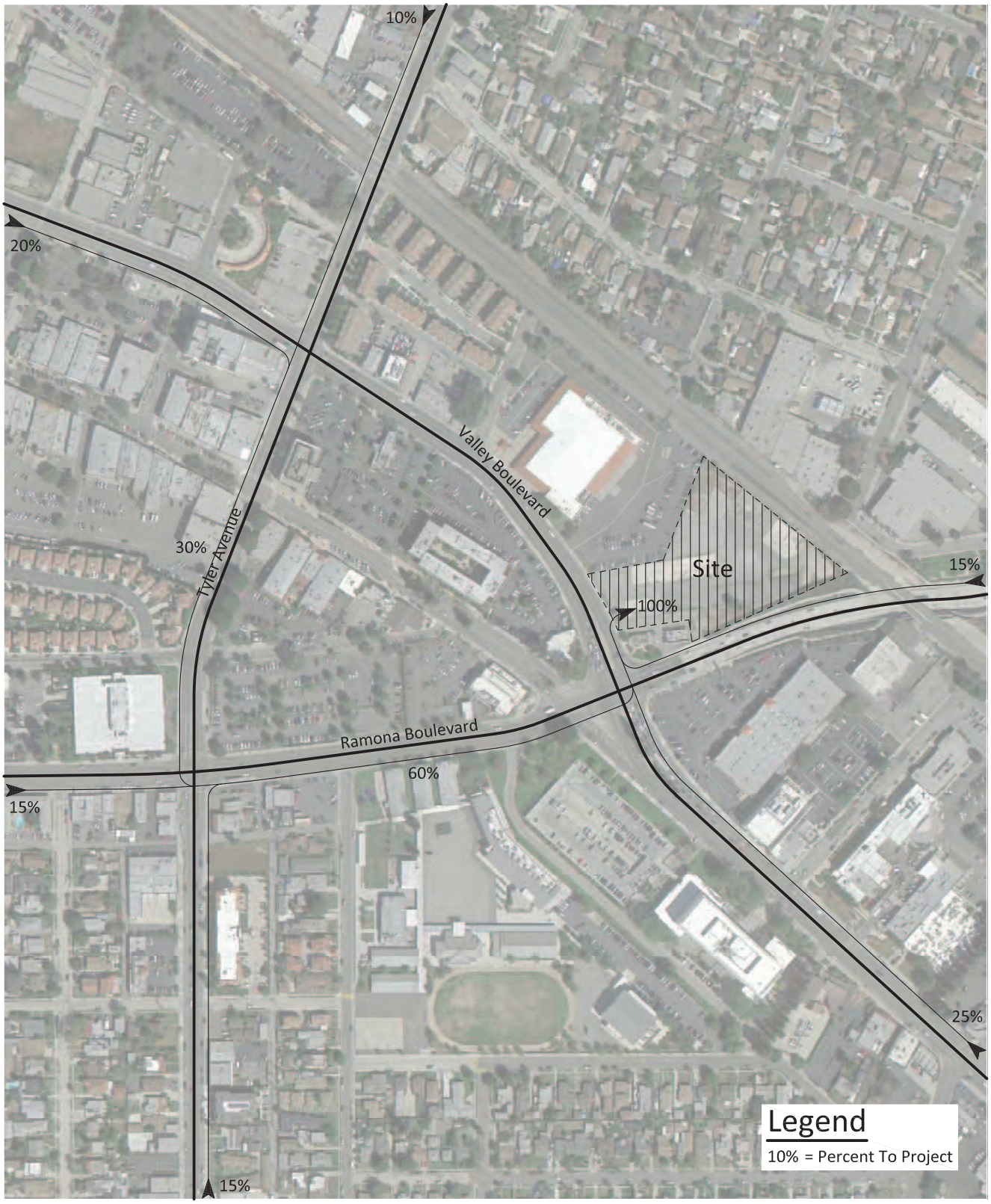
Figure 13
Project Inbound Trip Distribution (Alternative 1) - Residential



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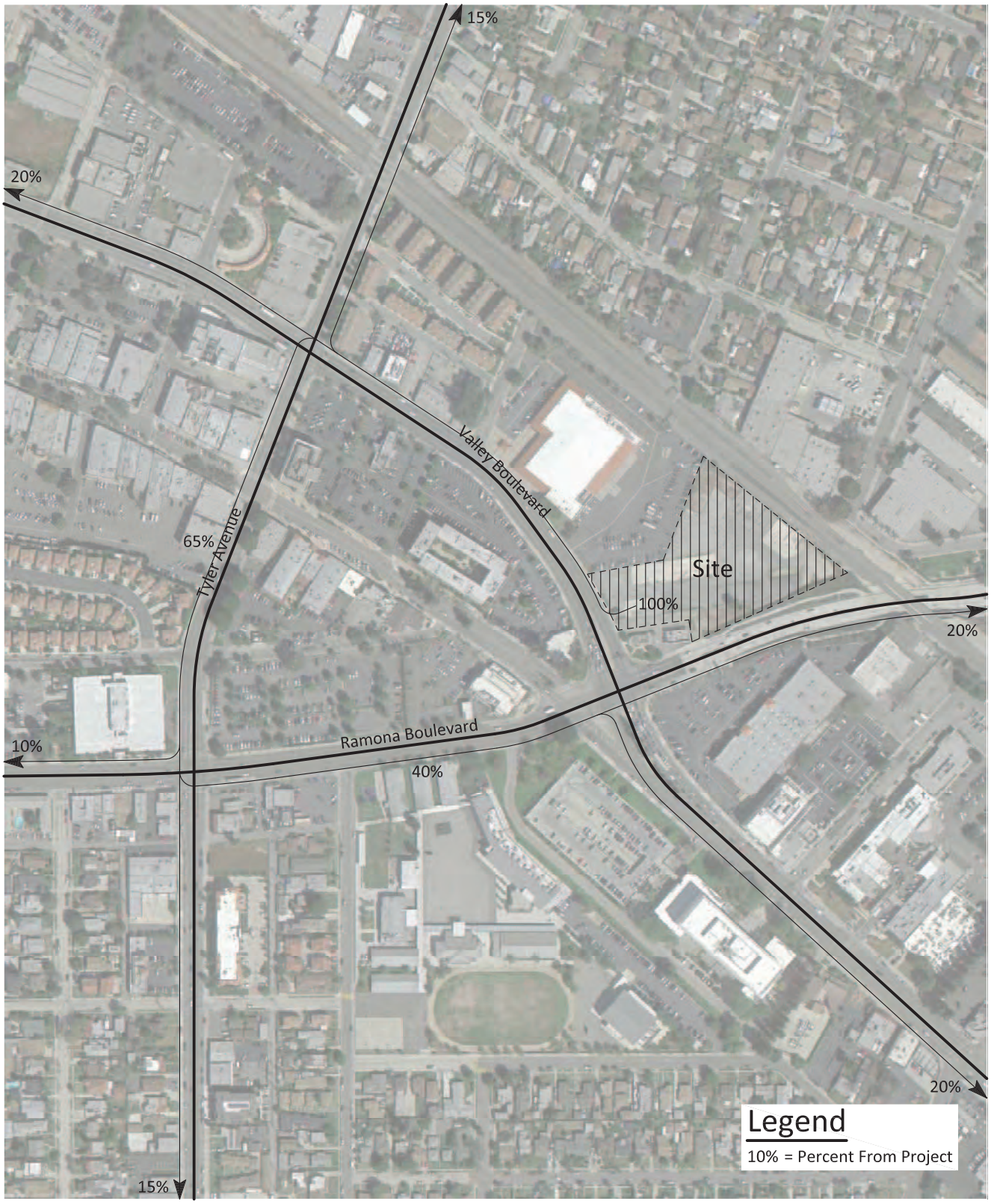
KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 14
Project Outbound Trip Distribution (Alternative 1) - Specialty Retail



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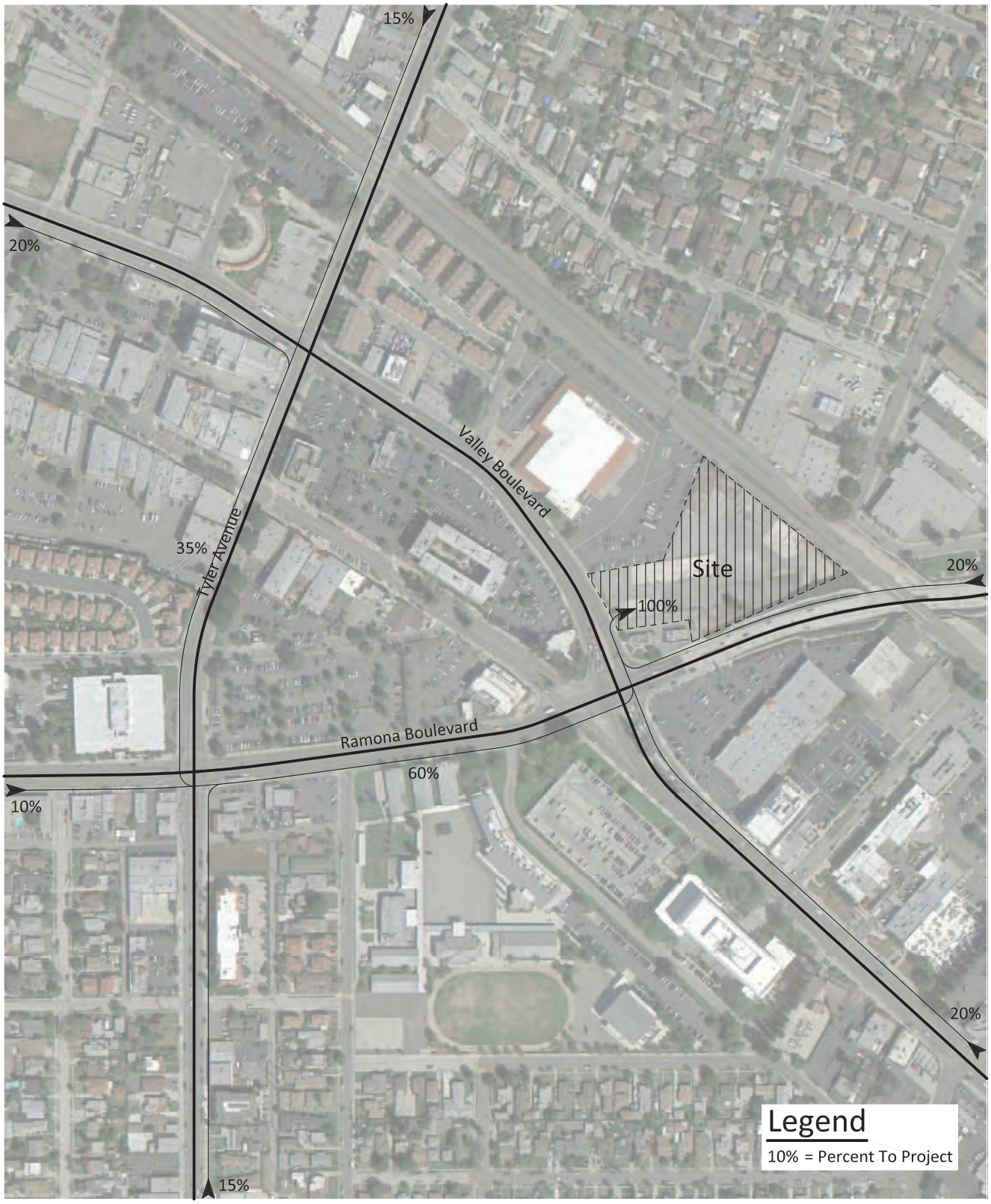
KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 15
Project Inbound Trip Distribution (Alternative 1) - Specialty Retail



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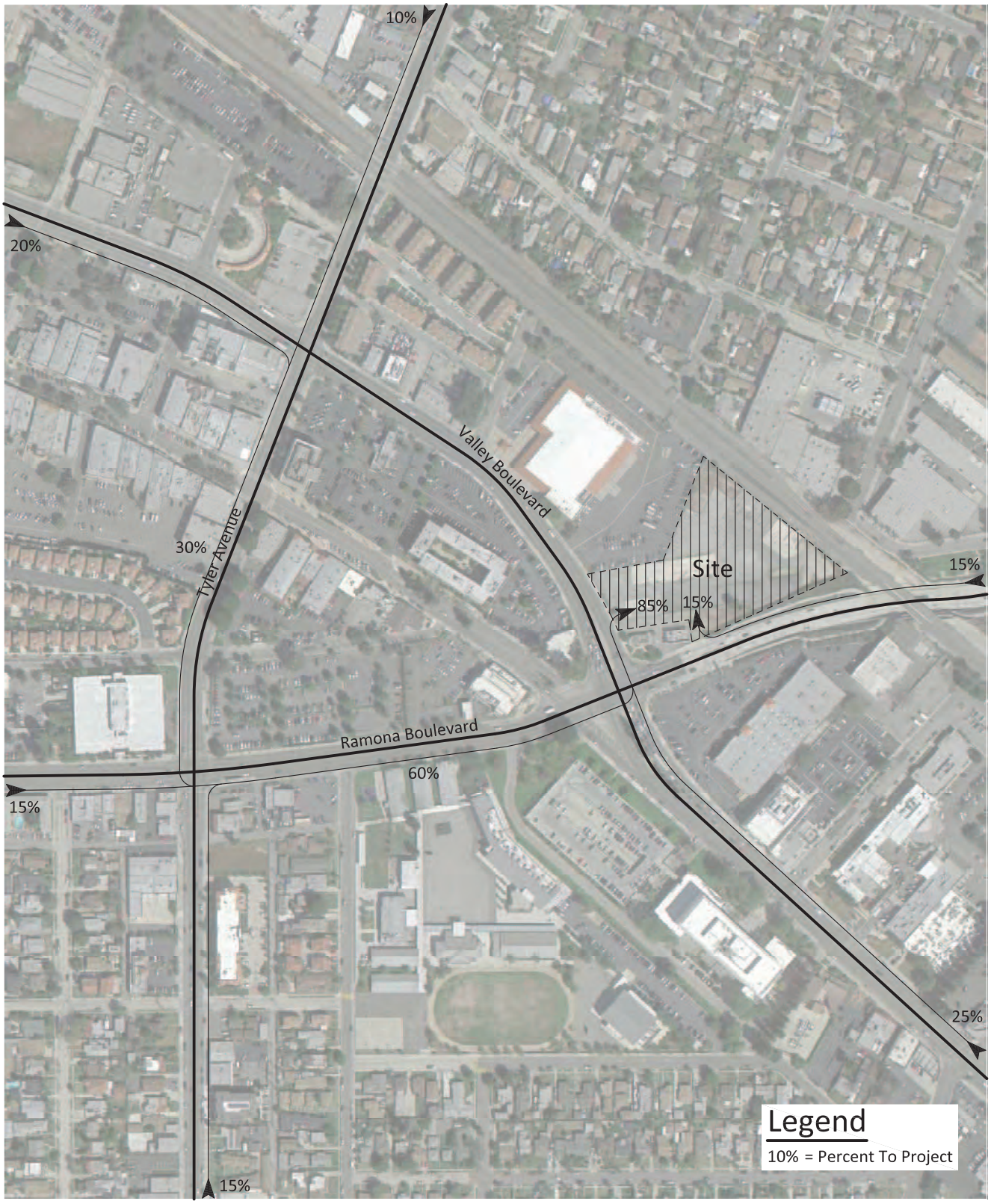
KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 17
Project Inbound Trip Distribution (Alternative 2) - Residential



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OVER 35 YEARS OF EXCELLENT SERVICE

Figure 16
Project Outbound Trip Distribution (Alternative 2) - Residential

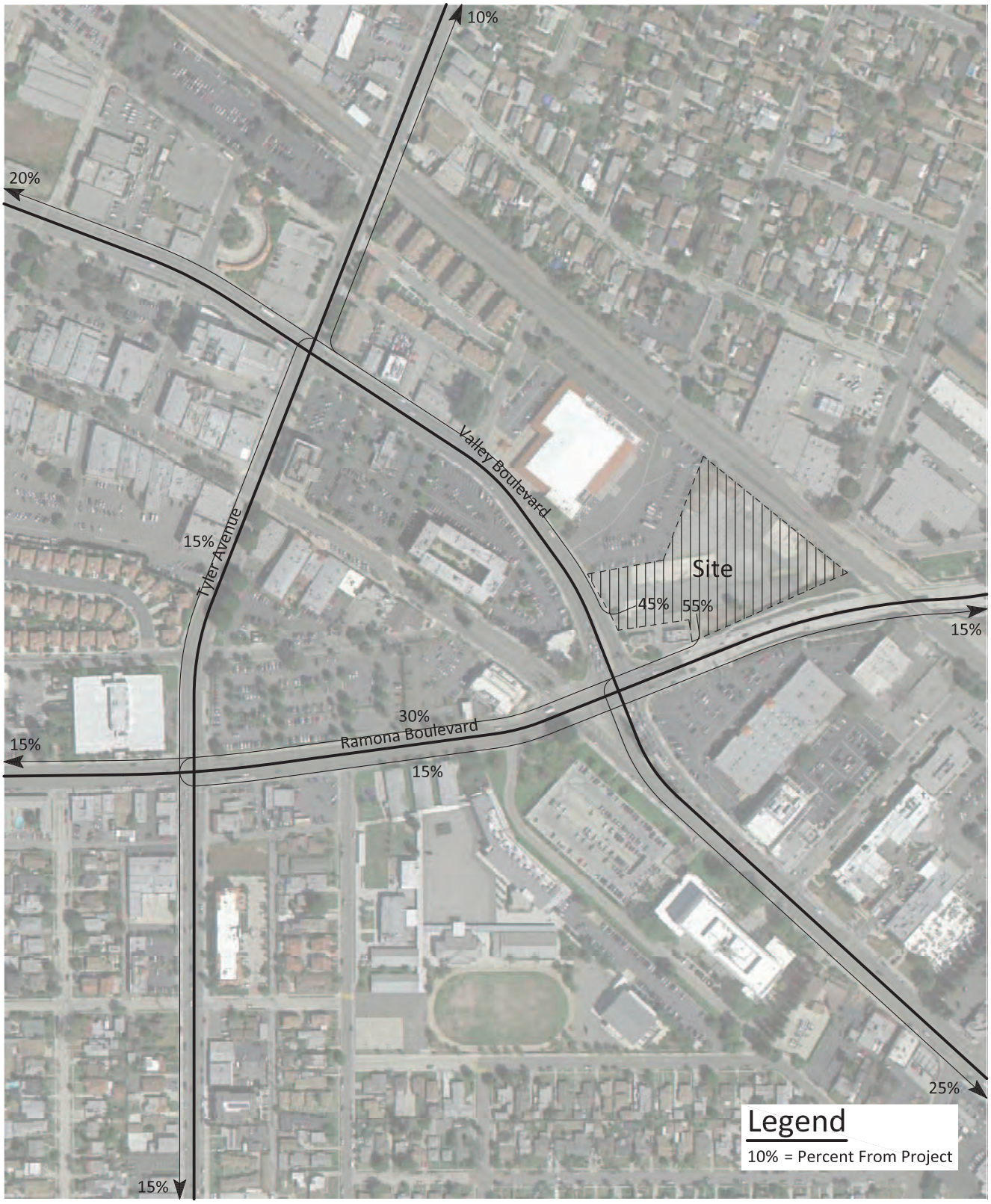

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Figure 18
Project Outbound Trip Distribution (Alternative 2) - Specialty Retail

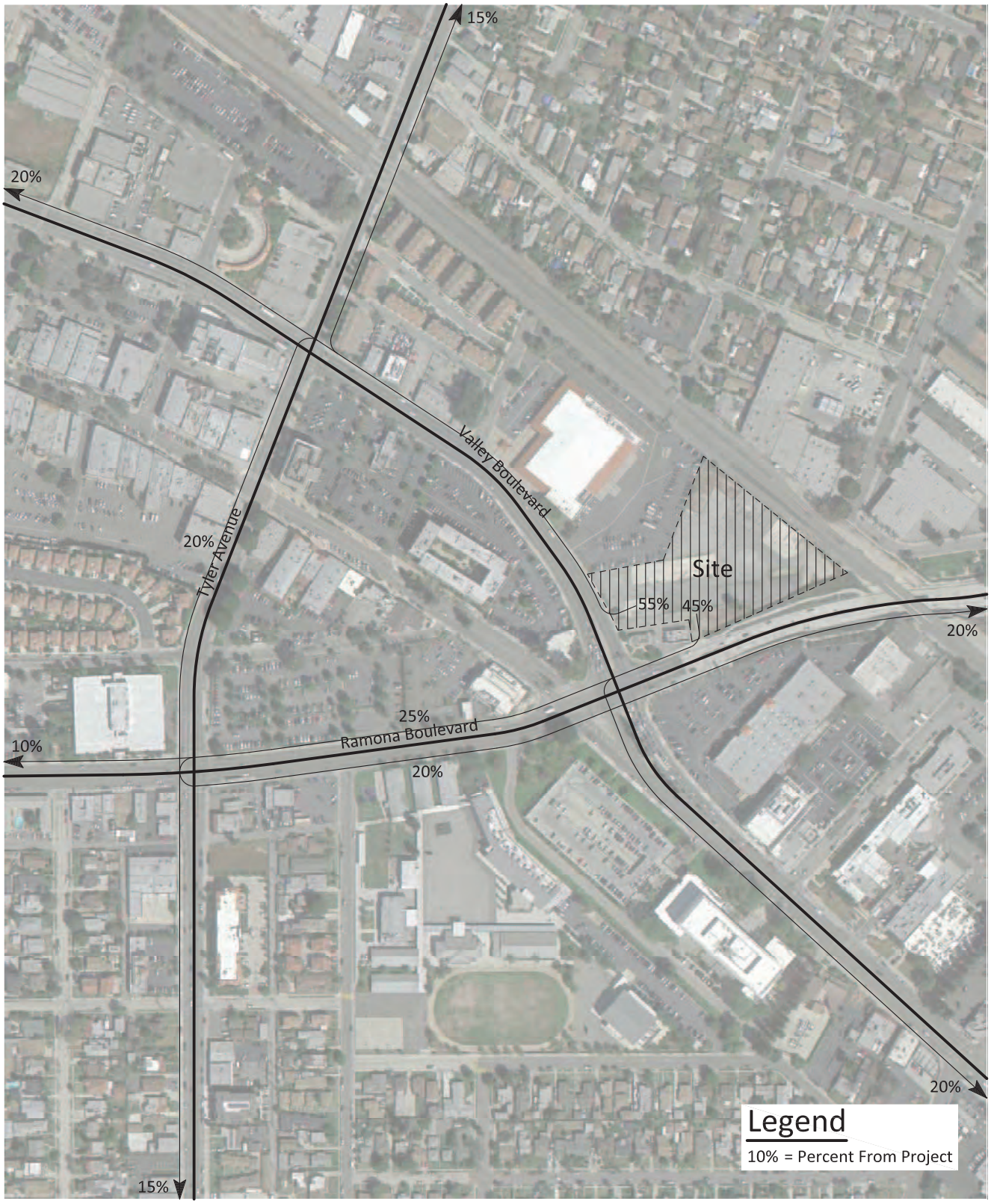

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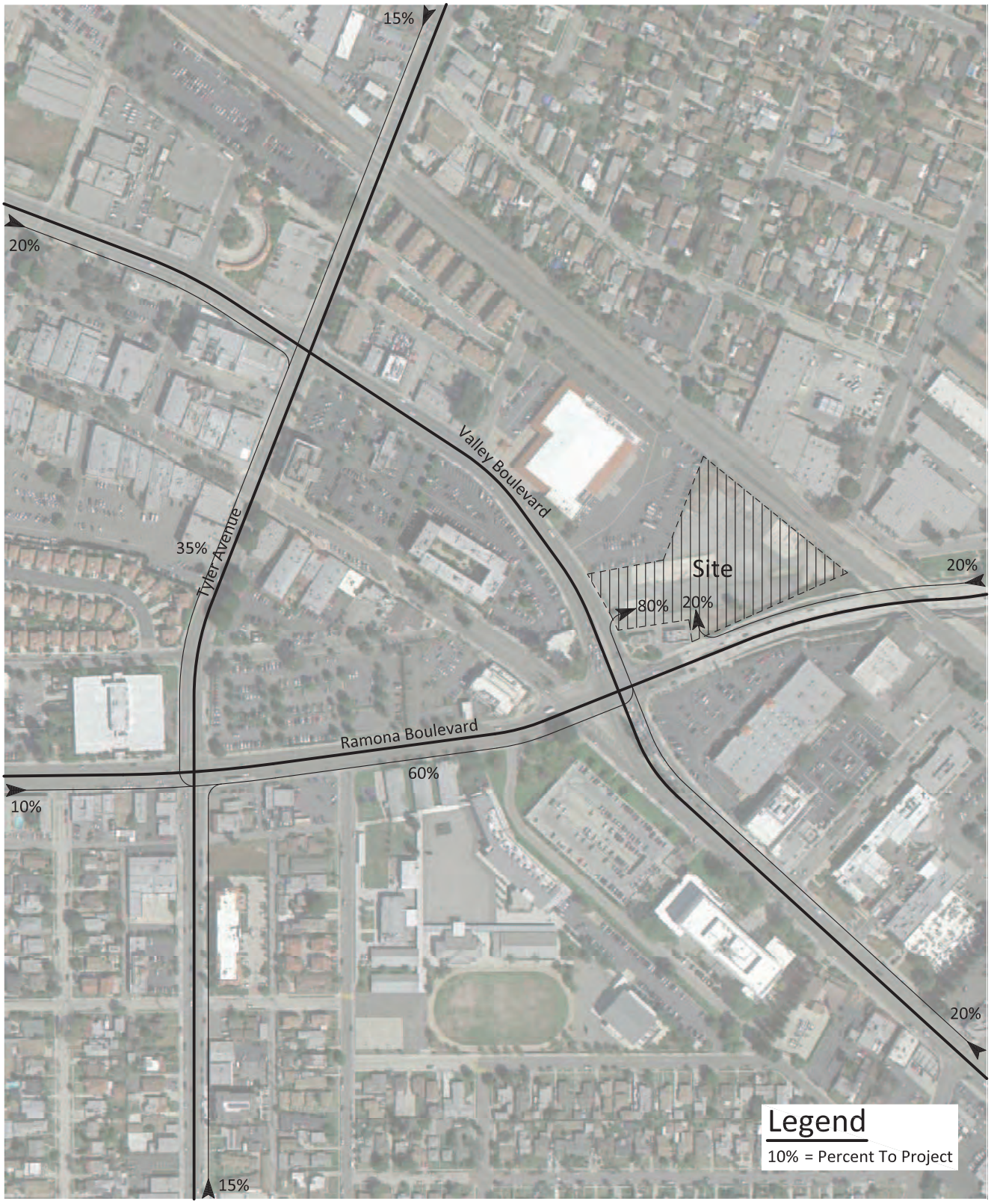
Figure 19
Project Inbound Trip Distribution (Alternative 2) - Specialty Retail



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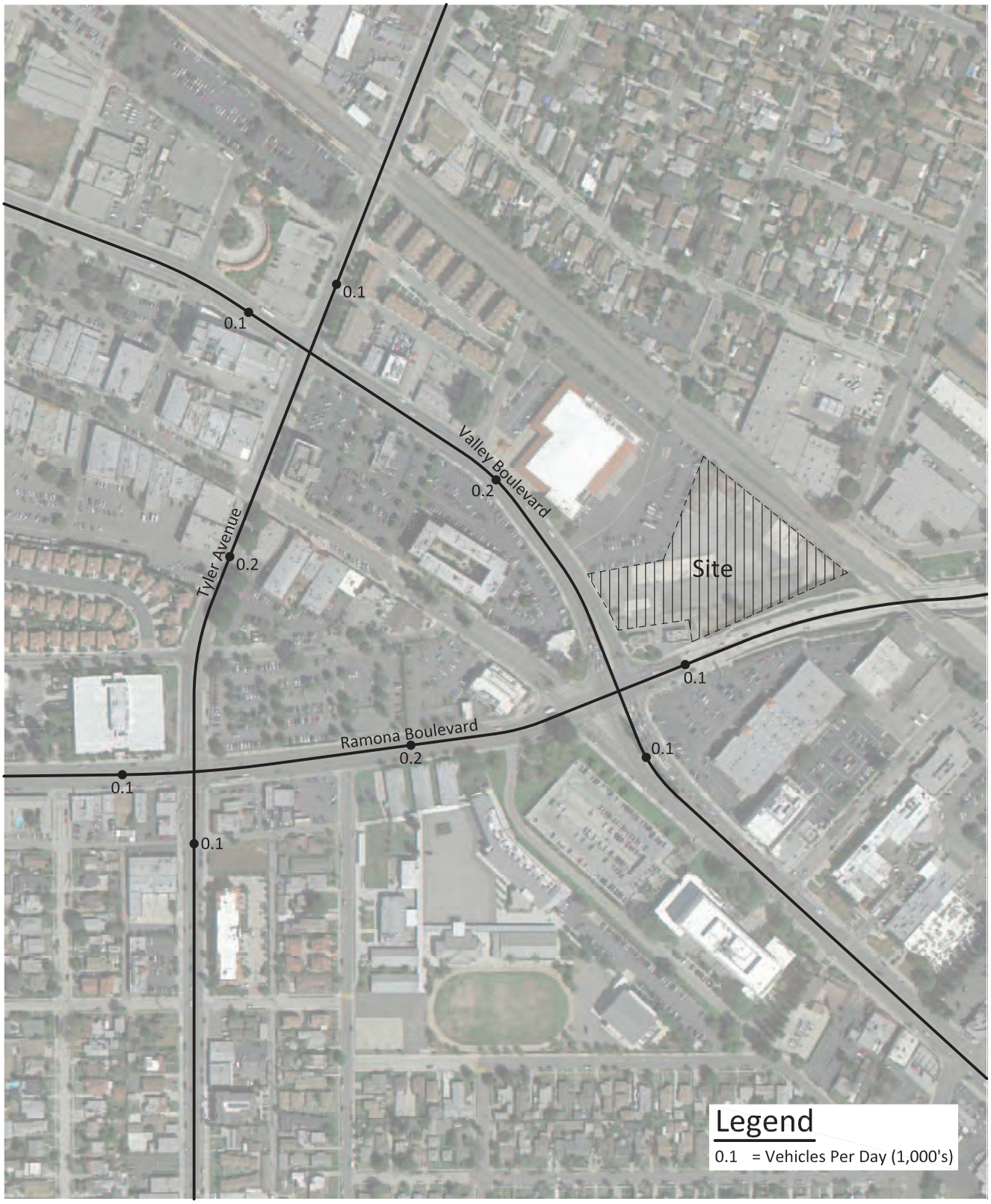
KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

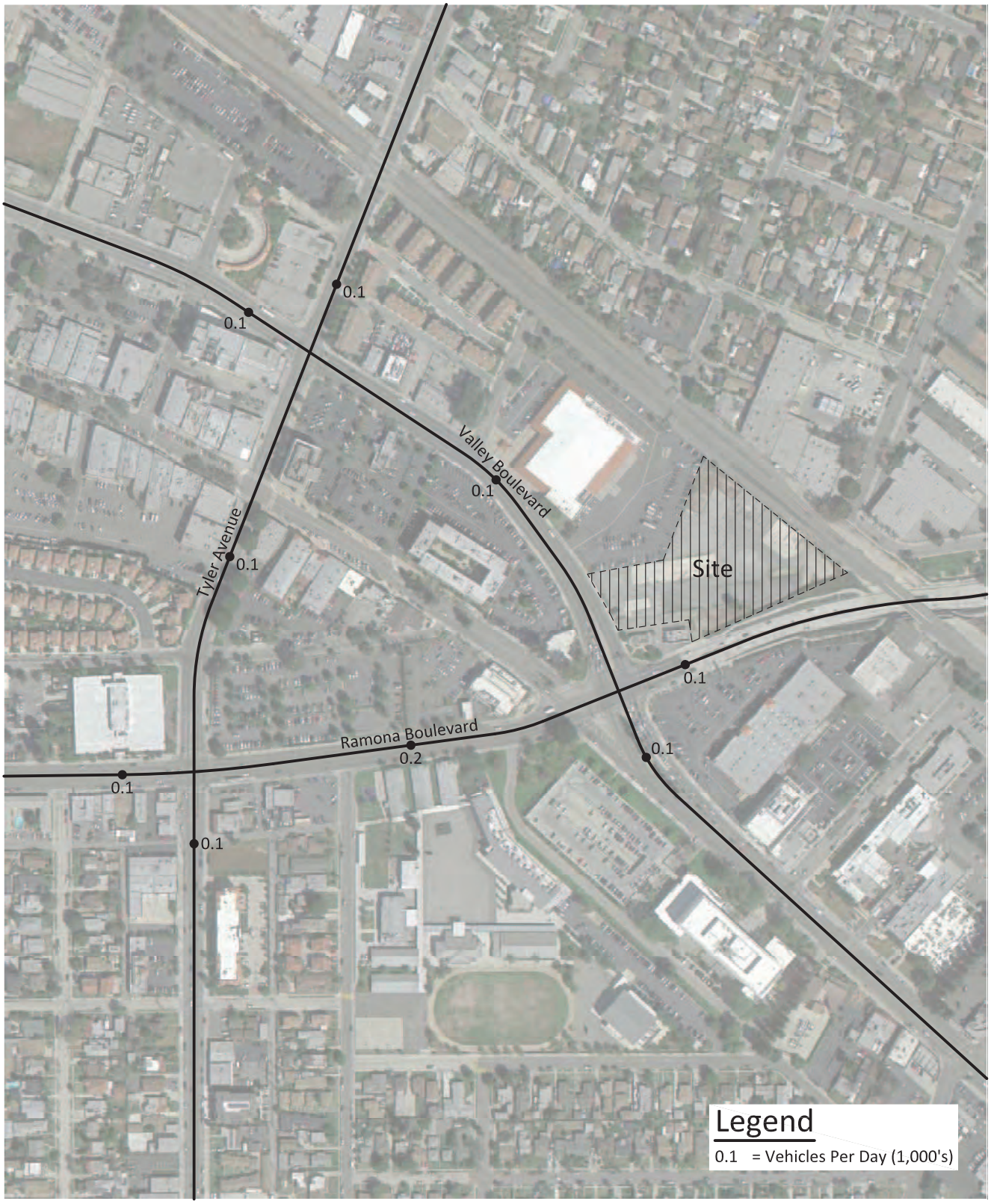
Figure 20
Project Average Daily Traffic Volumes - Alternative 1



6208/20

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 21
Project Average Daily Traffic Volumes - Alternative 2



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KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 22
Project Morning Peak Hour Intersection Turning Movement Volumes - Alternative 1

6208/22

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 23
Project Evening Peak Hour Intersection Turning Movement Volumes - Alternative 1

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KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 24
Project Morning Peak Hour Intersection Turning Movement Volumes - Alternative 2

6208/24

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 25
Project Evening Peak Hour Intersection Turning Movement Volumes - Alternative 2

6208/25

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

VI. Existing Plus Project Traffic Conditions

In this section, Existing Plus Project traffic conditions are discussed. Figures 26 to 31 depict the Existing Plus Project traffic conditions.

A. Method of Projection

For Existing Plus Project traffic conditions, the project traffic is added to the existing traffic volumes.

B. Existing Plus Project Average Daily Traffic Volumes

Existing Plus Project average daily traffic volumes are as illustrated on Figure 26 for Alternative 1 traffic conditions. Existing Plus Project average daily traffic volumes are as illustrated on Figure 27 for Alternative 2 traffic conditions.

C. Existing Plus Project Levels of Service

The technique used to assess the operation of a signalized intersection is known as Intersection Capacity Utilization, as described in Appendix D. To calculate an Intersection Capacity Utilization value, the volume of traffic using the intersection is compared with the capacity of the intersection. An Intersection Capacity Utilization value is usually expressed as a decimal. The decimal represents that portion of the hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity.

The technique used to assess the capacity needs of an unsignalized intersection is known as the Intersection Delay Method (see Appendix D). To calculate delay, the volume of traffic using the intersection is compared with the capacity of the intersection.

The Levels of Service for the Existing Plus Project traffic conditions for Alternative 1 have been calculated and are shown in Table 3. The Levels of Service for the Existing Plus Project traffic conditions for Alternative 2 have been calculated and are shown in Table 4. Existing Plus Project morning and evening peak hour intersection turning movement volumes for Alternative 1 are shown on Figures 28 and 29, respectively. Existing Plus Project morning and evening peak hour intersection turning movement volumes for Alternative 2 are shown on Figures 30 and 31, respectively.

The study area intersections are projected to operate within acceptable Levels of Service during the peak hours for Existing Plus Project traffic conditions. Existing Plus Project Level of Service worksheets are provided in Appendix D.

D. Significant Impact Evaluation

In the City of El Monte, an impact is considered significant for signalized intersections if the project related increase in the volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service F for all intersections on major corridors, truck

routes, commercial corridors or adjacent to freeway ramps. A significant impact occurs when the project related increase in volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service E for all intersections which are not on major corridors, truck routes, commercial corridors or adjacent to freeway ramps.

In the City of El Monte, an impact is considered significant for unsignalized intersections if the project related increase in traffic delay equals or exceeds two percent (0.02), causing or worsening Level of Service E for those intersections.

Table 5 depicts the Existing Plus Project traffic contribution for Alternative 1 at the study area intersections. As shown in Table 5, the project site does not significantly impact the study area intersections for Existing Plus Project traffic conditions.

Table 6 depicts the Existing Plus Project traffic contribution for Alternative 2 at the study area intersections. As shown in Table 6, the project site does not significantly impact the study area intersections for Existing Plus Project traffic conditions.

Table 3

Existing Plus Project Intersection Capacity Utilization and Level of Service - Alternative 1

Intersection	Jurisdiction	Traffic Control[2]	Intersection Approach Lanes[1]												Peak Hour Level of Service	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Tyler Avenue (NS) at:																
Ramona Boulevard (EW) - #1	El Monte	TS	1	1.5	0.5	1	1	1	1	1.5	0.5	1	1.5	0.5	0.361-A	0.378-A
Valley Boulevard (EW) - #2	El Monte	TS	1	1.5	0.5	1	1.5	0.5	1	1.5	0.5	1	1.5	0.5	0.537-A	0.516-A
Valley Boulevard (NS) at:																
Project Access (EW) - #3	El Monte	**CSS**	0	1.5	0.5	0	2	0	0	0	0	0	0	**1**	12.4-B	10.7-B
Ramona Boulevard (EW) - #4	El Monte	TS	1	2	1	1	2	1	1	2	0	1	1.5	0.5	0.576-A	0.579-A

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes (de facto right turn lane). L = Left; T = Through; R = Right; **1** = Improvement

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

Table 4

Existing Plus Project Intersection Capacity Utilization and Level of Service - Alternative 2

Intersection	Jurisdiction	Traffic Control[2]	Intersection Approach Lanes[1]												Peak Hour Level of Service	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Tyler Avenue (NS) at:																
Ramona Boulevard (EW) - #1	El Monte	TS	1	1.5	0.5	1	1	1	1	1.5	0.5	1	1.5	0.5	0.360-A	0.378-A
Valley Boulevard (EW) - #2	El Monte	TS	1	1.5	0.5	1	1.5	0.5	1	1.5	0.5	1	1.5	0.5	0.537-A	0.512-A
Valley Boulevard (NS) at:																
Project Access (EW) - #3	El Monte	**CSS**	0	1.5	0.5	0	2	0	0	0	0	0	0	**1**	12.2-B	10.6-B
Ramona Boulevard (EW) - #4	El Monte	TS	1	2	1	1	2	1	1	2	0	1	1.5	0.5	0.578-A	0.580-A
Project Access (EW) - #5	El Monte	**CSS**	0	0	0	0	0	**1**	0	2	0	0	1.5	0.5	16.3-C	9.8-A

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes (de facto right turn lane). L = Left; T = Through; R = Right; **1** = Improvement

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

Table 5

Existing Plus Project Significant Impact Evaluation
- Alternative 1

Intersection	Peak Hour	Existing		Existing Plus Project							
				Without Improvements				With Improvements			
		Intersection Capacity Utilization	Level of Service	Intersection Capacity Utilization	Level of Service	Project Impact	Significant Impact[1]	Intersection Capacity Utilization	Level of Service	Project Impact	Significant Impact[1]
Tyler Avenue (NS) at:											
Ramona Boulevard (EW) - #1	Morning	0.359	A	0.361	A	0.002	No				
	Evening	0.376	A	0.378	A	0.002	No				
Valley Boulevard (EW) - #2	Morning	0.535	A	0.537	A	0.002	No				
	Evening	0.508	A	0.516	A	0.008	No				
Valley Boulevard (NS) at:											
Ramona Boulevard (EW) - #4	Morning	0.574	A	0.576	A	0.002	No				
	Evening	0.576	A	0.579	A	0.003	No				

[1] In the City of El Monte, an impact is considered significant for signalized intersections if the project related increase in the volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service F for all intersections on major corridors, truck routes, commercial corridors or adjacent to freeway ramps. A significant impact occurs when the project related increase in volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service E for all intersections which are not on major corridors, truck routes, commercial corridors or adjacent to freeway ramps.

In the City of El Monte, an impact is considered significant for unsignalized intersections if the project related increase in traffic delay equals or exceeds two percent (0.02), causing or worsening Level Service E for those intersections.

Table 6

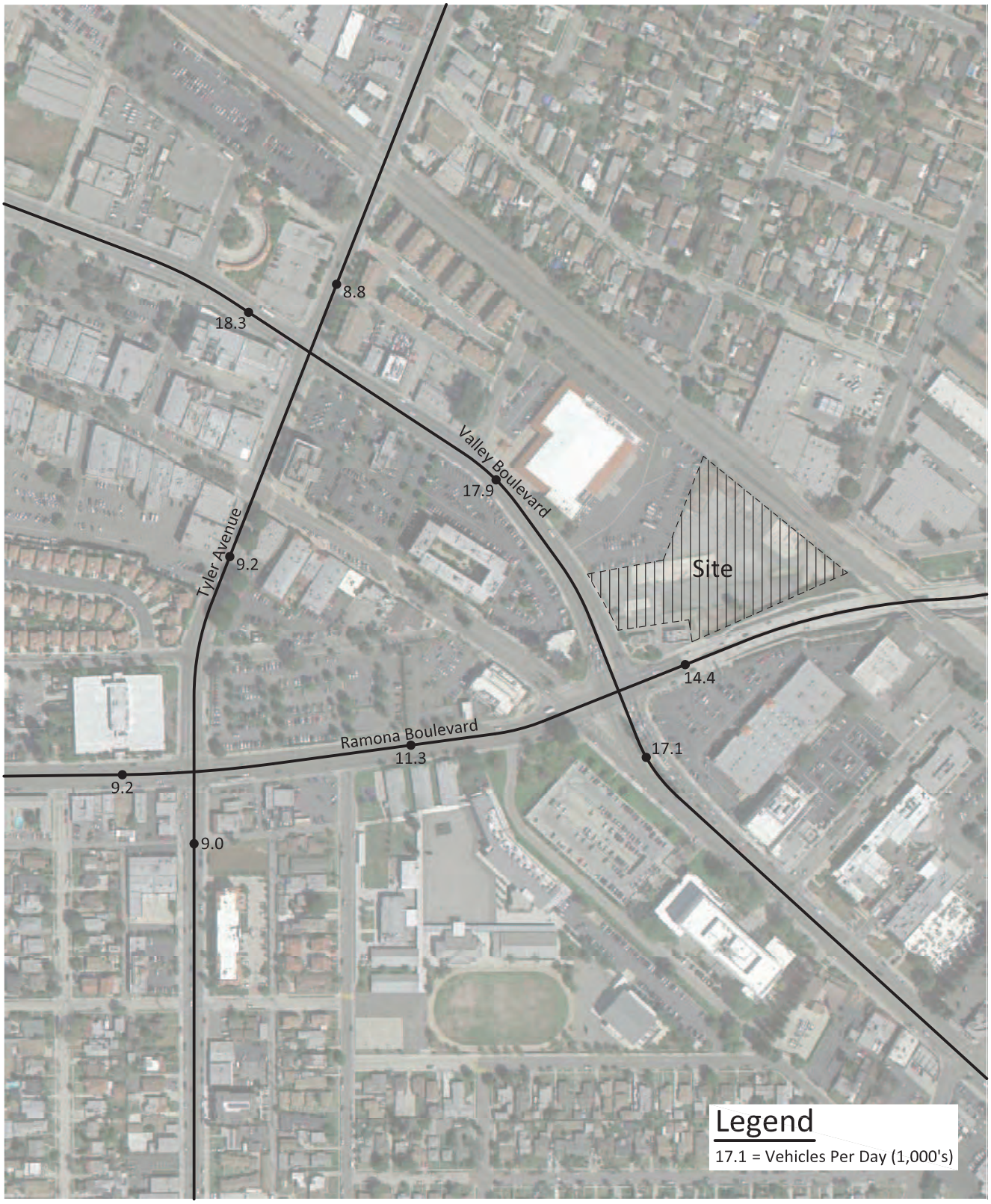
Existing Plus Project Significant Impact Evaluation
- Alternative 2

Intersection	Peak Hour	Existing		Existing Plus Project							
				Without Improvements				With Improvements			
		Intersection Capacity Utilization	Level of Service	Intersection Capacity Utilization	Level of Service	Project Impact	Significant Impact[1]	Intersection Capacity Utilization	Level of Service	Project Impact	Significant Impact[1]
Tyler Avenue (NS) at:											
Ramona Boulevard (EW) - #1	Morning	0.359	A	0.360	A	0.001	No				
	Evening	0.376	A	0.378	A	0.002	No				
Valley Boulevard (EW) - #2	Morning	0.535	A	0.537	A	0.002	No				
	Evening	0.508	A	0.512	A	0.004	No				
Valley Boulevard (NS) at:											
Ramona Boulevard (EW) - #4	Morning	0.574	A	0.578	A	0.004	No				
	Evening	0.576	A	0.580	A	0.004	No				

[1] In the City of El Monte, an impact is considered significant for signalized intersections if the project related increase in the volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service F for all intersections on major corridors, truck routes, commercial corridors or adjacent to freeway ramps. A significant impact occurs when the project related increase in volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service E for all intersections which are not on major corridors, truck routes, commercial corridors or adjacent to freeway ramps.

In the City of El Monte, an impact is considered significant for unsignalized intersections if the project related increase in traffic delay equals or exceeds two percent (0.02), causing or worsening Level o Service E for those intersections.

Figure 26
Existing Plus Project Average Daily Traffic Volumes - Alternative 1



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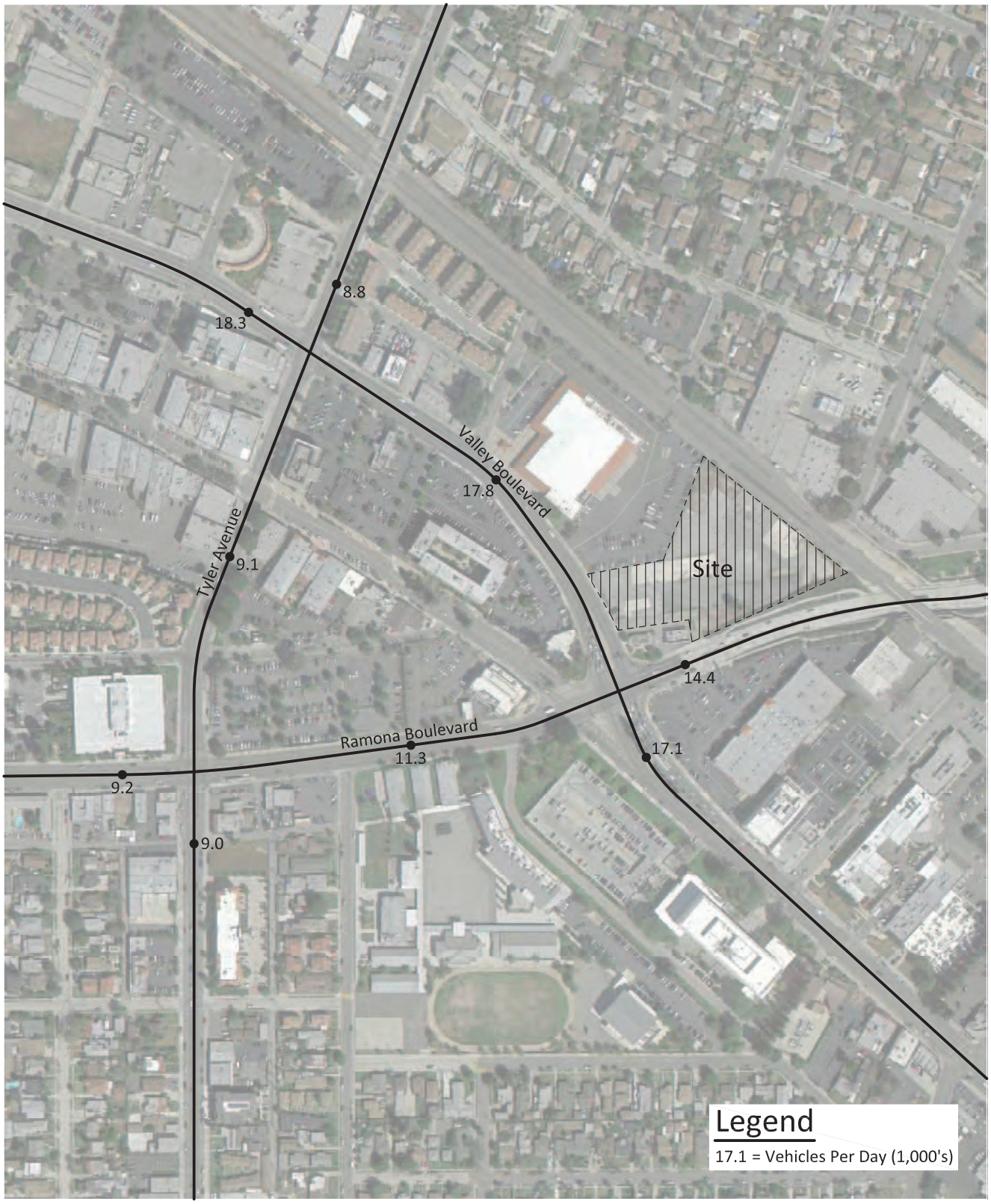
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 27
Existing Plus Project Average Daily Traffic Volumes - Alternative 2



6208/27

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 28
Existing Plus Project
Morning Peak Hour Intersection Turning Movement Volumes - Alternative 1

6208/28

Intersection reference numbers are in upper left corner of turning movement boxes.

Figure 29
Existing Plus Project
Evening Peak Hour Intersection Turning Movement Volumes - Alternative 1

6208/29

Kunzman Associates, Inc. Intersection reference numbers are in upper left corner of turning movement boxes.

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Figure 30
Existing Plus Project
Morning Peak Hour Intersection Turning Movement Volumes - Alternative 2

6208/30

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 31
Existing Plus Project
Evening Peak Hour Intersection Turning Movement Volumes - Alternative 2

6208/31

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

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VII. Opening Year (2017) Traffic Conditions

Figures 32 to 52 illustrate the Opening Year (2017) traffic conditions.

A. Method of Projection

For Opening Year (2017) traffic conditions, an areawide growth rate has been utilized to account for areawide growth on study area roadways. Opening Year (2017) traffic volumes have been calculated based on a 1.0 percent annual growth rate of existing traffic volumes over a two year period. The areawide growth rate has been obtained from the City of El Monte staff.

Areawide growth has been added to existing daily and peak hour traffic volumes on surrounding roadways, in addition to trips generated by the project.

B. Other Development

Table 7 lists the proposed land uses for other development (see Figure 32) obtained from the City of El Monte Planning Department. The list includes projects whose trips are projected to contribute traffic to the study area. Table 7 shows the daily and peak hour vehicle trips generated by the surrounding other development in the study area. Figures 33 to 40 contain the directional distributions and assignment of the other development trips.

Figure 41 shows the average daily traffic volumes that can be expected for the other development traffic conditions. Other development morning and evening peak hour intersection turning movement volumes are shown on Figures 42 and 43, respectively.

C. Opening Year (2017) Average Daily Traffic Volumes

Figure 44 shows the average daily traffic volumes that can be expected for Opening Year (2017) Without Project traffic conditions. Figure 45 shows the average daily traffic volumes that can be expected for Opening Year (2017) With Project traffic conditions for Alternative 1 and Figure 46 shows the average daily traffic volumes that can be expected for Opening Year (2017) With Project traffic conditions for Alternative 2.

D. Opening Year (2017) Intersection Levels of Service

Level of Service at Opening Year (2017) Without Project

The Opening Year (2017) Without Project Levels of Service for the study area roadway network without the proposed project are shown in Table 8. Opening Year (2017) Without Project morning and evening peak hour intersection turning movement volumes are shown on Figures 47 and 48, respectively. Opening Year (2017) Without Project Intersection Level of Service worksheets are provided in Appendix D.

For Opening Year (2017) Without Project traffic conditions (see Table 8), the study area intersections are projected to operate within acceptable Levels of Service during the peak hours.

Level of Service at Opening Year (2017) With Project

The Opening Year (2017) With Project Levels of Service for Alternative 1 for the study area roadway network with the proposed project are shown in Table 9. The Opening Year (2017) With Project Levels of Service for Alternative 2 for the study area roadway network with the proposed project are shown in Table 10. Opening Year (2017) With Project morning and evening peak hour intersection turning movement volumes for Alternative 1 are shown on Figures 49 and 50, respectively. Opening Year (2017) With Project morning and evening peak hour intersection turning movement volumes for Alternative 2 are shown on Figures 51 and 52, respectively. Opening Year (2017) With Project Intersection Level of Service worksheets are provided in Appendix D.

For Opening Year (2017) With Project traffic conditions (see Tables 9 and 10), the study area intersections are projected to operate within acceptable Levels of Service during the peak hours.

E. Significant Impact Evaluation

In the City of El Monte, an impact is considered significant for signalized intersections if the project related increase in the volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service F for all intersections on major corridors, truck routes, commercial corridors or adjacent to freeway ramps. A significant impact occurs when the project related increase in volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service E for all intersections which are not on major corridors, truck routes, commercial corridors or adjacent to freeway ramps.

In the City of El Monte, an impact is considered significant for unsignalized intersections if the project related increase in traffic delay equals or exceeds two percent (0.02), causing or worsening Level of Service E for those intersections.

Table 11 depicts the Opening Year (2017) With Project traffic contribution for Alternative 1 at the study area intersections. As shown in Table 11, the project site does not significantly impact the study area intersections for Opening Year (2017) With Project traffic conditions.

Table 12 depicts the Opening Year (2017) With Project traffic contribution for Alternative 2 at the study area intersections. As shown in Table 12, the project site does not significantly impact the study area intersections for Opening Year (2017) With Project traffic conditions.

Table 7

Other Development Trip Generation[1]

Traffic Analysis Zone	Project	Land Use	Quantity	Units[2]	Peak Hour						Daily
					Morning			Evening			
					Inbound	Outbound	Total	Inbound	Outbound	Total	
1	Gateway Magellan	Industrial	500.000	TSF							
		- Cars			318	43	361	47	334	381	2,739
		- Trucks (in Passenger Car Equivalent's)			194	25	219	30	205	235	1,684
		Total			512	68	580	77	539	616	4,423
2	Hilton Garden Hotel	Hotel	133	RM	42	29	71	41	39	80	1,087
3	Walmart Supercenter[3]	Free- Standing Discount Superstore	182.500	TSF	189	149	338	389	405	794	9,262
		- Pass-By Trip Reduction (18% AM, 28% PM, 18% Daily)			-34	-27	-61	-109	-113	-222	-1,667
		Total			155	122	277	280	292	572	7,595
4	Hickson Industrial	Industrial	60.000	TSF							
		- Cars			38	5	43	6	40	46	329
		- Trucks (in Passenger Car Equivalent's)			25	5	30	5	25	30	202
		Total			63	10	73	11	65	76	531
5	Gateway TOD	Apartments	220	DU	22	90	112	89	48	137	1,463
		Commercial Retail	25.000	TSF	15	9	24	45	48	93	1,068
		Total			37	99	136	134	96	230	2,531
6	Santa Fe Trail Project	Commercial Retail	115.000	TSF	105	64	169	315	342	657	7,437
		- Pass-By Trip Reduction (34% PM)			--	--	--	-107	-116	-223	-223
		Total			105	64	169	208	226	434	7,214
7	Garvey & Tyler[4]	Residential Condominiums	67	DU	5	24	29	23	11	34	389
		Specialty Retail	2.154	TSF	2	1	3	3	3	6	95
		- Specialty Retail Pass-By Trip Reduction (10%)			0	0	0	0	0	0	-10
		Subtotal			7	25	32	26	14	40	474
	Garvey & Peck[4]	Apartments	114	DU	12	47	59	46	25	71	758
		Commercial Retail	5.400	TSF	16	10	26	41	44	85	1,019
		- Commercial Retail Pass-By Trip Reduction (91%)			-15	-9	-24	-37	-40	-77	-927
		Subtotal			13	48	61	50	29	79	850
	Garvey & Meeker	Senior Housing	30	DU	2	4	6	4	3	7	103
		Commercial Retail	25.000	TSF	15	9	24	45	48	93	1,068
		Subtotal			17	13	30	49	51	100	1,171
	Garvey & La Madera	Senior Assisted Living	116	DU	11	6	17	11	14	25	309
		Commercial Retail	6	DU	4	2	6	11	12	23	256
		Subtotal			15	8	23	22	26	48	565
	East Valley	Apartments	70	DU	7	29	36	28	15	43	466
		Commercial Retail	30	TSF	18	11	29	53	58	111	1,281
		Subtotal			25	40	65	81	73	154	1,747
		Total			77	134	211	228	193	421	4,807
Total					991	526	1,517	979	1,450	2,429	28,188

[1] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Categories 110, 220, 230, 252, 254, 813, 820, and 826.

[2] TSF = Thousand Square Feet; RM = Rooms; DU = Dwelling Units

[3] Source: Traffic Impact Analysis for the Walmart on Arden Drive, prepared by Applied Planning, Inc., April 2014

[4] Source: Initial Study and Mitigated Negative Declaration for the 11022-11044 Garvey, Mixed Use Project, prepared by Tetra Tech, Inc., November 2014

Table 8

Opening Year (2017) Without Project
Intersection Capacity Utilization and Level of Service

Intersection	Jurisdiction	Traffic Control[2]	Intersection Approach Lanes[1]												Peak Hour Level of Service	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Tyler Avenue (NS) at:																
Ramona Boulevard (EW) - #1	El Monte	TS	1	1.5	0.5	1	1	1	1	1.5	0.5	1	1.5	0.5	0.376-A	0.413-A
Valley Boulevard (EW) - #2	El Monte	TS	1	1.5	0.5	1	1.5	0.5	1	1.5	0.5	1	1.5	0.5	0.593-A	0.598-A
Valley Boulevard (NS) at:																
Ramona Boulevard (EW) - #4	El Monte	TS	1	2	1	1	2	1	1	2	0	1	1.5	0.5	0.634-B	0.663-B

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes (de facto right turn lane). L = Left; T = Through; R = Right

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

Table 9

Opening Year (2017) With Project
Intersection Capacity Utilization and Level of Service
- Alternative 1

Intersection	Jurisdiction	Traffic Control[2]	Intersection Approach Lanes[1]												Peak Hour Level of Service	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Tyler Avenue (NS) at:																
Ramona Boulevard (EW) - #1	El Monte	TS	1	1.5	0.5	1	1	1	1	1.5	0.5	1	1.5	0.5	0.377-A	0.415-A
Valley Boulevard (EW) - #2	El Monte	TS	1	1.5	0.5	1	1.5	0.5	1	1.5	0.5	1	1.5	0.5	0.595-A	0.605-B
Valley Boulevard (NS) at:																
Project Access (EW) - #3	El Monte	**CSS**	0	1.5	0.5	0	2	0	0	0	0	0	0	**1**	13.2-B	11.4-B
Ramona Boulevard (EW) - #4	El Monte	TS	1	2	1	1	2	1	1	2	0	1	1.5	0.5	0.636-B	0.672-B

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes (de facto right turn lane). L = Left; T = Through; R = Right; **1** = Improvement

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

Table 10

Opening Year (2017) With Project
Intersection Capacity Utilization and Level of Service
- Alternative 2

Intersection	Jurisdiction	Traffic Control[2]	Intersection Approach Lanes[1]												Peak Hour Level of Service	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Tyler Avenue (NS) at:																
Ramona Boulevard (EW) - #1	El Monte	TS	1	1.5	0.5	1	1	1	1	1.5	0.5	1	1.5	0.5	0.377-A	0.415-A
Valley Boulevard (EW) - #2	El Monte	TS	1	1.5	0.5	1	1.5	0.5	1	1.5	0.5	1	1.5	0.5	0.595-A	0.601-B
Valley Boulevard (NS) at:																
Project Access (EW) - #3	El Monte	**CSS**	0	1.5	0.5	0	2	0	0	0	0	0	0	**1**	12.9-B	11.3-B
Ramona Boulevard (EW) - #4	El Monte	TS	1	2	1	1	2	1	1	2	0	1	1.5	0.5	0.638-B	0.672-B
Project Access (EW) - #5	El Monte	**CSS**	0	0	0	0	0	**1**	0	2	0	0	1.5	0.5	17.3-C	10.1-B

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes (de facto right turn lane). L = Left; T = Through; R = Right; **1** = Improvement

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

Table 11

Opening Year (2017) With Project Significant Impact Evaluation
- Alternative 1

Intersection	Peak Hour	Opening Year (2017) Without Project		Opening Year (2017) With Project							
				Without Improvements				With Improvements			
		Intersection Capacity Utilization	Level of Service	Intersection Capacity Utilization	Level of Service	Project Impact	Significant Impact[1]	Intersection Capacity Utilization	Level of Service	Project Impact	Significant Impact[1]
Tyler Avenue (NS) at:											
Ramona Boulevard (EW) - #1	Morning	0.376	A	0.377	A	0.001	No				
	Evening	0.413	A	0.415	A	0.002	No				
Valley Boulevard (EW) - #2	Morning	0.593	A	0.595	A	0.002	No				
	Evening	0.598	A	0.605	B	0.007	No				
Valley Boulevard (NS) at:											
Ramona Boulevard (EW) - #4	Morning	0.634	B	0.636	B	0.002	No				
	Evening	0.663	B	0.672	B	0.009	No				

[1] In the City of El Monte, an impact is considered significant for signalized intersections if the project related increase in the volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service F for all intersections on major corridors, truck routes, commercial corridors or adjacent to freeway ramps. A significant impact occurs when the project related increase in volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service E for all intersections which are not on major corridors, truck routes, commercial corridors or adjacent to freeway ramps.

In the City of El Monte, an impact is considered significant for unsignalized intersections if the project related increase in traffic delay equals or exceeds two percent (0.02), causing or worsening Level of Service E for those intersections.

Table 12

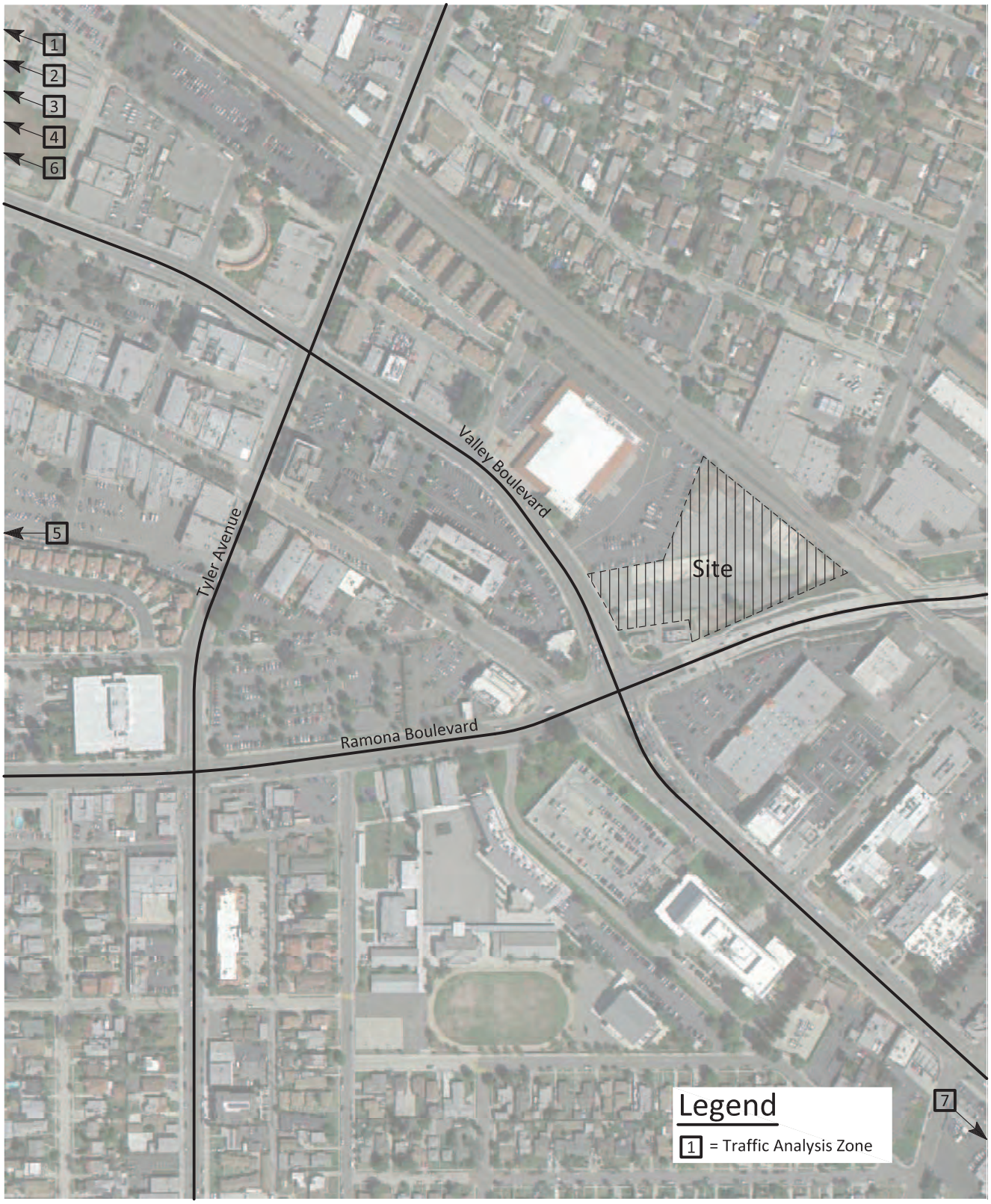
Opening Year (2017) With Project Significant Impact Evaluation
- Alternative 2

Intersection	Peak Hour	Opening Year (2017) Without Project		Opening Year (2017) With Project							
				Without Improvements				With Improvements			
		Intersection Capacity Utilization	Level of Service	Intersection Capacity Utilization	Level of Service	Project Impact	Significant Impact[1]	Intersection Capacity Utilization	Level of Service	Project Impact	Significant Impact[1]
Tyler Avenue (NS) at:											
Ramona Boulevard (EW) - #1	Morning	0.376	A	0.377	A	0.001	No				
	Evening	0.413	A	0.415	A	0.002	No				
Valley Boulevard (EW) - #2	Morning	0.593	A	0.595	A	0.002	No				
	Evening	0.598	A	0.601	B	0.003	No				
Valley Boulevard (NS) at:											
Ramona Boulevard (EW) - #4	Morning	0.634	B	0.638	B	0.004	No				
	Evening	0.663	B	0.672	B	0.009	No				

[1] In the City of El Monte, an impact is considered significant for signalized intersections if the project related increase in the volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service F for all intersections on major corridors, truck routes, commercial corridors or adjacent to freeway ramps. A significant impact occurs when the project related increase in volume to capacity ratio equals or exceeds two percent (0.02), causing or worsening Level of Service E for all intersections which are not on major corridors, truck routes, commercial corridors or adjacent to freeway ramps.

In the City of El Monte, an impact is considered significant for unsignalized intersections if the project related increase in traffic delay equals or exceeds two percent (0.02), causing or worsening Level of Service E for those intersections.

Figure 32
Other Development Traffic Analysis Zone Map

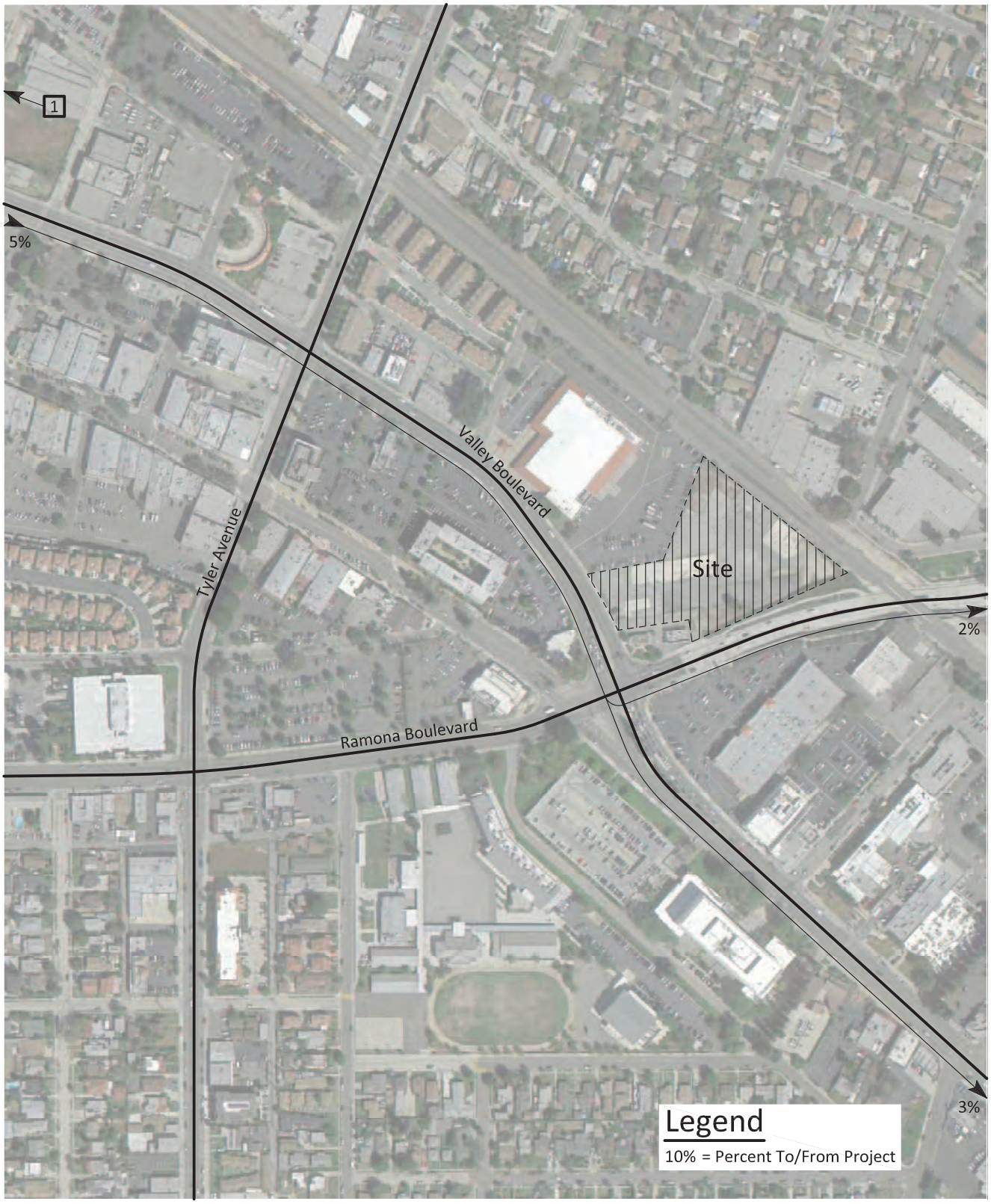


6208/32

KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

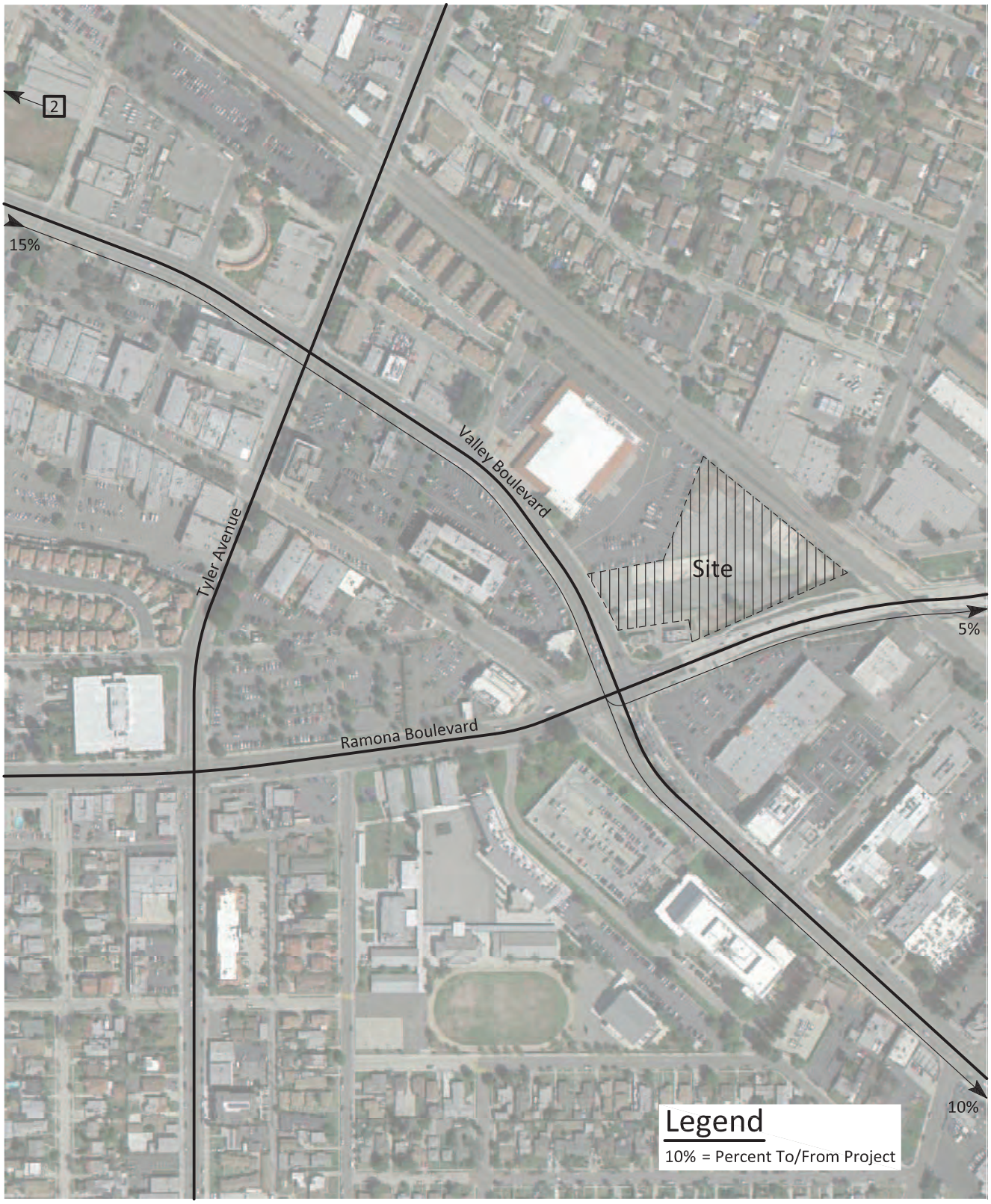
Figure 33
Other Development Traffic Analysis Zone 1 Trip Distribution - Cars



6208/33

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

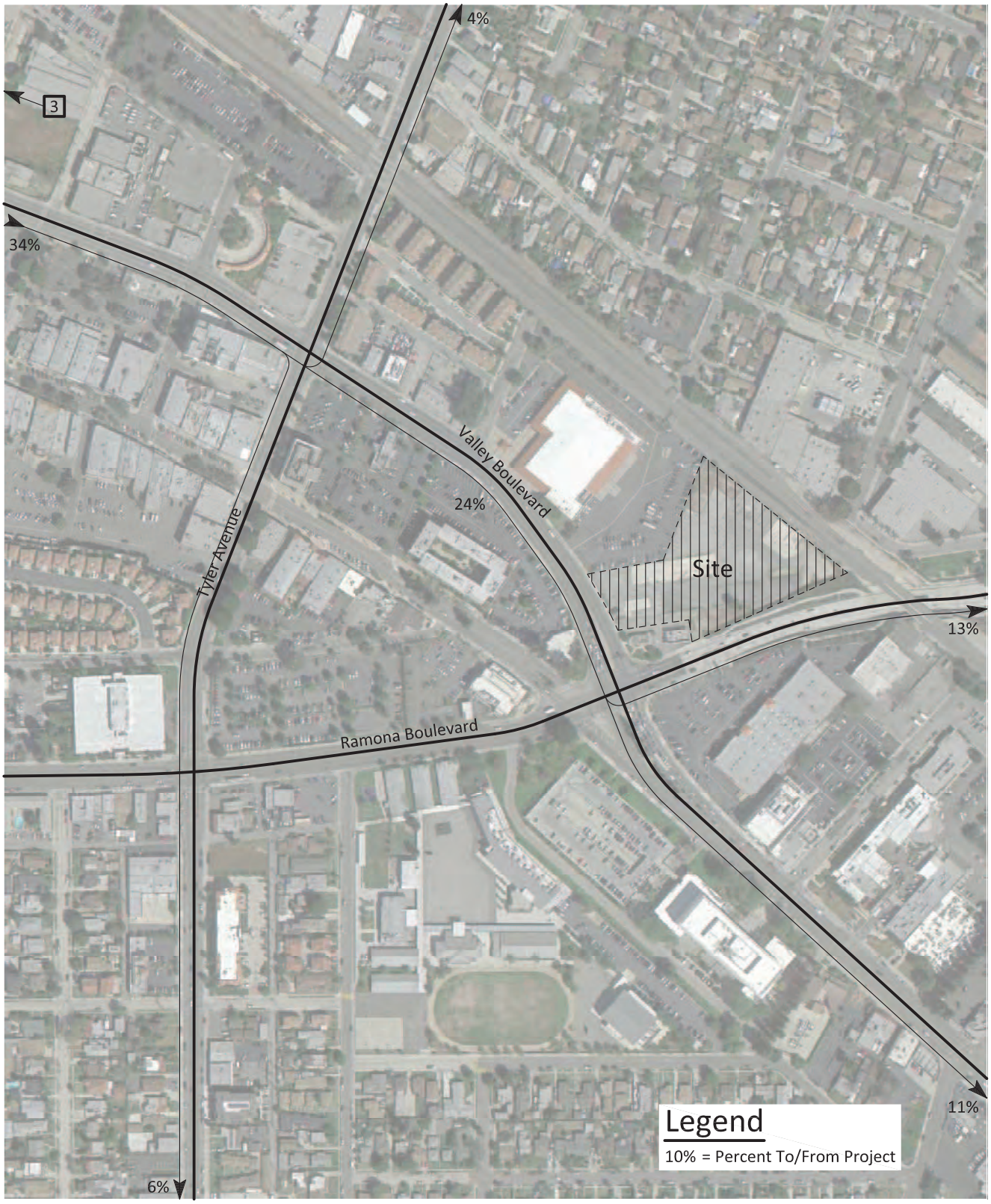
Figure 34
Other Development Traffic Analysis Zone 2 Trip Distribution



6208/34

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

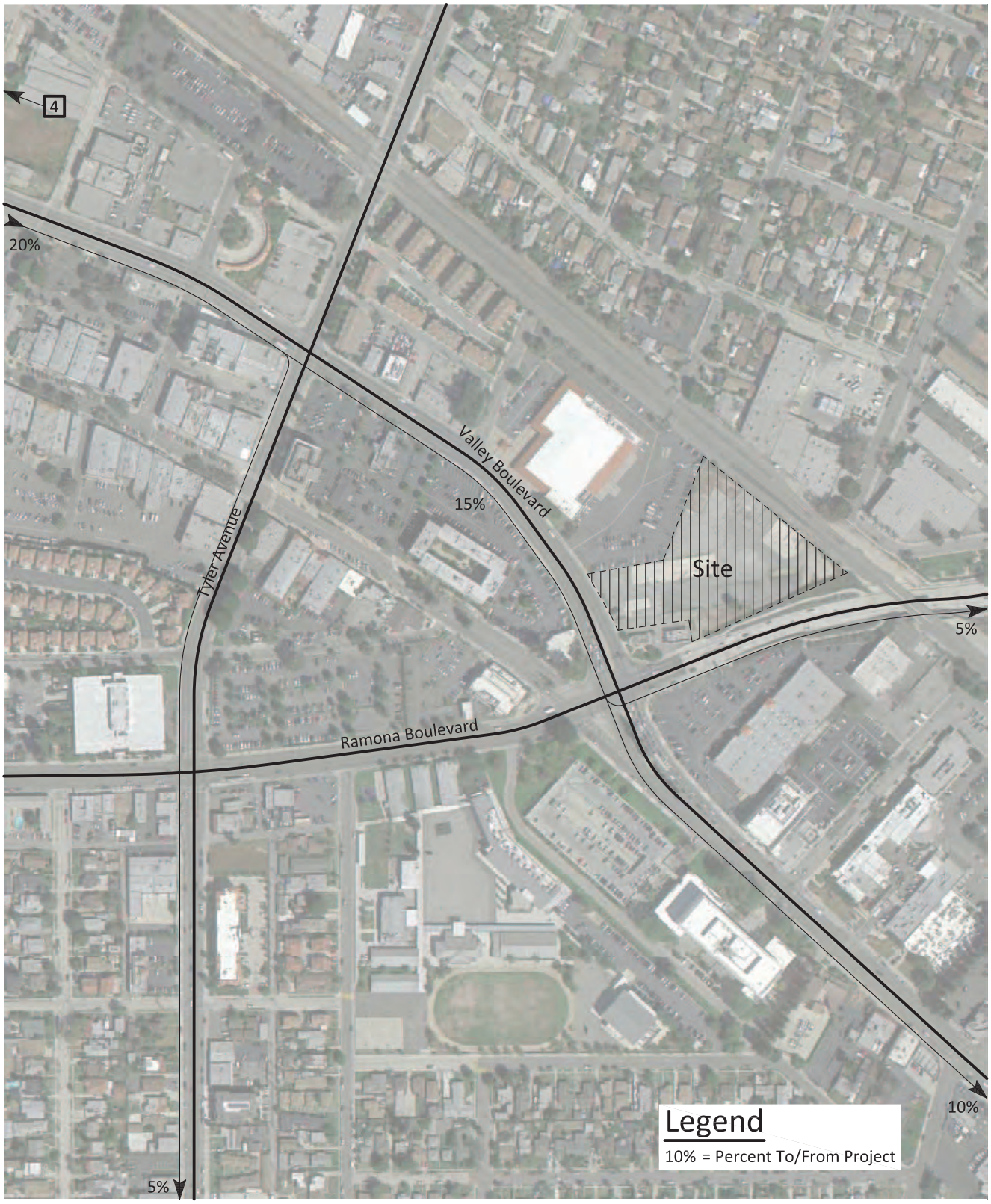
Figure 35
Other Development Traffic Analysis Zone 3 Trip Distribution



6208/35

Kunzman Associates, Inc.
Over 35 Years of Excellent Service

Figure 36
Other Development Traffic Analysis Zone 4 Trip Distribution - Cars



6208/36

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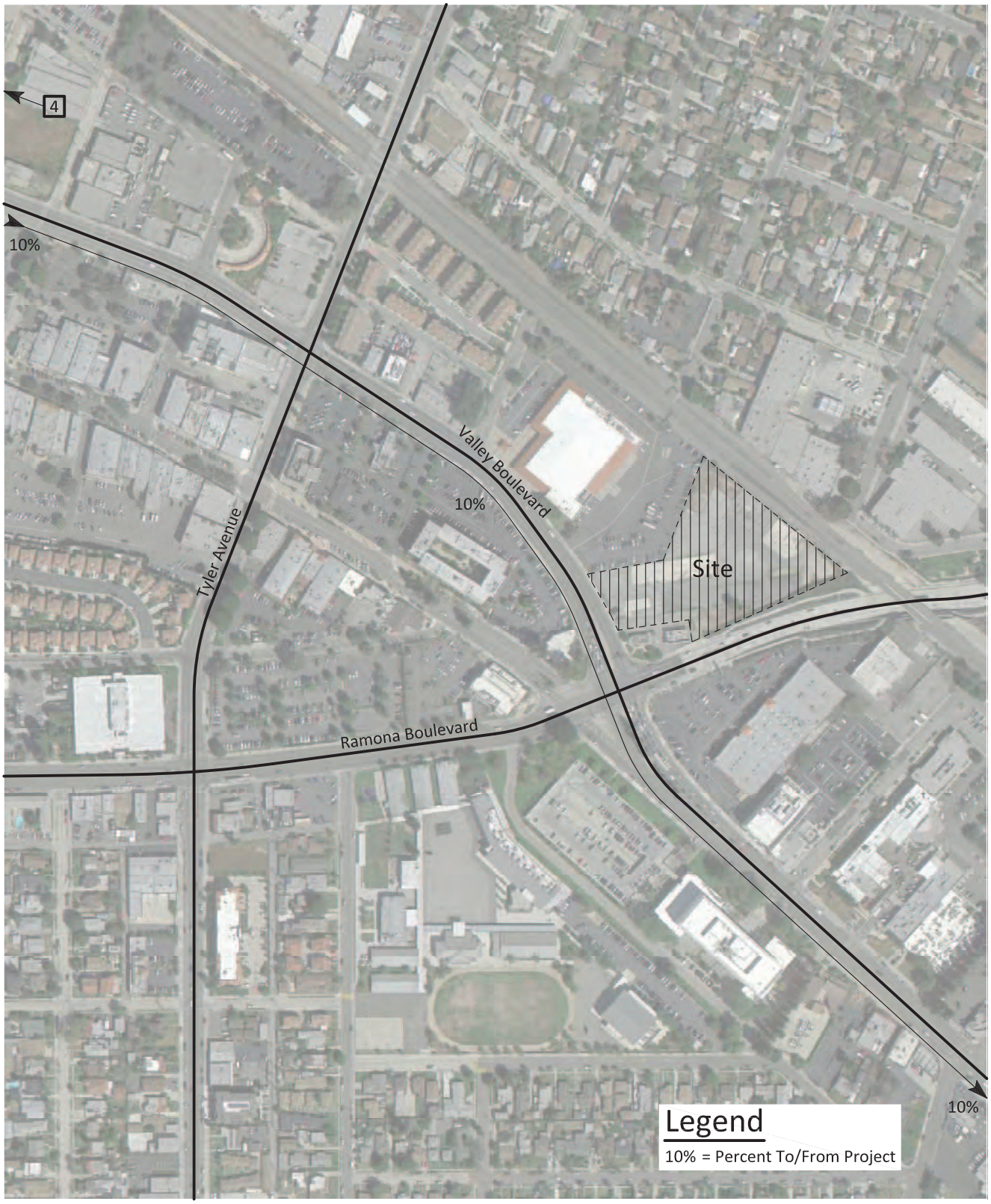
Figure 37
Other Development Traffic Analysis Zone 4 Trip Distribution - Trucks



6208/37

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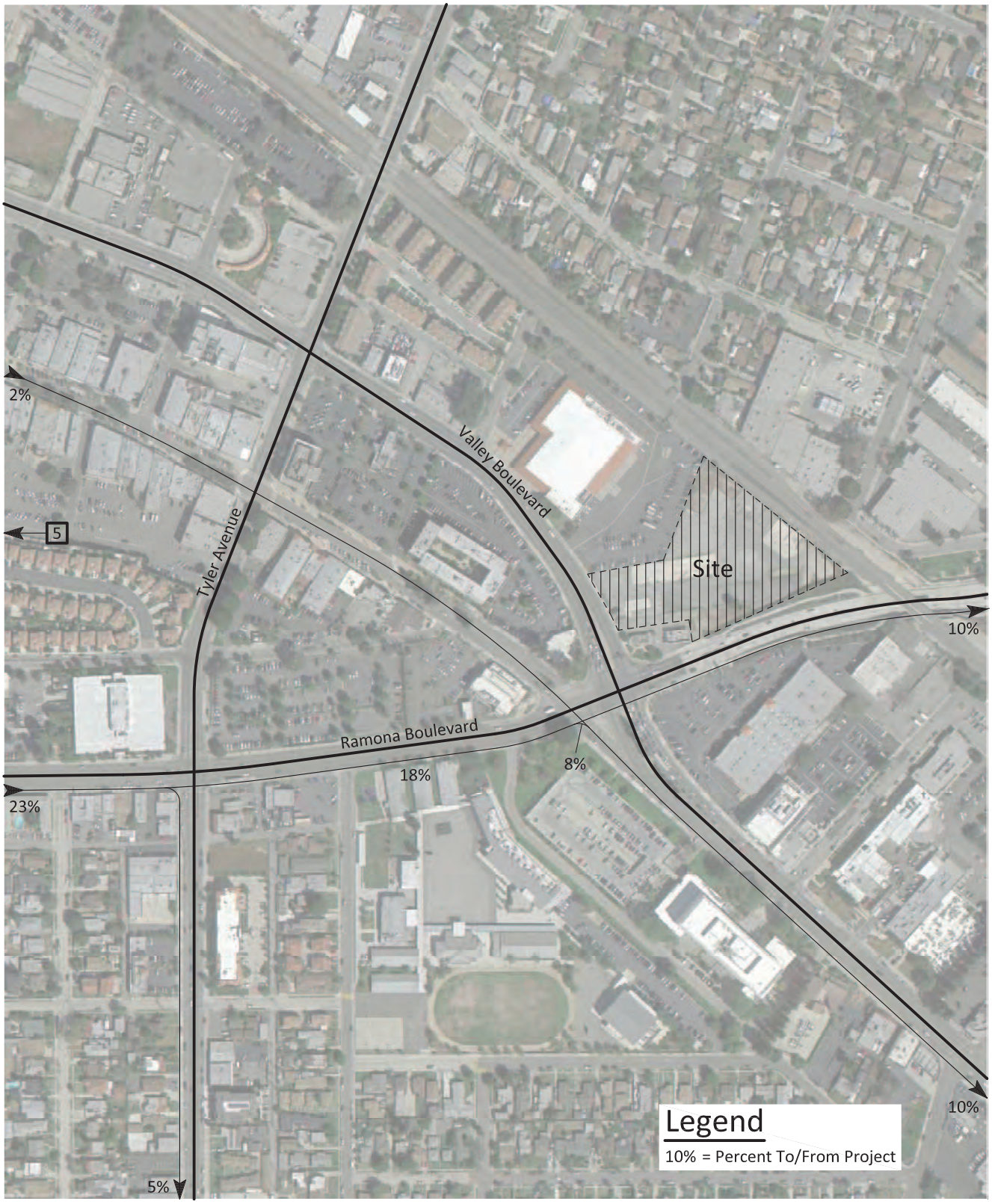
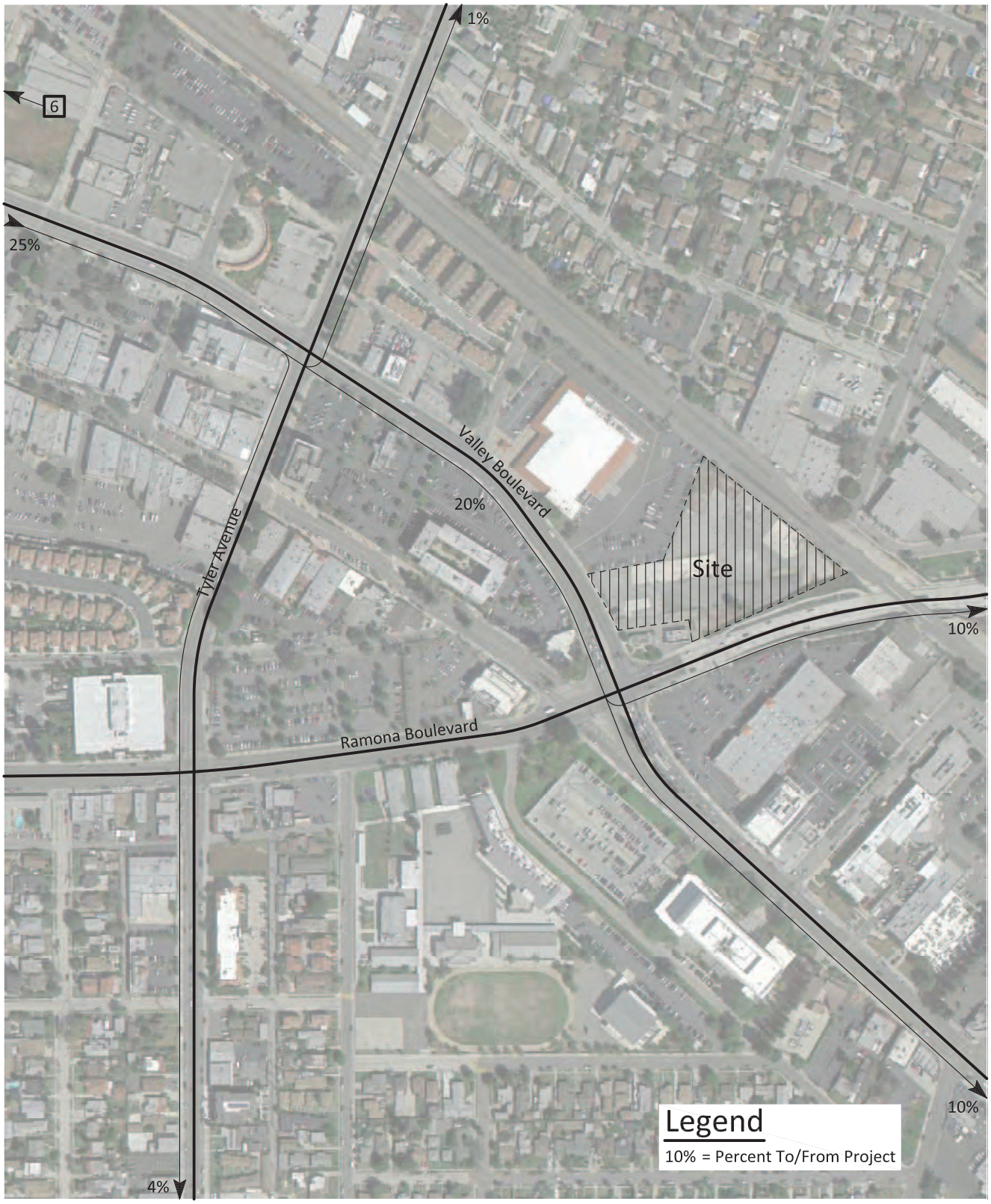
Figure 38
Other Development Traffic Analysis Zone 5 Trip Distribution



6208/38

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 39
Other Development Traffic Analysis Zone 6 Trip Distribution



6208/39

KUNZMAN ASSOCIATES, INC.
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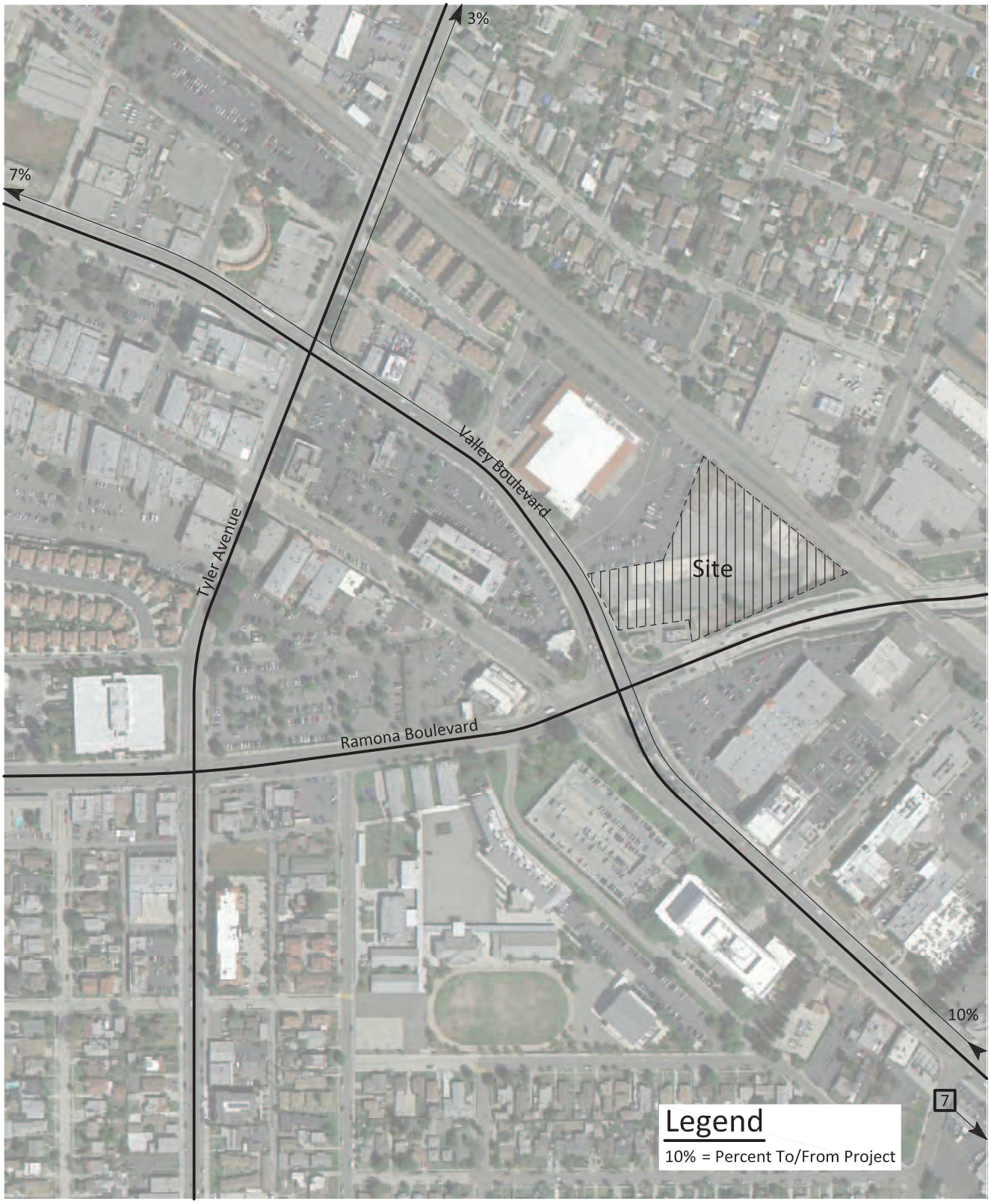
Figure 40
Other Development Traffic Analysis Zone 7 Trip Distribution



6208/40

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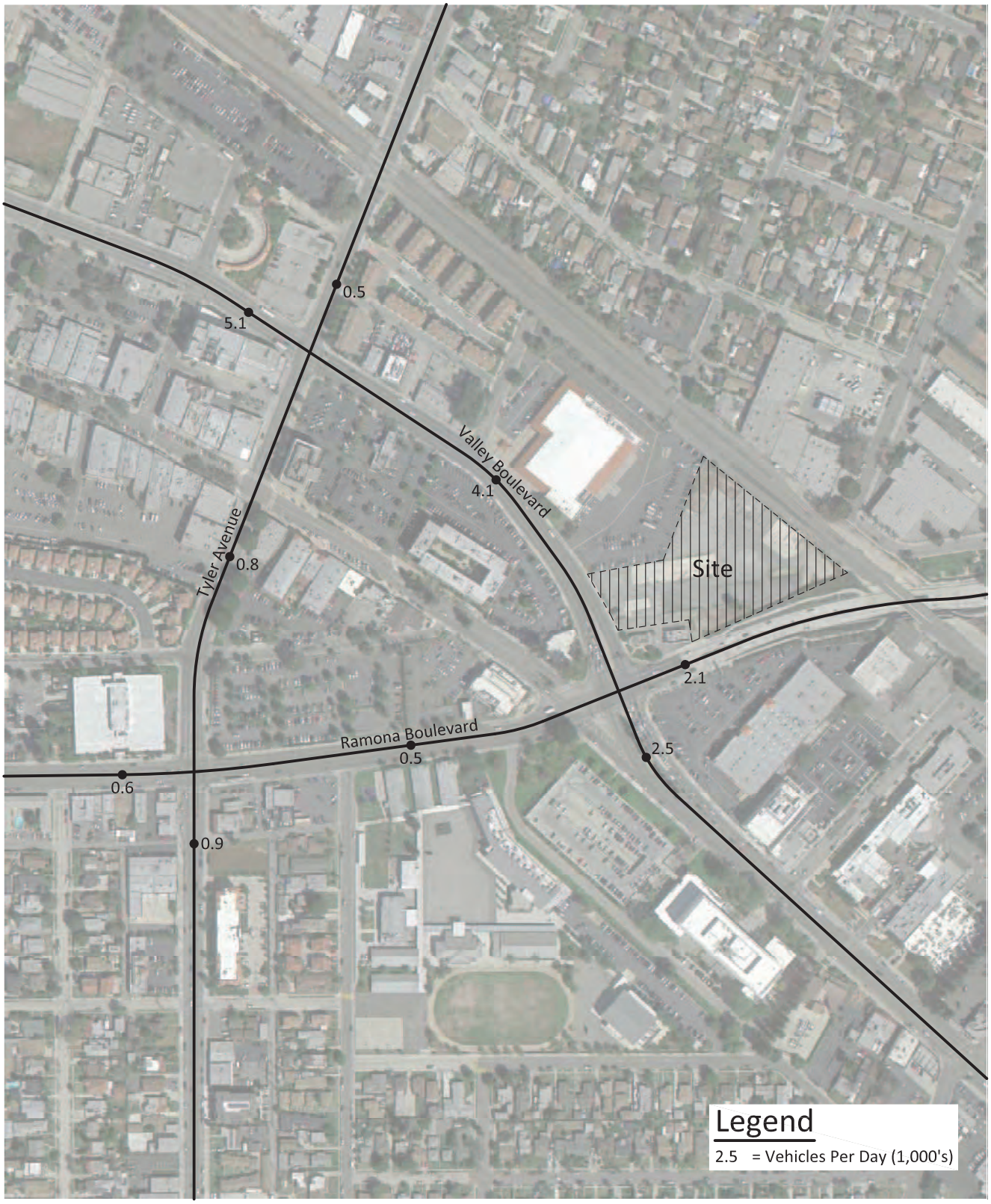
Figure 41
Other Development Average Daily Traffic Volumes



6208/41

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OVER 35 YEARS OF EXCELLENT SERVICE

Figure 42
Other Development
Morning Peak Hour Intersection Turning Movement Volumes

6208/42

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

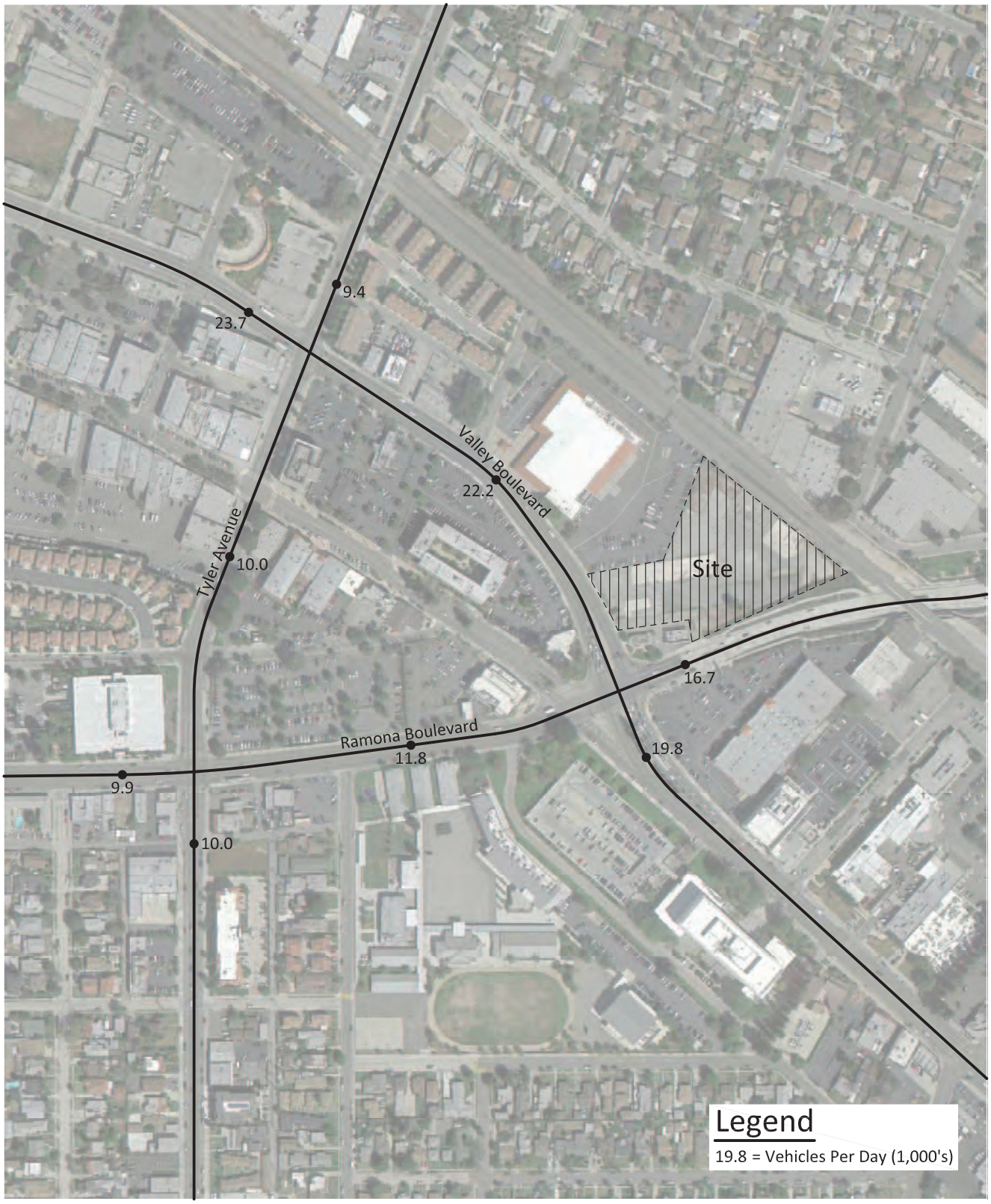
Figure 43
Other Development
Evening Peak Hour Intersection Turning Movement Volumes

6208/43

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 44
Opening Year (2017) Without Project Average Daily Traffic Volumes



6208/44

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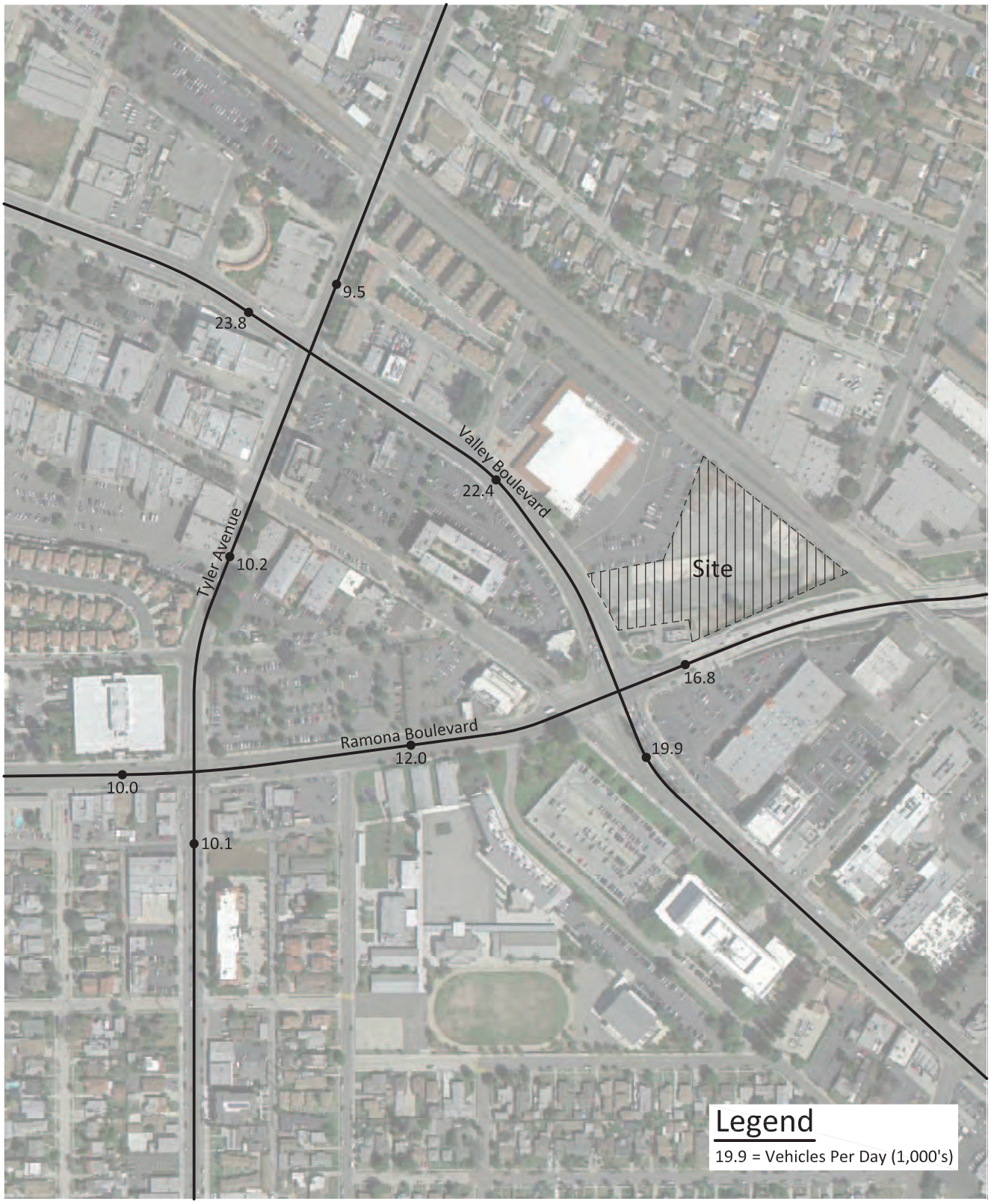
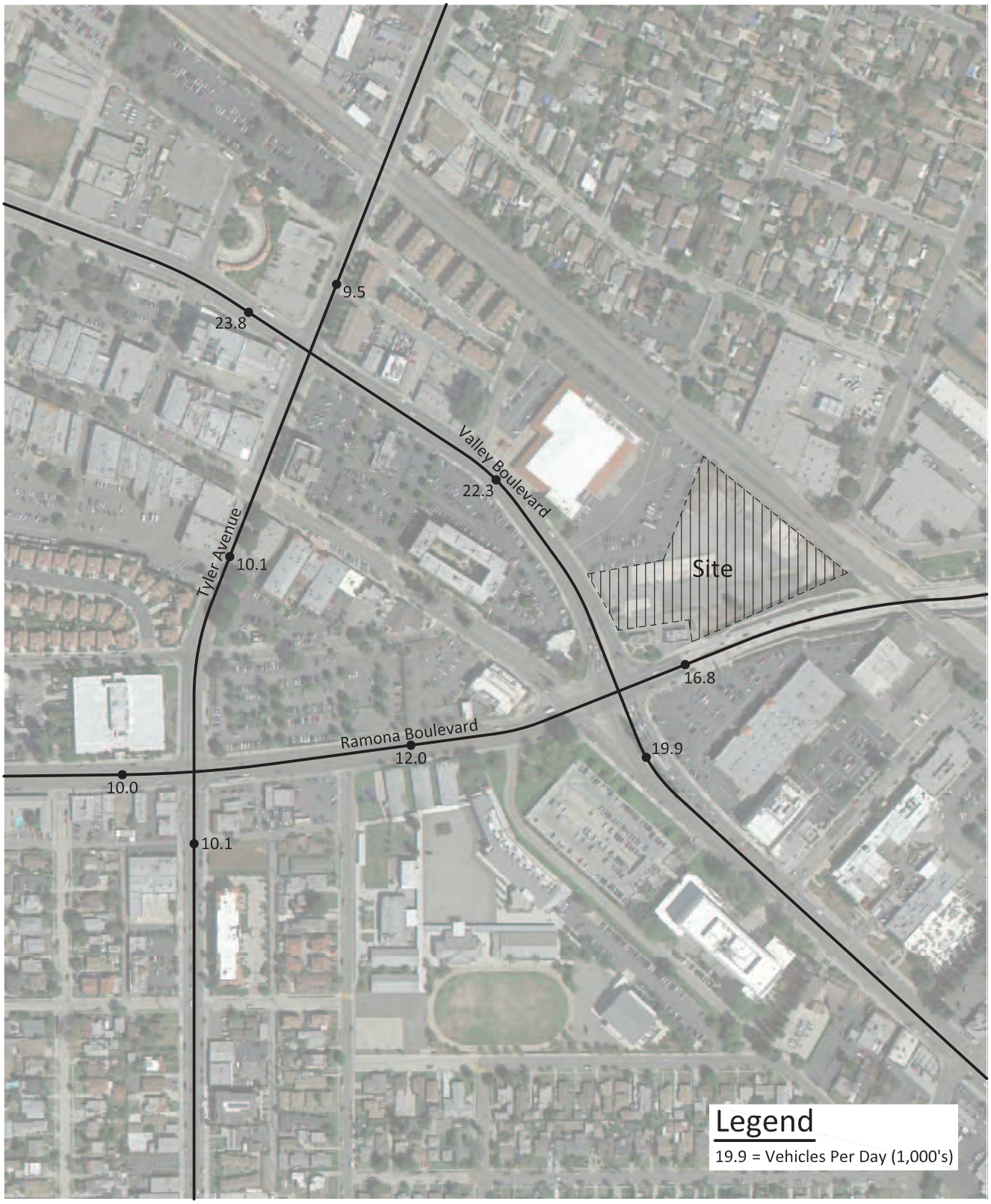
Figure 45
Opening Year (2017) With Project Average Daily Traffic Volumes - Alternative 1



6208/45

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 46
Opening Year (2017) With Project Average Daily Traffic Volumes - Alternative 2



6208/46

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 47
Opening Year (2017) Without Project
Morning Peak Hour Intersection Turning Movement Volumes

6208/47

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 48
Opening Year (2017) Without Project
Evening Peak Hour Intersection Turning Movement Volumes

6208/48

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 49
Opening Year (2017) With Project
Morning Peak Hour Intersection Turning Movement Volumes - Alternative 1

6208/49

Kunzman Associates, Inc. Intersection reference numbers are in upper left corner of turning movement boxes.

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Figure 50
Opening Year (2017) With Project
Evening Peak Hour Intersection Turning Movement Volumes - Alternative 1

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

6208/50

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 51
Opening Year (2017) With Project
Morning Peak Hour Intersection Turning Movement Volumes - Alternative 2

6208/51

Kunzman Associates, Inc. Intersection reference numbers are in upper left corner of turning movement boxes.

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Figure 52
Opening Year (2017) With Project
Evening Peak Hour Intersection Turning Movement Volumes - Alternative 2

6208/52

Kunzman Associates, Inc. Intersection reference numbers are in upper left corner of turning movement boxes.

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VIII. Recommendations

A. Site Access

The City of El Monte has requested that this project be analyzed with two alternatives. Alternative 1 is the Proposed Project with vehicular access for the site provided via Valley Boulevard. An emergency access has been requested by the City of El Monte on Ramona Boulevard for Alternative 1. This emergency access consists of a gated emergency vehicle access and is not shown on the site plan as it a requested alternative from the City of El Monte Planning Department. Alternative 2 consists of the vehicular access on Valley Boulevard and a secondary vehicular access on Ramona Boulevard. The access on Ramona Boulevard has been requested for analysis by the City of El Monte and is not shown on the site plan as it is not part of the proposed design.

B. Roadway Improvements

Site-specific circulation and vehicular access recommendations are depicted on Figures 53 and 54.

1. Construct Valley Boulevard from the north project boundary to the south project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary. While Valley Boulevard is not anticipated to be widened beyond its current configuration, the City of El Monte is requiring a 5 foot dedication for potential future street widening.

2. Construct Ramona Boulevard from the west project boundary to the east project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary. While Ramona Boulevard is not anticipated to be widened beyond its current configuration, the City of El Monte is studying whether or not to widen Ramona Boulevard but this potential future widening would not impact the project frontage.

3. Sight distance at the project access(es) shall comply with standard California Department of Transportation and City of El Monte sight distance standards. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City and approved as consistent with this measure prior to issue of grading permits.

4. The project shall provide sufficient parking spaces to meet the City of El Monte parking code requirements or as approved by the City of El Monte via a future parking study in order to service on-site parking.

5. On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

6. As is the case for any roadway design, the City of El Monte should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

Figure 53
Circulation Recommendations - Alternative 1

Construct Valley Boulevard from the north project boundary to the south project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary. While Valley Boulevard is not anticipated to be widened beyond its current configuration, the City of El Monte is requiring a 5 foot dedication for potential future street widening.

Construct Ramona Boulevard from the west project boundary to the east project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary. While Ramona Boulevard is not anticipated to be widened beyond its current configuration, the City of El Monte is studying whether or not to widen Ramona Boulevard but this potential future widening would not impact the project frontage.

Sight distance at the project access shall comply with standard California Department of Transportation and City of El Monte sight distance standards. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City and approved as consistent with this measure prior to issue of grading permits.

The project shall provide sufficient parking spaces to meet the City of El Monte parking code requirements or as approved by the City of El Monte via a future parking study in order to service on-site parking.

On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

As is the case for any roadway design, the City of El Monte should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

Legend

= Traffic Signal
STOP = Stop Sign
= Right Turns In/Out Only Access Driveway
= Emergency Access

6208/53

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Figure 54
Circulation Recommendations - Alternative 2

Construct Valley Boulevard from the north project boundary to the south project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary. While Valley Boulevard is not anticipated to be widened beyond its current configuration, the City of El Monte is requiring a 5 foot dedication for potential future street widening.

Construct Ramona Boulevard from the west project boundary to the east project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary. While Ramona Boulevard is not anticipated to be widened beyond its current configuration, the City of El Monte is studying whether or not to widen Ramona Boulevard but this potential future widening would not impact the project frontage.

Sight distance at the project accesses shall comply with standard California Department of Transportation and City of El Monte sight distance standards. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City and approved as consistent with this measure prior to issue of grading permits.

The project shall provide sufficient parking spaces to meet the City of El Monte parking code requirements or as approved by the City of El Monte via a future parking study in order to service on-site parking.

On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

As is the case for any roadway design, the City of El Monte should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

Legend

= Traffic Signal
STOP = Stop Sign
= Right Turns In/Out Only Access Driveway

6208/54

Appendices

Appendix A – Glossary of Transportation Terms

Appendix B – Scoping Agreement

Appendix C – Traffic Count Worksheets

Appendix D – Explanation and Calculation of Intersection Capacity Utilization/Delay

APPENDIX A

Glossary of Transportation Terms

GLOSSARY OF TRANSPORTATION TERMS

COMMON ABBREVIATIONS

AC:	Acres
ADT:	Average Daily Traffic
Caltrans:	California Department of Transportation
DU:	Dwelling Unit
ICU:	Intersection Capacity Utilization
LOS:	Level of Service
TSF:	Thousand Square Feet
V/C:	Volume/Capacity
VMT:	Vehicle Miles Traveled

TERMS

AVERAGE DAILY TRAFFIC: The total volume during a year divided by the number of days in a year. Usually only weekdays are included.

BANDWIDTH: The number of seconds of green time available for through traffic in a signal progression.

BOTTLENECK: A constriction along a travelway that limits the amount of traffic that can proceed downstream from its location.

CAPACITY: The maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.

CHANNELIZATION: The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movements of both vehicles and pedestrians.

CLEARANCE INTERVAL: Nearly same as yellow time. If there is an all red interval after the end of a yellow, then that is also added into the clearance interval.

CORDON: An imaginary line around an area across which vehicles, persons, or other items are counted (in and out).

CYCLE LENGTH: The time period in seconds required for one complete signal cycle.

CUL-DE-SAC STREET: A local street open at one end only, and with special provisions for turning around.

DAILY CAPACITY: The daily volume of traffic that will result in a volume during the peak hour equal to the capacity of the roadway.

DELAY: The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.

DEMAND RESPONSIVE SIGNAL: Same as traffic-actuated signal.

DENSITY: The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.

DETECTOR: A device that responds to a physical stimulus and transmits a resulting impulse to the signal controller.

DESIGN SPEED: A speed selected for purposes of design. Features of a highway, such as curvature, superelevation, and sight distance (upon which the safe operation of vehicles is dependent) are correlated to design speed.

DIRECTIONAL SPLIT: The percent of traffic in the peak direction at any point in time.

DIVERSION: The rerouting of peak hour traffic to avoid congestion.

FORCED FLOW: Opposite of free flow.

FREE FLOW: Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.

GAP: Time or distance between successive vehicles in a traffic stream, rear bumper to front bumper.

HEADWAY: Time or distance spacing between successive vehicles in a traffic stream, front bumper to front bumper.

INTERCONNECTED SIGNAL SYSTEM: A number of intersections that are connected to achieve signal progression.

LEVEL OF SERVICE: A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

LOOP DETECTOR: A vehicle detector consisting of a loop of wire embedded in the roadway, energized by alternating current and producing an output circuit closure when passed over by a vehicle.

MINIMUM ACCEPTABLE GAP: Smallest time headway between successive vehicles in a traffic stream into which another vehicle is willing and able to cross or merge.

MULTI-MODAL: More than one mode; such as automobile, bus transit, rail rapid transit, and bicycle transportation modes.

OFFSET: The time interval in seconds between the beginning of green at one intersection and the beginning of green at an adjacent intersection.

PLATOON: A closely grouped component of traffic that is composed of several vehicles moving, or standing ready to move, with clear spaces ahead and behind.

ORIGIN-DESTINATION SURVEY: A survey to determine the point of origin and the point of destination for a given vehicle trip.

PASSENGER CAR EQUIVALENTS (PCE): One car is one Passenger Car Equivalent. A truck is equal to 2 or 3 Passenger Car Equivalents in that a truck requires longer to start, goes slower, and accelerates slower. Loaded trucks have a higher Passenger Car Equivalent than empty trucks.

PEAK HOUR: The 60 consecutive minutes with the highest number of vehicles.

PRETIMED SIGNAL: A type of traffic signal that directs traffic to stop and go on a predetermined time schedule without regard to traffic conditions. Also, fixed time signal.

PROGRESSION: A term used to describe the progressive movement of traffic through several signalized intersections.

SCREEN-LINE: An imaginary line or physical feature across which all trips are counted, normally to verify the validity of mathematical traffic models.

SIGNAL CYCLE: The time period in seconds required for one complete sequence of signal indications.

SIGNAL PHASE: The part of the signal cycle allocated to one or more traffic movements.

STARTING DELAY: The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through a signalized intersection.

TRAFFIC-ACTUATED SIGNAL: A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.

TRIP: The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home are two trips, not one.

TRIP-END: One end of a trip at either the origin or destination; i.e. each trip has two trip-ends. A trip-end occurs when a person, object, or message is transferred to or from a vehicle.

TRIP GENERATION RATE: The quantity of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.

TRUCK: A vehicle having dual tires on one or more axles, or having more than two axles.

UNBALANCED FLOW: Heavier traffic flow in one direction than the other. On a daily basis, most facilities have balanced flow. During the peak hours, flow is seldom balanced in an urban area.

VEHICLE MILES OF TRAVEL: A measure of the amount of usage of a section of highway, obtained by multiplying the average daily traffic by length of facility in miles.

APPENDIX B

Scoping Agreement

SCOPING FOR TRAFFIC STUDY

Project Name:	The Cypress & Ramona Residential Project

This Memorandum of Understanding (MOU) acknowledges Los Angeles County Department of Public Works, Traffic and Lighting Division (TLD) requirements of traffic impact analysis for the project and is subject to change:

Project Address:	11127 Ramona Boulevard		
Project Description:	62 Residential Townhouse Dwelling Units with Live/Work Units		
City:	El Monte		
Project Buildout Year:	2017	**Ambient or CMP Growth Rate per Year:**	1.0%
Closest Intersection (Xtn) to the Project			
Xtn N/S Street Name:	Valley Boulevard		
Xtn E/W Street Name:	Ramona Boulevard		
Thomas Guide Pg+Grid:	597 D-7	**Los Angeles County Supervisorial District:**	1

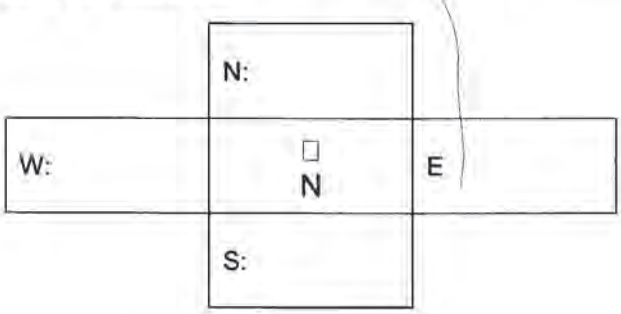
	Consultant	**Developer**
Company:	KUNZMAN ASSOCIATES, INC.	COMPREHENSIVE PLANNING SERVICES
Name:	Bryan Crawford	Joann Lombardo
Address:	1111 Town and County Rd. Ste. 34	P.O. Box 15592
City, State, Zip Code:	Orange, CA 92868	Newport Beach, CA 92659
Phone #:	714-973-8383 x213	949-650-3206
Fax #:	714-973-8821	949-548-6981
Email:	bryan@traffic-engineer.com	joann@jalcps.com

By:		**Reviewed By:**	
Print Name: Bryan Crawford		**Print Name:**	
Consultant/Developer's Representative	**Date 8/5/15**	**TLD's Representative**	**Date**

SCOPING FOR TRAFFIC STUDY

Project Name:	The Cypress & Ramona Residential Project

1. Traffic Distribution: Figure(s) illustrating project trip distribution in percentages and volumes at the studied intersections analyzed. **See attached.**



Trip Credit: Exact amount of credit subject to approval by TLD.

Transportation Demand Management (TDM)	NO	
Existing Active Land Use	NO	
Previous Land Use	YES	
Internal Trip Reduction	NO	
Pass-by Trip Reduction	NO	

SCOPING FOR TRAFFIC STUDY

Project Name:	The Cypress & Ramona Residential Project

2. Trip Generation

Trip Generation Rate(s) Source: ITE Trip Generation	I – Institute of Transportation Engineers; S – San Diego Traffic Generators; C – County; O – Other:	Edition:	9th

Land Use Code	Land Use	Rate Based on	Qty	*AVTE vs	ADT	Weekday a.m. peak		Weekday p.m. peak		Weekend peak hour	
						In	Out	In	Out	In	Out
230	Residential Townhouse	ITE 230	62 DU		360	5	23	22	11		
826	Specialty Retail	ITE 826	1.750 TSF		78	1	1	2	3		

* - Average Vehicle Trip Ends.

SCOPING FOR TRAFFIC STUDY

Project Name:	The Cypress & Ramona Residential Project

3. Study Intersections: At minimum, the study shall include the following intersections. The list is subject to change after related projects, trip generation and distribution are determined. Consultant should check with adjoining Cities regarding their requirements in addition to the following County/City intersections. Documentation of the consultation from these agencies shall be included in the traffic study.

Xtn #	% County	Thomas Guide Page+Grid	N⌉S/E/W Street Name	City	Signalized	CMP
1		597 C-7	Tyler Avenue (NS) at Ramona Boulevard (EW)	El Monte	YES	NO
2		597 C-7	Tyler Avenue (NS) at Valley Boulevard (EW)	El Monte	YES	NO
3		597 D-7	Valley Boulevard (NS) at Project Access (EW)	El Monte	NO	NO
4		597 D-7	Valley Boulevard (NS) at Ramona Boulevard (EW)	El Monte	YES	NO
5						
6						
7						
8						
9						
10						

Cites to be consulted: El Monte

4. Related Projects: Consultant should check with Los Angeles County Department of Regional Planning and planning departments of adjoining Cities. Documentation of the consultation from these agencies shall be included in the traffic study. Related projects list shall be submitted to TLD for our review and approval before being incorporated in the study.

5. Congested Management Program (CMP): A CMP TIA is required for all projects required to prepare an Environmental Assessment based on local determination or projects requiring a traffic study. Where the project meets the criteria established in the Transportation Impact Analysis (TIA section of the County of Los Angeles' CMP TIA Land Use Analysis Guidelines, a CMP analysis must be prepared. At a minimum, the geographic area examined in the TIA must include the following:

- All CMP arterial monitoring intersections (see Appendix A, exhibit A-2, page A-15 of the 2002 Guidelines), including freeway on- or off-ramp intersections, where the proposed project will add 50 or more trips during either the a.m. or p.m. peak hours.
- Main line freeway monitoring locations (see Chapter 2, exhibit 2-4, page 16 of the 2002 Guidelines) where the project will add 150 or more trips, in either direction, during the a.m. or p.m. weekday peak hours.

A copy of the 2002 CMP Land Use Analysis Guidelines can be obtained by calling the CMP Hotline at (213) 922-2830.

6. Freeway Analysis: The potential traffic impact on the following Freeway(s) must be considered.

N/A

The applicant shall consult with the State of California Department of Transportation (Caltrans) to determine the California Environmental Quality Act levels of significance with regard to traffic impacts on Caltrans' freeway facilities. This consultation shall also include a determination of Caltrans requirements for the study of traffic impacts to its facilities and the mitigation of any such impacts. This analysis must follow the most current Caltrans' Guide for the Preparation of Traffic Impact Studies (December 2002) and can be obtained from http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tiguide.pdf. If Caltrans finds that the project has a significant impact on the freeway, Caltrans shall be requested to include the basis for this finding in their response. If fees are proposed to mitigate the freeway impact, Caltrans shall be requested to identify the specific project to which the fees will apply. These written comments from Caltrans shall be included with the traffic study and submitted to Public Works for review and approval. If a documented good faith effort is made to consult with Caltrans and written comments cannot be obtained from within a reasonable amount of time, an analysis of the freeway impact shall be made using the County of Los Angeles' CMP Land Use Analysis Guidelines.

Table 1

Project Trip Generation[1]

Land Use	Quantity	Units[2]	Peak Hour						Daily
			Morning			Evening			
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates									
Residential Townhouse		DU	0.07	0.37	0.44	0.35	0.17	0.52	5.81
Specialty Retail		TSF	0.80	0.53	1.33	1.19	1.52	2.71	44.32
Trips Generated									
Residential Townhouse	62	DU	5	23	28	22	11	33	360
Specialty Retail	1.750	TSF	1	1	2	2	3	5	78
Subtotal			6	24	30	24	14	38	438
10% Reduction			-1	-2	-3	-2	-1	-4	-44
Total			5	22	27	22	13	34	394

[1] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Categories 230 and 826.

The San Diego Association of Governments (SANDAG), Traffic Generator, April 2002, was used for the Specialty Retail AM peak hour.

[2] DU = Dwelling Units; TSF = Thousand Square Feet

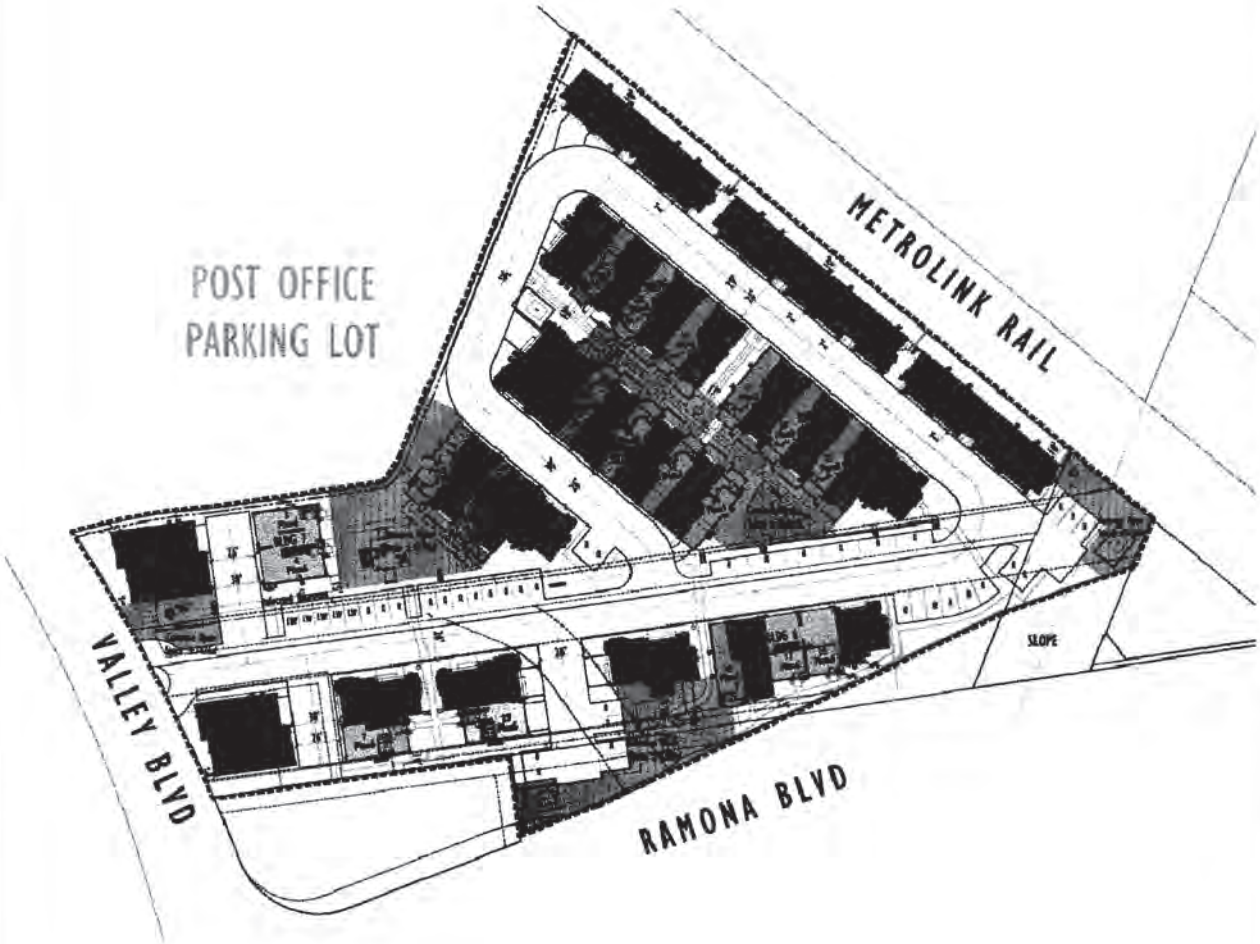
Figure 1
Project Location Map

KUNZMAN ASSOCIATES, INC.

6208/1

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 2
Site Plan



KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

6208/2

Figure 3
Project Outbound Trip Distribution - Residential

KUNZMAN ASSOCIATES, INC.

6208/3

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 4
Project Inbound Trip Distribution - Residential

KUNZMAN ASSOCIATES, INC.

6208/4

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 5
Project Outbound Trip Distribution - Speciality Retail

KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

6208/5

Figure 6
Project Inbound Trip Distribution - Specialty Retail

KUNZMAN ASSOCIATES, INC.

6208/6

OVER 35 YEARS OF EXCELLENT SERVICE

APPENDIX C

Traffic Count Worksheets

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

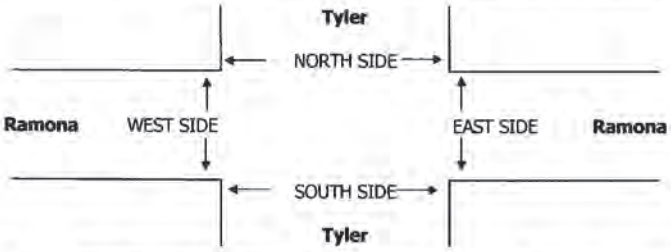
DATE:				
Thu, Sep 3, 15	LOCATION:	El Monte	PROJECT #:	SC0709
	NORTH & SOUTH:	Tyler	LOCATION #:	1
	EAST & WEST:	Ramona	CONTROL:	SIGNAL

NOTES:

N ▲ ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Tyler			SOUTHBOUND Tyler			EASTBOUND Ramona			WESTBOUND Ramona				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 1	SR 1	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	5	32	8	3	36	22	8	27	0	13	77	5	236	0	0	0	0	0
	7:15 AM	9	46	14	7	58	18	15	41	9	17	83	11	328	0	0	0	0	0
	7:30 AM	13	48	17	19	51	23	13	66	3	9	103	7	372	0	0	0	0	0
	7:45 AM	16	65	22	23	50	37	21	100	11	22	115	16	498	0	0	0	0	0
	8:00 AM	14	61	18	8	54	24	21	52	8	14	124	18	416	0	0	0	0	0
	8:15 AM	11	52	11	9	61	30	10	39	5	24	81	14	347	0	0	0	0	0
	8:30 AM	4	55	12	4	58	23	9	32	2	21	66	8	294	0	0	0	0	0
	8:45 AM	10	64	15	7	49	17	15	42	12	11	53	2	297	0	0	0	0	0
	VOLUMES	82	423	117	80	417	194	112	399	50	131	702	81	2,788	0	0	0	0	0
	APPROACH %	13%	68%	19%	12%	60%	28%	20%	71%	9%	14%	77%	9%						
	APP/DEPART	622	/	616	691	/	598	561	/	596	914	/	978	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	54	226	68	59	216	114	65	257	27	69	423	55	1,633					
	APPROACH %	16%	65%	20%	15%	56%	29%	19%	74%	8%	13%	77%	10%						
	PEAK HR FACTOR		0.845			0.884			0.661			0.877		0.820					
	APP/DEPART	348	/	346	389	/	312	349	/	384	547	/	591	0					
PM	4:00 PM	4	50	24	9	65	13	19	73	11	20	55	16	359	0	0	0	0	0
	4:15 PM	8	70	30	9	65	15	25	100	19	21	57	17	436	0	0	0	0	0
	4:30 PM	8	69	29	14	52	25	18	98	15	19	68	16	431	0	0	0	0	0
	4:45 PM	7	65	37	12	74	20	20	84	9	19	67	13	427	0	0	0	0	0
	5:00 PM	7	81	23	7	76	26	26	117	11	15	70	23	482	0	0	0	0	0
	5:15 PM	13	83	26	7	63	18	26	92	13	18	65	20	444	0	0	0	0	0
	5:30 PM	10	82	33	13	68	26	17	80	9	16	50	14	418	0	0	0	0	0
	5:45 PM	15	86	36	8	73	23	25	79	7	24	87	13	476	0	0	0	0	0
	VOLUMES	72	586	238	79	536	166	176	723	94	152	519	132	3,473	0	0	0	0	0
	APPROACH %	8%	65%	27%	10%	69%	21%	18%	73%	9%	19%	65%	16%						
	APP/DEPART	896	/	894	781	/	782	993	/	1,040	803	/	757	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	45	332	118	35	280	93	94	368	40	73	272	70	1,820					
	APPROACH %	9%	67%	24%	9%	69%	23%	19%	73%	8%	18%	66%	17%						
	PEAK HR FACTOR		0.903			0.936			0.815			0.837		0.944					
	APP/DEPART	495	/	496	408	/	393	502	/	521	415	/	410	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

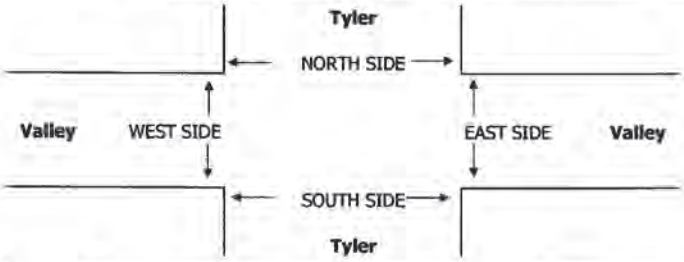
DATE:	LOCATION:	El Monte	PROJECT #:	SC0709
Thu, Sep 3, 15	NORTH & SOUTH:	Tyler	LOCATION #:	2
	EAST & WEST:	Valley	CONTROL:	SIGNAL

NOTES:

◄ W ▲ N S ▼ E ►

☑ Add U-Turns to Left Turns

		NORTHBOUND Tyler			SOUTHBOUND Tyler			EASTBOUND Valley			WESTBOUND Valley				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	12	35	5	20	61	24	6	57	4	3	168	15	410	0	0	0	0	0
	7:15 AM	16	41	6	26	56	26	6	77	9	5	202	12	482	0	0	0	0	0
	7:30 AM	15	40	4	28	78	23	6	91	10	10	258	35	598	0	0	0	0	0
	7:45 AM	23	67	3	36	111	38	11	136	10	6	214	27	682	0	0	0	0	0
	8:00 AM	21	50	7	36	72	25	14	120	6	10	233	28	622	0	0	0	0	0
	8:15 AM	26	28	7	22	67	12	11	113	14	5	216	22	543	0	0	0	1	1
	8:30 AM	28	31	6	27	63	21	11	134	11	7	194	41	574	0	0	0	0	0
	8:45 AM	23	33	10	30	51	14	16	103	3	10	175	22	490	0	0	0	0	0
	VOLUMES	164	325	48	225	559	183	81	831	67	56	1,660	202	4,401	0	0	0	1	1
	APPROACH %	31%	61%	9%	23%	58%	19%	8%	85%	7%	3%	87%	11%						
	APP/DEPART	537	/	608	967	/	681	979	/	1,105	1,918	/	2,007	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	85	185	21	122	328	98	42	460	40	31	921	112	2,445					
	APPROACH %	29%	64%	7%	22%	60%	18%	8%	85%	7%	3%	87%	11%						
	PEAK HR FACTOR		0.782			0.741			0.863			0.878		0.896					
	APP/DEPART	291	/	339	548	/	398	542	/	604	1,064	/	1,104	0					
PM	4:00 PM	20	66	14	30	46	12	21	204	11	14	139	25	602	0	0	0	0	0
	4:15 PM	24	57	13	27	46	14	16	180	10	20	146	34	587	0	0	0	0	0
	4:30 PM	31	71	17	29	44	18	19	221	14	16	111	29	620	0	0	0	0	0
	4:45 PM	23	58	9	29	52	12	20	180	9	14	158	21	585	0	0	0	0	0
	5:00 PM	32	77	12	21	57	13	18	221	22	14	107	30	624	0	0	0	0	0
	5:15 PM	25	76	12	34	49	23	40	251	10	10	128	26	684	0	0	0	0	0
	5:30 PM	31	60	9	25	53	12	21	231	14	13	119	29	617	0	0	0	0	0
	5:45 PM	32	64	7	17	53	13	34	248	17	13	161	27	686	0	0	0	0	0
	VOLUMES	218	529	93	212	400	117	189	1,736	107	114	1,069	221	5,005	0	0	0	0	0
	APPROACH %	26%	63%	11%	29%	55%	16%	9%	85%	5%	8%	76%	16%						
	APP/DEPART	840	/	939	729	/	621	2,032	/	2,041	1,404	/	1,404	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	120	277	40	97	212	61	113	951	63	50	515	112	2,611					
	APPROACH %	27%	63%	9%	26%	57%	16%	10%	84%	6%	7%	76%	17%						
	PEAK HR FACTOR		0.903			0.873			0.936			0.842		0.952					
	APP/DEPART	437	/	502	370	/	325	1,127	/	1,088	677	/	696	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

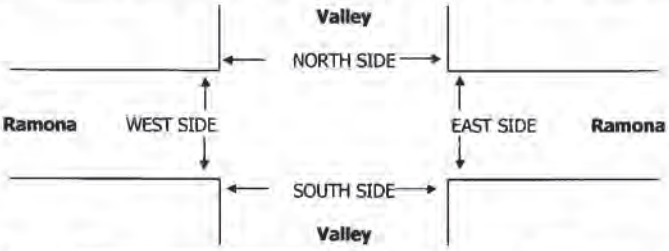
DATE:	LOCATION:	El Monte	PROJECT #:	SC0709
Thu, Sep 3, 15	NORTH & SOUTH:	Valley	LOCATION #:	3
	EAST & WEST:	Ramona	CONTROL:	SIGNAL

NOTES:

N ▲ ◄ W E ► S ▼

Add U-Turns to Left Turns

		NORTHBOUND Valley			SOUTHBOUND Valley			EASTBOUND Ramona			WESTBOUND Ramona				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	27	131	3	22	59	0	1	23	14	9	72	71	432	0	0	0	0	0
	7:15 AM	31	142	3	29	56	1	0	35	22	11	90	95	515	0	0	0	0	0
	7:30 AM	47	182	4	31	92	1	1	36	35	19	94	86	628	0	0	0	0	0
	7:45 AM	56	172	6	34	102	1	1	60	55	25	164	85	761	0	0	0	0	0
	8:00 AM	38	147	4	52	115	1	1	58	49	18	121	106	710	0	0	0	0	0
	8:15 AM	46	161	11	45	113	0	0	39	32	15	97	91	650	0	0	0	0	0
	8:30 AM	34	165	5	29	115	0	2	24	30	12	74	82	572	0	0	0	0	0
	8:45 AM	36	141	11	41	113	1	2	43	32	9	58	61	548	1	1	0	0	2
	VOLUMES	315	1,241	47	283	765	5	8	318	269	118	770	677	4,816	1	1	0	0	2
	APPROACH %	20%	77%	3%	27%	73%	0%	1%	53%	45%	8%	49%	43%						
	APP/DEPART	1,603	/	1,927	1,053	/	1,153	595	/	647	1,565	/	1,089	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	187	662	25	162	422	3	3	193	171	77	476	368	2,749					
	APPROACH %	21%	76%	3%	28%	72%	1%	1%	53%	47%	8%	52%	40%						
	PEAK HR FACTOR		0.934			0.874			0.791			0.840		0.903					
	APP/DEPART	874	/	1,033	587	/	670	367	/	380	921	/	666	0					
PM	4:00 PM	50	130	20	68	137	0	3	97	52	8	63	52	680	0	0	0	0	0
	4:15 PM	56	99	10	95	171	1	2	120	65	8	61	46	734	0	0	0	0	0
	4:30 PM	52	147	26	85	135	1	2	101	58	13	67	57	744	0	0	0	0	0
	4:45 PM	51	110	21	82	165	0	2	119	48	10	65	47	720	0	0	0	0	0
	5:00 PM	46	125	29	97	164	6	3	104	47	14	67	47	749	0	0	0	0	0
	5:15 PM	40	106	24	121	172	3	1	114	40	8	55	42	726	0	0	0	0	0
	5:30 PM	48	149	25	93	165	2	1	98	45	12	84	40	762	0	0	0	0	0
	5:45 PM	47	136	22	92	148	2	0	108	75	15	73	47	765	0	0	0	0	0
	VOLUMES	390	1,002	177	733	1,257	15	14	861	430	88	535	378	5,880	0	0	0	0	0
	APPROACH %	25%	64%	11%	37%	63%	1%	1%	66%	33%	9%	53%	38%						
	APP/DEPART	1,569	/	1,394	2,005	/	1,775	1,305	/	1,771	1,001	/	940	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	181	516	100	403	649	13	5	424	207	49	279	176	3,002					
	APPROACH %	23%	65%	13%	38%	61%	1%	1%	67%	33%	10%	55%	35%						
	PEAK HR FACTOR		0.898			0.899			0.869			0.926		0.981					
	APP/DEPART	797	/	697	1,065	/	905	636	/	927	504	/	473	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX D

Explanation and Calculation of Intersection Capacity Utilization/Delay

EXPLANATION AND CALCULATION OF INTERSECTION CAPACITY UTILIZATION

Overview

The ability of a roadway to carry traffic is referred to as capacity. The capacity is usually greater between intersections and less at intersections because traffic flows continuously between them and only during the green phase at them. Capacity at intersections is best defined in terms of vehicles per lane per hour of green. If capacity is 1600 vehicles per lane per hour of green, and if the green phase is 50 percent of the cycle and there are three lanes, then the capacity is 1600 times 50 percent times 3 lanes, or 2400 vehicles per hour for that approach.

The technique used to compare the volume and capacity at an intersection is known as Intersection Capacity Utilization. Intersection Capacity Utilization, usually expressed as a percent, is the proportion of an hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity. If an intersection is operating at 80 percent of capacity (i.e., an Intersection Capacity Utilization of 80 percent), then 20 percent of the signal cycle is not used. The signal could show red on all indications 20 percent of the time and the signal would just accommodate approaching traffic.

Intersection Capacity Utilization analysis consists of (a) determining the proportion of signal time needed to serve each conflicting movement of traffic, (b) summing the times for the movements, and (c) comparing the total time required to the total time available. For example, if for north-south traffic the northbound traffic is 1600 vehicles per hour, the southbound traffic is 1200 vehicles per hour, and the capacity of either direction is 3200 vehicles per hour, then the northbound traffic is critical and requires 1600/3200 or 50 percent of the signal time. If for east-west traffic, 30 percent of the signal time is required, then it can be seen that the Intersection Capacity Utilization is 50 plus 30, or 80 percent. When left turn arrows (left turn phasing) exist, they are incorporated into the analysis. The critical movements are usually the heavy left turn movements and the opposing through movements.

The Intersection Capacity Utilization technique is an ideal tool to quantify existing as well as future intersection operation. The impact of adding a lane can be quickly determined by examining the effect the lane has on the Intersection Capacity Utilization.

Intersection Capacity Utilization Worksheets That Follow This Discussion

The Intersection Capacity Utilization worksheet table contains the following information:

1. Peak hour turning movement volumes.

2. Number of lanes that serve each movement.

3. For right turn lanes, whether the lane is a free right turn lane, whether it has a right turn arrow, and the percent of right turns on red that are assumed.

4. Capacity assumed per lane.

5. Capacity available to serve each movement (number of lanes times capacity per lane).

6. Volume to capacity ratio for each movement.

7. Whether the movement's volume to capacity ratio is critical and adds to the Intersection Capacity Utilization value.

8. The yellow time or clearance interval assumed.

9. Adjustments for right turn movements.

10. The Intersection Capacity Utilization and Level of Service.

The Intersection Capacity Utilization Worksheet also has two graphics on the same page. These two graphics show the following:

1. Peak hour turning movement volumes.

2. Number of lanes that serve each movement.

3. The approach and exit leg volumes.

4. The two-way leg volumes.

5. An estimate of daily traffic volumes that is fairly close to actual counts and is based strictly on the peak hour leg volumes multiplied by a factor.

6. Percent of daily traffic in peak hours.

7. Percent of peak hour leg volume that is inbound versus outbound.

A more detailed discussion of Intersection Capacity Utilization and Level of Service follows.

Level of Service

Level of Service is used to describe the quality of traffic flow. Levels of Service A to C operate quite well. Level of Service C is typically the standard to which rural roadways are designed.

Level of Service D is characterized by fairly restricted traffic flow. Level of Service D is the standard to which urban roadways are typically designed. Level of Service E is the maximum volume a facility can accommodate and will result in possible stoppages of momentary duration. Level of Service F occurs when a facility is overloaded and is characterized by stop-and-go traffic with stoppages of long duration.

A description of the various Levels of Service appears at the end of the ICU description, along with the relationship between Intersection Capacity Utilization and Level of Service.

Signalized and Unsignalized Intersections

Although calculating an Intersection Capacity Utilization value for an unsignalized intersection is invalid, the presumption is that a signal can be installed and the calculation shows whether the geometrics are capable of accommodating the expected volumes with a signal. A traffic signal becomes warranted before Level of Service D is reached for a signalized intersection.

Signal Timing

The Intersection Capacity Utilization calculation assumes that a signal is properly timed. It is possible to have an Intersection Capacity Utilization well below 100 percent, yet have severe traffic congestion. This would occur if one or more movements is not getting sufficient green time to satisfy its demand, and excess green time exists on other movements. This is an operational problem that should be remedied.

Lane Capacity

Capacity is often defined in terms of roadway width; however, standard lanes have approximately the same capacity whether they are 11 or 14 feet wide. Our data indicates a typical lane, whether a through lane or a left turn lane, has a capacity of

approximately 1750 vehicles per hour of green time, with nearly all locations showing a capacity greater than 1600 vehicles per hour of green per lane. Right turn lanes have a slightly lower capacity; however 1600 vehicles per hour is a valid capacity assumption for right turn lanes.

This finding is published in the August, 1978 issue of Institute of Transportation Engineers Journal in the article entitled, "Another Look at Signalized Intersection Capacity" by William Kunzman. A capacity of 1600 vehicles per hour per lane with no yellow time penalty, or 1700 vehicles per hour with a 3 or 5 percent yellow time penalty is reasonable.

Yellow Time

The yellow time can either be assumed to be completely used and no penalty applied, or it can be assumed to be only partially usable. Total yellow time accounts for approximately 10 percent of a signal cycle, and a penalty of 3 to 5 percent is reasonable.

During peak hour traffic operation the yellow times are nearly completely used. If there is no left turn phasing, the left turn vehicles completely use the yellow time. Even if there is left turn phasing, the through traffic continues to enter the intersection on the yellow until just a split second before the red.

Shared Lanes

Shared lanes occur in many locations. A shared lane is often found at the end of an off ramp where the ramp forms an intersection with the cross street. Often at a diamond interchange off ramp, there are three lanes. In the case of a diamond interchange, the middle lane is sometimes shared, and the driver can turn left, go through, or turn right from that lane.

If one assumes a three lane off ramp as described above, and if one assumes that each lane has 1600 capacity, and if one assumes that there are 1000 left turns per hour, 500 right turns per hour, and 100 through vehicles per hour, then how should one assume that the three lanes operate. There are three ways that it is done.

One way is to just assume that all 1600 vehicles (1000 plus 500 plus 100) are served simultaneously by three lanes. When this is done, the capacity is 3 times 1600 or 4800, and the amount of green time needed to serve the ramp is 1600 vehicles divided by 4800 capacity or 33.3 percent. This assumption effectively assumes perfect lane distribution between the three lanes that is not realistic. It also means a left turn can be made from the right lane.

Another way is to equally split the capacity of a shared lane and in this case to assume there are 1.33 left turn lanes, 1.33 right turn lanes, and 0.33 through lanes. With this assumption, the critical movement is the left turns and the 1000 left turns are served by a capacity of 1.33 times 1600, or 2133. The volume to capacity ratio of the critical move is 1000 divided by 2133 or 46.9 percent.

The first method results in a critical move of 33.3 percent and the second method results in a critical move of 46.9 percent. Neither is very accurate, and the difference in the calculated Level of Service will be approximately 1.5 Levels of Service (one Level of Service is 10 percent).

The way Kunzman Associates, Inc. does it is to assign fractional lanes in a reasonable way. In this example, it would be assumed that there is 1.1 right turn lanes, 0.2 through lanes, and 1.7 left turn lanes. The volume to capacity ratios for each movement would be 31.3 percent for the through traffic, 28.4 percent for the right turn movement, and 36.8 percent for the left turn movement. The critical movement would be the 36.8 percent for the left turns.

Right Turn on Red

The Kunzman Associates, Inc. software treats right turn lanes in one of five different ways. Each right turn lane is classified into one of five cases. The five cases are (1) free right turn lane, (2) right turn lane with separate right turn arrow, (3) standard right turn lane with no right turns on red allowed, (4) standard right turn lane with a certain percentage of right turns on red allowed, and (5) separate right turn arrow and a certain percentage of right turns on red allowed.

Free Right Turn Lane

If it is a free right turn lane, then it is given a capacity of one full lane with continuous or 100 percent green time. A Free right turn lane occurs when there is a separate approach lane for right turning vehicles, there is a separate departure lane for the right turning vehicles after they turn and are exiting the intersection, and the through cross street traffic does not interfere with the vehicles after they turn right.

Separate Right Turn Arrow

If there is a separate right turn arrow, then it is assumed that vehicles are given a green indication and can proceed on what is known as the left turn overlap.

The left turn overlap for a northbound right turn is the westbound left turn. When the left turn overlap has a green indication, the right turn lane is also given a green arrow

indication. Thus, if there is a northbound right turn arrow, then it can be turned green for the period of time that the westbound left turns are proceeding.

If there are more right turns than can be accommodated during the northbound through green and the time that the northbound right turn arrow is on, then an adjustment is made to the Intersection Capacity Utilization to account for the green time that needs to be added to the northbound through green to accommodate the northbound right turns.

Standard Right Turn Lane, No Right Turns on Red

A standard right turn lane, with no right turn on red assumed, proceeds only when there is a green indication displayed for the adjacent through movement. If additional green time is needed above that amount of time, then in the Intersection Capacity Utilization calculation a right turn adjustment green time is added above the green time that is needed to serve the adjacent through movement.

Standard Right Turn Lane, With Right Turns on Red

A standard right turn lane with say 20 percent of the right turns allowed to turn right on a red indication is calculated the same as the standard right turn case where there is no right turn on red allowed, except that the right turn adjustment is reduced to account for the 20 percent of the right turning vehicles that can logically turn right on a red light. The right turns on red are never allowed to exceed the time the overlap left turns take plus the unused part of the green cycle that the cross street traffic moving from left to right has.

As an example of how 20 percent of the cars are allowed to turn right on a red indication, assume that the northbound right turn volume needs 40 percent of the signal cycle to be satisfied. To allow 20 percent of the northbound right turns to turn right on red, then during 8 percent of the signal cycle (40 percent of signal cycle times 20 percent that can turn right on red) right turns on red will be allowed if it is feasible.

For this example, assume that 15 percent of the signal cycle is green for the northbound through traffic, and that means that 15 percent of the signal cycle is available to satisfy northbound right turns. After the northbound through traffic has received its green, 25 percent of the signal cycle is still needed to satisfy the northbound right turns (40 percent of the signal cycle minus the 15 percent of the signal cycle that the northbound through used).

Assume that the westbound left turns require a green time of 6 percent of the signal cycle. This 6 percent of the signal cycle is used by northbound right turns on red. After accounting for the northbound right turns that occur on the westbound overlap

left turn, 19 percent of the signal cycle is still needed for the northbound right turns (25 percent of the cycle was needed after the northbound through green time was accounted for [see above paragraph], and 6 percent was served during the westbound left turn overlap). Also, at this point 6 percent of the signal cycle has been used for northbound right turns on red, and still 2 percent more of the right turns will be allowed to occur on the red if there is unused eastbound through green time.

For purpose of this example, assume that the westbound through green is critical, and that 15 percent of the signal cycle is unused by eastbound through traffic. Thus, 2 percent more of the signal cycle can be used by the northbound right turns on red since there is 15 seconds of unused green time being given to the eastbound through traffic.

At this point, 8 percent of the signal cycle was available to serve northbound right turning vehicles on red, and 15 percent of the signal cycle was available to serve right turning vehicles on the northbound through green. So 23 percent of the signal cycle has been available for northbound right turns.

Because 40 percent of the signal cycle is needed to serve northbound right turns, there is still a need for 17 percent more of the signal cycle to be available for northbound right turns. What this means is the northbound through traffic green time is increased by 17 percent of the cycle length to serve the unserved right turn volume, and a 17 percent adjustment is added to the Intersection Capacity Utilization to account for the northbound right turns that were not served on the northbound through green time or when right turns on red were assumed.

Separate Right Turn Arrow, With Right Turns on Red

A right turn lane with a separate right turn arrow, plus a certain percentage of right turns allowed on red is calculated the same way as a standard right turn lane with a certain percentage of right turns allowed on red, except the turns which occur on the right turn arrow are not counted as part of the percentage of right turns that occur on red.

Critical Lane Method

Intersection Capacity Utilization parallels another calculation procedure known as the Critical Lane Method with one exception. Critical Lane Method dimensions capacity in terms of standardized vehicles per hour per lane. A Critical Lane Method result of 800 vehicles per hour means that the intersection operates as though 800 vehicles were using a single lane continuously. If one assumes a lane capacity of 1600 vehicles per hour, then a Critical Lane Method calculation resulting in 800 vehicles per hour is the same as an Intersection Capacity Utilization calculation of 50 percent since 800/1600

is 50 percent. It is our opinion that the Critical Lane Method is inferior to the Intersection Capacity Utilization method simply because a statement such as "The Critical Lane Method value is 800 vehicles per hour" means little to most persons, whereas a statement such as "The Intersection Capacity Utilization is 50 percent" communicates clearly. Critical Lane Method results directly correspond to Intersection Capacity Utilization results. The correspondence is as follows, assuming a lane capacity of 1600 vehicles per hour and no clearance interval.

Critical Lane Method Result	Intersection Capacity Utilization Result
800 vehicles per hour	50 percent
960 vehicles per hour	60 percent
1120 vehicles per hour	70 percent
1280 vehicles per hour	80 percent
1440 vehicles per hour	90 percent
1600 vehicles per hour	100 percent
1760 vehicles per hour	110 percent

INTERSECTION CAPACITY UTILIZATION
LEVEL OF SERVICE DESCRIPTION[1]

Level of Service	Description	Volume to Capacity Ratio
A	Level of Service A occurs when progression is extremely favorable and vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	0.600 and below
B	Level of Service B generally occurs with good progression and/or short cycle lengths. More vehicles stop than for Level of Service A, causing higher levels of average delay.	0.601 to 0.700
C	Level of Service C generally results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.	0.701 to 0.800
D	Level of Service D generally results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	0.801 to 0.900
E	Level of Service E is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent.	0.901 to 1.000
F	Level of Service F is considered to be unacceptable to most drivers. This condition often occurs when oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.	1.001 and up

[1]Source: Highway Capacity Manual Special Report 209, Transportation Research Board, National Research Council Washington D.C., 2000.

EXPLANATION AND CALCULATION OF INTERSECTION LEVEL OF SERVICE USING DELAY METHODOLOGY

The levels of service at the unsignalized and signalized intersections are calculated using the delay methodology in the Highway Capacity Manual. This methodology views an intersection as consisting of several lane groups. A lane group is a set of lanes serving a movement. If there are two northbound left turn lanes, then the lane group serving the northbound left turn movement has two lanes. Similarly, there may be three lanes in the lane group serving the northbound through movement, one lane in the lane group serving the northbound right turn movement, and so forth. It is also possible for one lane to serve two lane groups. A shared lane might result in there being 1.5 lanes in the northbound left turn lane group and 2.5 lanes in the northbound through lane group.

For each lane group, there is a capacity. That capacity is calculated by multiplying the number of lanes in the lane group times a theoretical maximum lane capacity per lane time's 12 adjustment factors.

Each of the 12 adjustment factors has a value of approximately 1.00. A value less than 1.00 is generally assigned when a less than desirable condition occurs.

The 12 adjustment factors are as follows:

1. Peak hour factor (to account for peaking within the peak hour)
2. Lane utilization factor (to account for not all lanes loading equally)
3. Lane width
4. Percent of heavy trucks
5. Approach grade
6. Parking
7. Bus stops at intersections
8. Area type (CBD or other)
9. Right turns

10. Left turns

11. Pedestrian activity

12. Signal progression

The maximum theoretical lane capacity and the 12 adjustment factors for it are all unknowns for which approximate estimates have been recommended in the Highway Capacity Manual. For the most part, the recommended values are not based on statistical analysis but rather on educated estimates. However, it is possible to use the delay method and get reasonable results as will be discussed below.

Once the lane group volume is known and the lane group capacity is known, a volume to capacity ratio can be calculated for the lane group.

With a volume to capacity ratio calculated, average delay per vehicle in a lane group can be estimated. The average delay per vehicle in a lane group is calculated using a complex formula provided by the Highway Capacity Manual, which can be simplified and described as follows:

Delay per vehicle in a lane group is a function of the following:

1. Cycle length

2. Amount of red time faced by a lane group

3. Amount of yellow time for that lane group

4. The volume to capacity ratio of the lane group

The average delay per vehicle for each lane group is calculated, and eventually an overall average delay for all vehicles entering the intersection is calculated. This average delay per vehicle is then used to judge Level of Service. The Level of Services are defined in the table that follows this discussion.

Experience has shown that when a maximum lane capacity of 1,900 vehicles per hour is used (as recommended in the Highway Capacity Manual), little or no yellow time penalty is used, and none of the 12 penalty factors are applied, calculated delay is realistic. The delay calculation for instance assumes that yellow time is totally unused. Yet experience shows that most of the yellow time is used.

An idiosyncrasy of the delay methodology is that it is possible to add traffic to an intersection and reduce the average total delay per vehicle. If the average total delay is 30 seconds per vehicle for all vehicles traveling through an intersection, and traffic is added to a movement that has an average total delay of 15 seconds per vehicle, then the overall average total delay is reduced.

The delay calculation for a lane group is based on a concept that the delay is a function of the amount of unused capacity available. As the volume approaches capacity and there is no more unused capacity available, then the delay rapidly increases. Delay is not proportional to volume, but rather increases rapidly as the unused capacity approaches zero.

Because delay is not linearly related to volumes, the delay does not reflect how close an intersection is to overloading. If an intersection is operating at Level of Service C and has an average total delay of 18 seconds per vehicle, you know very little as to what percent the traffic can increase before Level of Service E is reached.

DELAY METHODOLOGY
LEVEL OF SERVICE DESCRIPTION[1]

Level Of Service	Description	Average Total Delay Per Vehicle (Seconds)	
		Signalized	Unsignalized
A	Level of Service A occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	0 to 10.00	0 to 10.00
B	Level of Service B generally occurs with good progression and/or short cycle lengths. More vehicles stop than for Level of Service A, causing higher levels of average total delay.	10.01 to 20.00	10.01 to 15.00
C	Level of Service C generally results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.	20.01 to 35.00	15.01 to 25.00
D	Level of Service D generally results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	35.01 to 55.00	25.01 to 35.00
E	Level of Service E is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent occurrences.	55.01 to 80.00	35.01 to 50.00
F	Level of Service F is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.	80.01 and up	50.01 and up

[1] Source: Highway Capacity Manual Special Report 209, Transportation Research Board, National Research Council, Washington, D.C., 2000.

KUNZMAN ASSOCIATES, INC.

VALLEY & RAMONA

PARKING ANALYSIS

October 26, 2015

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

October 26, 2015

Ms. Joann Lombardo
COMPREHENSIVE PLANNING SERVICES
P.O. Box 15592
Newport Beach, CA 92659

Dear Ms. Lombardo:

INTRODUCTION

The firm of Kunzman Associates, Inc. is pleased to provide this parking analysis for the Valley & Ramona project. The project site is located at 11127 Ramona Boulevard in the City of El Monte. This parking analysis supplements the Valley & Ramona Traffic Impact Analysis prepared by Kunzman Associates, Inc. (October 8, 2015). The project location map is shown on Figure 1.

This report summarizes our methodology, analysis and findings. We trust that the findings, which are summarized in the front of the report, will be of immediate as well as continuing value to you and the City of El Monte in evaluating the proposed development.

Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with those terms unique to transportation engineering, a glossary of terms is provided within Appendix A.

PROJECT DESCRIPTION

The proposed project consists of 62 dwelling units of townhomes with 4 live/work units utilizing 1,750 square feet of professional office uses. A total of 22 dwelling units are proposed to be 2 bedroom units and 40 units are proposed to be three+ bedroom units. The proposed project will have access to Valley Boulevard. Figure 2 shows the project site plan.

FINDINGS

1. The project is located at 11127 Ramona Boulevard in the City of El Monte.

2. The proposed project consists of 62 dwelling units of townhomes with 4 live/work units utilizing 1,750 square feet of professional office uses.

3. Based on the City of El Monte Parking Code requirements, 164.5 (say 165) parking spaces are required for the proposed development (see Table 1).

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4. The similar townhome complexes were surveyed by counting the number of occupied guest parking spaces on a Thursday and a Saturday at 3:00 AM.

5. The 11535 Lower Azusa Road location in the City of El Monte had a surveyed maximum occupied guest parking space to dwelling unit ratio of 0.08 parking spaces per dwelling unit (see Table 2).

6. The 5245 Village Circle Drive location in the City of Temple City provides had a surveyed maximum occupied guest parking space to dwelling unit ratio of 0.16 parking spaces per dwelling unit (see Table 2).

7. The 11038 Encanto Way location in the City of El Monte had a surveyed maximum occupied guest parking space to dwelling unit ratio of 0.50 parking spaces per dwelling unit (see Table 2).

8. The survey of three similar townhome complexes shows that the maximum occupied guest parking spaces is 0.50 per dwelling unit (see Table 2).

9. The survey of three similar townhome complexes shows that the average maximum occupied guest parking spaces is 0.22 per dwelling unit (see Table 2).

10. Based on the maximum occupied guest parking space ratio of 0.50, a total of 31 guest parking spaces are required for the proposed project.

11. Based on the average maximum occupied guest parking space ratio of 0.22, a total of 14 guest parking spaces are required for the proposed project.

PARKING CODE

The City of El Monte Parking Code requirements are included within Appendix B. The City Parking Code states that a two bedroom residential dwelling unit requires 2 parking spaces, a three or more bedroom residential dwelling unit in common areas requires 2.5 parking spaces (3 parking spaces if private or enclosed), 0.25 parking spaces for guest parking are required for each residential dwelling unit, and 1 parking space for every 350 square feet of gross floor area is required for live/work units. Based on the City of El Monte Parking Code requirements, 164.5 (say 165) parking spaces are required for the proposed development (see Table 1).

SIMILAR TOWNHOMES PARKING SURVEY

To survey similar townhome complexes in the area, the project applicant (through conversations with City of El Monte staff) provided 5 locations in or near the City of El Monte. These 5 locations were studied and narrowed down to 3 similar locations for analysis. The locations were chosen based on the following factors:

- Number of dwelling units comparative to the proposed development
- Project location
- Ease of access (gated or not)
- Probability that on-street parking would occur at the location

Based on the aforementioned criteria, the following similar locations were chosen (see Table 2):

- 11535 Lower Azusa Road, El Monte
- 5245 Village Circle Drive, Temple City
- 11038 Encanto Way, El Monte

The 11535 Lower Azusa Road location in the City of El Monte provides 19 on-site guest parking spaces for its 62 dwelling units. On-street parking was not observed at this location.

The 5245 Village Circle Drive location in the City of Temple City provides 27 on-site guest parking spaces for its 87 dwelling units. On-street parking was not observed at this location.

The 11038 Encanto Way location in the City of El Monte provides 20 on-site guest parking spaces for its 46 dwelling units. On-street parking was observed along Wiggins Avenue with approximately 7 parking spaces that can be utilized.

SIMILAR TOWNHOMES MAXIMUM OCCUPIED PARKING SPACE PER UNIT RATIO SURVEY

The similar townhome complexes were surveyed by counting the number of occupied guest parking spaces on a Thursday and a Saturday at 3:00 AM. 3:00 AM was chosen as it would provide for the time during a typical day when the maximum number of parking spaces would be occupied. More guest parking spaces were occupied on Saturday (October 18, 2015) than Thursday (October 15, 2015). It was not possible to count the number of parking spaces provided or utilized at each dwelling unit since the parking spaces were enclosed in a garage.

The 11535 Lower Azusa Road location in the City of El Monte had a surveyed maximum occupied guest parking space to dwelling unit ratio of 0.08 parking spaces per dwelling unit (see Table 2).

The 5245 Village Circle Drive location in the City of Temple City provides had a surveyed maximum occupied guest parking space to dwelling unit ratio of 0.16 parking spaces per dwelling unit (see Table 2).

The 11038 Encanto Way location in the City of El Monte had a surveyed maximum occupied guest parking space to dwelling unit ratio of 0.50 parking spaces per dwelling unit (see Table 2).

The three similar locations had a surveyed average maximum occupied guest parking space to dwelling unit ratio of 0.22 parking spaces per dwelling unit (see Table 2). This occurred on Saturday (October 18, 2015).

Ms. Joann Lombardo
COMPREHENSIVE PLANNING SERVICES
October 26, 2015

CONCLUSIONS

The proposed development is requesting to provide 124 resident garage parking spaces, 34 off-street guest parking spaces (3 of which are handicapped), 2 off-street driveway spaces, and 6 live/work parking spaces for a total of 166 parking spaces. This provides for a parking space to dwelling unit ratio of 2.68 (166/62) or 2.58 (160/62) not including the live/work units. The guest parking spaces to dwelling unit ratio proposed is 0.58 (36/62) or 0.68 (42/62) with live/work and parking spaces included.

The proposed development is projected to provide adequate parking for guest parking at 0.58 (or 0.68) with live/work accounted for) based upon the parking ratios at the surveyed similar townhome complex locations.

It has been a pleasure to service your needs on this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 973-8383.

Sincerely,

KUNZMAN ASSOCIATES , INC.

Bryan Crawford
Associate

#6208

REGISTERED PROFESSIONAL ENGINEER
WILLIAM A. KUNZMAN
No. TR0056
TRAFFIC
STATE OF CALIFORNIA

KUNZMAN ASSOCIATES, INC.

William Kunzman

William Kunzman, P.E.
Principal

Table 1

City of El Monte Parking Code Requirements[1]

Descriptor	Number of Units	Parking Code Requirements	Number of Parking Spaces Required[2]
Two bedroom	22	2 parking spaces per unit	44
Three or more bedrooms	40	2.5 parking spaces per unit in common areas; 3 parking spaces if private or enclosed	100
Guest Parking	62	1/4 parking space per unit	15.5
Live/Work	4	1 parking space for every 350 square feet of gross floor area	5
Total Required Number of Parking Spaces			164.5 (Say 165)

[1] From City of El Monte Parking Code (See Appendix B).

[2] Live/Work parking space requirements for the project provided by applicant.

Table 2

Similar Townhome Parking Surveys[1]

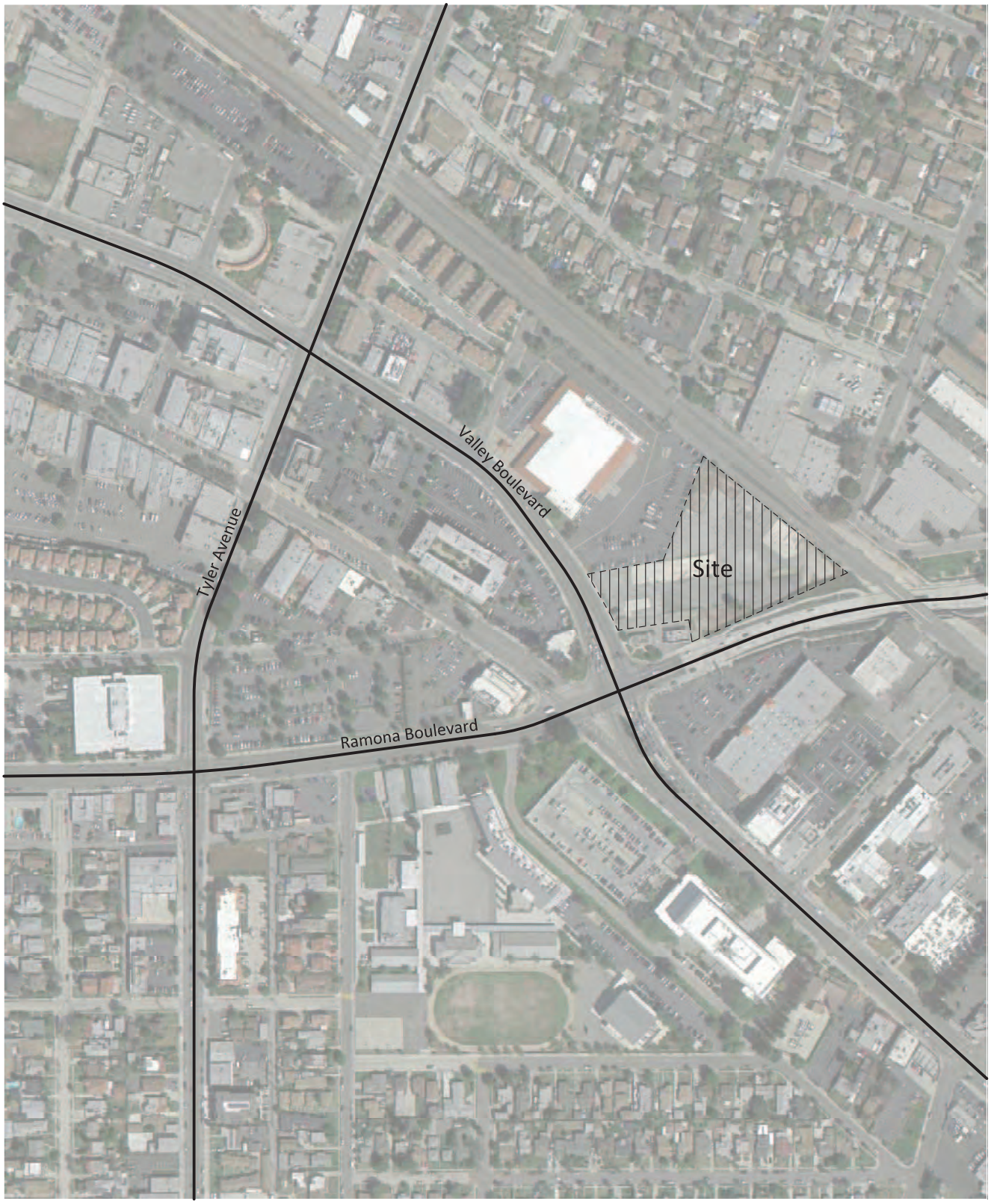
Weekday							
	Number of						
Location	Dwelling Units	On-Site Guest Parking Spaces	On-Street Parking Spaces	Occupied On-Site Parking Spaces	Occupied On-Street Parking Spaces	Parking Spaces Per Unit[2]	Occupied Parking Spaces Per Unit
11535 Lower Azusa Road, El Monte	62	19	N/A	2	N/A	0.31	0.03
5245 Village Circle Drive, Temple City	87	27	N/A	13	N/A	0.31	0.15
11038 Encanto Way, El Monte	46	20	7	18	5	0.43	0.50
Average	65	22	2.33	11	1.67	0.34	0.19

Weekend							
	Number of						
Location	Dwelling Units	On-Site Guest Parking Spaces	On-Street Parking Spaces	Occupied On-Site Parking Spaces	Occupied On-Street Parking Spaces	Parking Spaces Per Unit[2]	Occupied Parking Spaces Per Unit
11535 Lower Azusa Road, El Monte	62	19	N/A	5	N/A	0.31	0.08
5245 Village Circle Drive, Temple City	87	27	N/A	14	N/A	0.31	0.16
11038 Encanto Way, El Monte	46	20	7	17	6	0.43	0.50
Average	65	22	2.33	12	2.00	0.34	0.22

[1] Surveyed by Kunzman Associates, Inc. on Thursday (October 15,2015) and Saturday (October 18, 2015) at 3:00 AM.

[2] Includes on-street parking.

Figure 1
Project Location Map



6208/1

KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 2
Site Plan

6208/2

APPENDIX A

GLOSSARY OF TRANSPORTATION TERMS

GLOSSARY OF TRANSPORTATION TERMS

COMMON ABBREVIATIONS

AC:	Acres
ADT:	Average Daily Traffic
Caltrans:	California Department of Transportation
DU:	Dwelling Unit
ICU:	Intersection Capacity Utilization
LOS:	Level of Service
TSF:	Thousand Square Feet
V/C:	Volume/Capacity
VMT:	Vehicle Miles Traveled

TERMS

AVERAGE DAILY TRAFFIC: The total volume during a year divided by the number of days in a year. Usually only weekdays are included.

BANDWIDTH: The number of seconds of green time available for through traffic in a signal progression.

BOTTLENECK: A constriction along a travelway that limits the amount of traffic that can proceed downstream from its location.

CAPACITY: The maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.

CHANNELIZATION: The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movements of both vehicles and pedestrians.

CLEARANCE INTERVAL: Nearly same as yellow time. If there is an all red interval after the end of a yellow, then that is also added into the clearance interval.

CORDON: An imaginary line around an area across which vehicles, persons, or other items are counted (in and out).

CYCLE LENGTH: The time period in seconds required for one complete signal cycle.

CUL-DE-SAC STREET: A local street open at one end only, and with special provisions for turning around.

DAILY CAPACITY: The daily volume of traffic that will result in a volume during the peak hour equal to the capacity of the roadway.

DELAY: The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.

DEMAND RESPONSIVE SIGNAL: Same as traffic-actuated signal.

DENSITY: The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.

DETECTOR: A device that responds to a physical stimulus and transmits a resulting impulse to the signal controller.

DESIGN SPEED: A speed selected for purposes of design. Features of a highway, such as curvature, superelevation, and sight distance (upon which the safe operation of vehicles is dependent) are correlated to design speed.

DIRECTIONAL SPLIT: The percent of traffic in the peak direction at any point in time.

DIVERSION: The rerouting of peak hour traffic to avoid congestion.

FORCED FLOW: Opposite of free flow.

FREE FLOW: Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.

GAP: Time or distance between successive vehicles in a traffic stream, rear bumper to front bumper.

HEADWAY: Time or distance spacing between successive vehicles in a traffic stream, front bumper to front bumper.

INTERCONNECTED SIGNAL SYSTEM: A number of intersections that are connected to achieve signal progression.

LEVEL OF SERVICE: A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

LOOP DETECTOR: A vehicle detector consisting of a loop of wire embedded in the roadway, energized by alternating current and producing an output circuit closure when passed over by a vehicle.

MINIMUM ACCEPTABLE GAP: Smallest time headway between successive vehicles in a traffic stream into which another vehicle is willing and able to cross or merge.

MULTI-MODAL: More than one mode; such as automobile, bus transit, rail rapid transit, and bicycle transportation modes.

OFFSET: The time interval in seconds between the beginning of green at one intersection and the beginning of green at an adjacent intersection.

PLATOON: A closely grouped component of traffic that is composed of several vehicles moving, or standing ready to move, with clear spaces ahead and behind.

ORIGIN-DESTINATION SURVEY: A survey to determine the point of origin and the point of destination for a given vehicle trip.

PASSENGER CAR EQUIVALENTS (PCE): One car is one Passenger Car Equivalent. A truck is equal to 2 or 3 Passenger Car Equivalents in that a truck requires longer to start, goes slower, and accelerates slower. Loaded trucks have a higher Passenger Car Equivalent than empty trucks.

PEAK HOUR: The 60 consecutive minutes with the highest number of vehicles.

PRETIMED SIGNAL: A type of traffic signal that directs traffic to stop and go on a predetermined time schedule without regard to traffic conditions. Also, fixed time signal.

PROGRESSION: A term used to describe the progressive movement of traffic through several signalized intersections.

SCREEN-LINE: An imaginary line or physical feature across which all trips are counted, normally to verify the validity of mathematical traffic models.

SIGNAL CYCLE: The time period in seconds required for one complete sequence of signal indications.

SIGNAL PHASE: The part of the signal cycle allocated to one or more traffic movements.

STARTING DELAY: The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through a signalized intersection.

TRAFFIC-ACTUATED SIGNAL: A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.

TRIP: The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home is two trips, not one.

TRIP-END: One end of a trip at either the origin or destination; i.e. each trip has two trip-ends. A trip-end occurs when a person, object, or message is transferred to or from a vehicle.

TRIP GENERATION RATE: The quantity of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.

TRUCK: A vehicle having dual tires on one or more axles, or having more than two axles.

UNBALANCED FLOW: Heavier traffic flow in one direction than the other. On a daily basis, most facilities have balanced flow. During the peak hours, flow is seldom balanced in an urban area.

VEHICLE MILES OF TRAVEL: A measure of the amount of usage of a section of highway, obtained by multiplying the average daily traffic by length of facility in miles.

APPENDIX B

CITY OF EL MONTE PARKING CODE

Chapter 17.45 - MIXED/MULTIUSE ZONE

Sections:

17.45.010 - Purpose.

A. The purpose of this chapter to provide regulations that implement the goals and policies of the general plan and other similar long-range planning documents aimed at encouraging mixed-use development within the city. The mixed/multiuse zone is further intended to serve as an implementation tool of the city's housing element of the general plan by facilitating residential development on identified "housing opportunity sites."

B. The mixed/multiuse (MMU) zone has the following major objectives:

1. Create "by-right" opportunities for new mixed/multiuse housing along major corridors to protect and preserve single-family residential neighborhoods, reduce automobile dependence, improve air quality and revitalize and transition underutilized uses;
2. Implement state laws that require cities to demonstrate available land capacity and zoning tools to accommodate the city's projected need for housing;
3. Encourage lot assembly to provide quality multi-unit housing at higher densities;
4. Encourage commercial and mixed-use development at key intersections and nodes along major corridors and locate exclusively residential developments mid-block;
5. Create a pedestrian-oriented mix of uses with convenient access between area neighborhoods, housing, employment centers, and retail services;
6. Facilitate well-designed mixed/multiuse development projects that combine residential and nonresidential uses (e.g., office, retail, business services, personal services, public spaces and uses, other community amenities, etc.) vertically integrated (e.g., commercial frontage with residential and/or office uses above the first floor) or horizontally integrated (housing adjacent to commercial and office uses) to promote a better balance of jobs and housing;
7. Stimulate economic development and reinvestment through regulations based upon recognized urban design principles that allow property owners to respond with flexibility to market forces; and
8. Encourage the development of a unique zone character through a streetscape that provides attractive features (e.g., landscaping, niche or linear parks, public places, courtyards, etc.) designed to integrate the public realm (e.g., streets, sidewalks, etc.) with development on adjacent private property.

(Ord. No. 2834, § 6(Exh. A), 1-14-2014)

17.45.020 - Uses permitted.

No lot, premises, building or structure in the mixed use/multiuse zone shall be used for any use or purpose other than those specified in the following subsections:

1. Any use permitted in the R-C zone.
2. Any use permitted in the C-1, C-2, and C-O zone.
3. Automobile parking lots, surface.
4. Automobile parking structure, above ground.
5. Care facilities (less than six (6) persons).
6. Dwelling, multifamily.
7. Live/work.
8. Mixed-use development, where residential and nonresidential uses are integrated vertically, including live/work opportunities. Nonresidential uses in vertical mixed-use projects shall be limited to:

a. Health and fitness centers.
b. Schools, specialized education and training.
c. Studios, professional.
d. Printing and publishing.
e. Studios—Art, dance, music, photography, etc.
f. Retail trade uses that can only include:
    i. Appliance sales.
    ii. Arts, antiques, collectibles, and gifts.
    iii. Convenience stores.
    iv. Furniture and furnishings.
    v. Grocery stores.
    vi. Pet shops.
    vii. Restaurants.
    viii. Retail, general merchandise.
g. Bank and financial services.
h. Day care centers.
i. Laundry and dry cleaning.
j. Laundromats, self service.
k. Offices.
l. Personal services.

9. Senior housing.
10. Supportive housing.
11. Transitional housing.

(Ord. No. 2834, § 6(Exh. A), (Exh. E), 1-14-2014)

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17.45.030 - Regulations.

The regulations contained in the following subsections shall apply to and be complied with as to every lot, premises, building and structure in the mixed/multiuse (MMU) zone:

Table 17.45.030A
Development Regulations—Mixed/Multiuse Zone (MMU)

Development Regulation	MMU	Notes
1. Minimum density (residential uses)	25 du/ac	Minimum density for residential uses expressed as dwelling units per acre. Density is incentivized through land assembly/lot consolidation. See Section 17.45.040 for lot area per dwelling unit.

2. Maximum density (residential uses)	35 du/ac	Maximum density for residential uses expressed as dwelling units per acre. The maximum density of 35 dwelling units on a one-acre lot with established percentages of open space required. It is not intended that lots less than one acre in size provide housing at the maximum density of the zone.
3. Maximum intensity (nonresidential uses)	1.0 FAR	Maximum floor area ratio (FAR) for nonresidential uses. Podium and underground parking is not counted toward floor area ratio (FAR).
3. Minimum lot area	22,000 s.f.	See Section 17.45.040 for lot area per dwelling unit.
4. Minimum dwelling unit size	Studio: 500 s.f. 1-bdrm: 650 s.f. 2-bdrm: 800 s.f. 3-bdrm: 1,000 s.f.	
5. Maximum building height	4 stories/50 ft.	Underground levels and mezzanines lofts are allowed.
6. Distance between buildings (minimum)	10 ft.	Increase of 5 ft. for every 10 ft. of height, or fraction thereof, above 25 ft.
7. Front yard setback	5 ft. (min); 15 ft. (max)	
8. Street side setback	5 ft. (min); 15 ft. (max)	
9. Interior side setback	5 ft. (min); No max	Minimum 15 ft. if abutting residential zone district.

10. Rear yard setback	10 ft. (min) for residential portion, no requirement for commercial portion	Minimum 15 ft. if abutting residential zone district.
11. Permitted setback encroachments	6 ft. into setbacks	Balconies, awning, porches, stairways and similar elements may extend up to 6 ft. into the setback. Cornices, eaves, fireplaces, similar architectural features may extend 4 ft. into the front and rear setbacks and 3 ft. in interior setbacks.
12. Maximum lot coverage	None	
Landscape/open space standards		
13. Publicly accessible open space (nonresidential)	15% of net lot area	See Section 17.10 for additional standards and Chapter 4.1 of the El Monte Comprehensive Design Standards.
14. Private open space (multi-family residential)	1st floor-150 s.f. per unit Upper floor-100 s.f. per unit	See Section 17.10 for additional standards and Chapter 4.1 of the El Monte Comprehensive Design Standards.
15. Common open space (multi-family residential)	200 s.f. per unit	See Section 17.10 for additional standards and Chapter 4.1 of the El Monte Comprehensive Design Standards.
Parking Standards		
16. Surface parking	20 ft. min setback from front lot; 15 ft. min setback from side lot line	See Section 17.45.050 for additional parking standards.

17. Garage/tuck-under parking	Prohibited along front and street side lot lines	See Section 17.45.050 for additional parking standards.
18. Underground/podium parking	Allowed beneath building footprint	See Section 17.11.050 for additional parking standards.
19. Above-ground parking structure	Permitted if screened from views from public right-of-way and adjacent single-family residential districts	See Section 17.45.050 for additional parking standards.

Abbreviations: s.f. = square feet; ft. = feet or foot

(Ord. No. 2834, § 6(Exh. A), 1-14-2014)

17.45.040 - Lot area per dwelling unit.

A. For every building hereafter erected or structurally altered as a multiple-family dwelling, dwelling group, or apartment structure, the following table establishes the permitted densities based on gross square footage of the lot.

B. When calculating number of units, if insufficient area exists to provide the minimum lot area for the additional unit, the total number of units shall be rounded down to the smaller number.

Table 17.45.040A
Permitted Densities/Graduated Scale - Mixed/Multiuse Zone (MMU)

Lot Size Square Feet	# of Dwelling Units Square Feet of Lot Area
Up to 5,999	1/3,000 square feet
6,000—8,499	1/2,830 square feet
8,500—10,000	1/2,500 square feet
10,001—14,999	1/2,000 square feet
15,000—22,000	1/1,815 square feet

22,001—30,000	1/1,640 square feet
30,001—39,999	1/1,500 square feet
40,000—43,559	1/1,300 square feet
Above 43,560	1/1,244 square feet

(Ord. No. 2834, § 6(Exh. A), 1-14-2014)

17.45.050 - Parking regulations.

A. The mixed/multiuse zone integrates commercial, office and residential uses with varying parking requirements, peak hour demands and vehicle loading needs. Flexibility in meeting these varying requirements and demands is accommodated through parking requirements and inclusion of shared parking, when feasible. This section provides parking standards for buildings in the mixed/multiuse (MMU) zone.

Table 17.45.050A
Parking Standards - Mixed/Multiuse Zone (MMU)

Use	Required Number of Spaces	Notes
Multi-family residential and condominiums	Studio - 1 space per unit 1 bedroom - 1.7 spaces per unit Two bedrooms - 2 spaces per unit Three or more bedrooms - 2.5 spaces per unit in common parking areas; 3 spaces per unit if private and enclosed. Additional guest parking - ¼ space per unit	Per unit; Tandem parking is allowed in cases where multiple spaces are assigned to a single unit
Professional office	1 space per 350 square feet	
Medical office	1 space per 250 square feet	

Retail	1 space per 250 square feet of floor area for the first 20,000 square feet of gross floor area, 1 space per 400 square feet of floor area for the next 30,000 square feet of gross floor area and 1 space per 500 square feet of floor area after the first 50,000 square feet	
Restaurants		
Hotel	1 space per rentable room	
Senior housing and housing for very-low/low income	0.5 spaces per dwelling unit. The city may reduce the parking requirements for qualified senior and/or very low/low income units.	

1. Reduced Parking. The Planning Commission and City Council may reduce the required parking after considering documentation and/or study provided by the applicant, staffs recommendation and giving decisive weight to all relevant facts, including but not limited to the following factors: availability and accessibility of alternative parking; impact on adjacent residential neighborhoods; existing or potential shared parking arrangements; the characteristics of the use, including hours of operation and peak parking demand times; design and maintenance of off-street parking that will be provided; and whether the proposed use is new or a small addition to an existing use.
2. Electric Vehicle Charging Stations. In accordance with the California Green Building Code (CALGreen Code), new buildings shall be electric vehicle charging station ready. This requires residential and commercial properties alike to provide one 120V AC 20 amp and one 208/240V 40 amp, grounded AC outlet for each required parking space. The number of required parking spaces for electric vehicle charging shall be as follows:

Table 17.45.050B
Electric Vehicle Charging Station Standards - Mixed/Multiuse Zone (MMU)

Total Number of Spaces	Number of Required Electric Vehicle Charging Spaces
1—50	1
51—200	2

201 and over	4

(Ord. No. 2834, § 6(Exh. A), 1-14-2014)

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17.45.060 - Frontage type regulations.

A. This section provides frontage type standards for buildings in the mixed/multiuse zone (MMU). Types of frontages include:

1. Live-Work/Office Fronts. A frontage that reinforces both residential and work activities that can occur in the building. The elevation of the ground floor is located at or near the grade of sidewalk to provide direct public access to the building. Entrances and windows are provided on the front of the facade to provide eyes on the street and direct sidewalk access to commercial and office uses. The front setback may be improved with landscaping or as an extension of the public sidewalk to create a more pedestrian-friendly environment.
   a. Elevation of ground floor. The ground floor elevation shall be located near the elevation of the sidewalk to minimize the need for external steps and external ADA ramps at public entrances.
   b. Minimum Ground Floor Interior Height. Twelve (12) feet minimum (floor-to-floor height - commercial ready).
   c. Ground Floor Unit Entrances. All ground floor tenant spaces that have street frontage shall have entrances on a facade fronting a street. All other ground floor uses may have a common lobby entrance along the front facade or private entrances along other facades.
   d. Upper Floor Unit Entrances. Entrances to upper floor units may be provided through a common lobby entrance and/or by a common entrance along a facade fronting a street.
   e. Recessed Entrances. Entrances may be recessed into the facade.
   f. Awnings and Marquees. Awnings or marquees may be provided over storefront windows and entrances. Awning and marquees may project up to six (6) feet from the facade and extend over the sidewalk provided that at least eight (8) feet of vertical clearance is provided.
   g. Projecting Elements (Balconies, Roof Overhangs, Shade Structures, and Bay Windows). Projecting elements on upper floors may project four (4) feet from the facade and project into the setback.
   h. Sidewalk and Setback Treatment. The public sidewalk shall be improved with street trees with an average spacing of thirty (30) feet on-center and pedestrian-scaled street lights (no taller than fourteen (14) feet). If the front facade is setback from the public sidewalk, the setback shall be landscaped and/or improved as an extension of the public sidewalk.
2. Residential Fronts. A frontage that reinforces the residential character and use of the building. The elevation of the ground floor is elevated above the grade of the lot to provide privacy for residences by preventing direct views into the home from the sidewalk. Entrances and windows are provided on the front of the facade to provide eyes on the street and direct sidewalk access to the building. Stoops are allowed to project into the front setback to enhance entrances. The front setback is primarily improved with landscaping.
   a. Elevation of Ground Floor. The ground floor elevation shall be located within six feet of the ground surface of the adjacent sidewalk or walkway.
   b. Minimum Ground Floor Ceiling Height. Ten (10) feet minimum (floor-to-floor height).
   c. Ground Floor Unit Entrances. Entrances to ground floor units that have street frontage may be

provided through a common lobby entrance and/or by private entrances from the adjacent sidewalk.

d. Upper Floor Unit Entrances. Entrances to upper floor units may be provided through a common lobby entrance and/or by a common entrance along a facade fronting a street.

e. Recessed Entrances. Entrances may be recessed into the facade.

f. Stoops and Front Porches. Stoops and front porches may be provided in front of building and unit entrances. Stoops and front porches may project up to six (6) feet from the facade and project into the setback.

g. Projecting Elements (Balconies, Roof Overhangs, Shade Structures, and Bay Windows). Projecting Elements on upper floors may project four (4) feet from the facade and project into the setback.

h. Sidewalk and Setback Treatment. The public sidewalk shall be improved with street trees with an average spacing of thirty (30) feet on-center and pedestrian-scaled street lights (no taller than fourteen (14) feet). If the front facade is setback from the public sidewalk, the setback shall be landscaped (excluding stoops/front porches and paved paths to building entrances).

3. Storefronts. A frontage that reinforces the commercial character and use of the ground floor of the building. The elevation of the ground floor is located at or near the grade of sidewalk to provide direct public access into the building. Large storefronts display windows are provided on the front of the facade to encourage visual access to merchandise displays and to encourage window shopping. Awnings or marquees are provided over storefront windows and entrances. The front setback is primarily improved as an extension of the public sidewalk to create a more pedestrian-friendly environment.

a. Elevation of Ground Floor. The ground floor elevation shall be located near the elevation of the sidewalk to minimize the need for external steps and external ADA ramps at public entrances.

b. Minimum Ground Floor Ceiling Height. Fifteen (15) feet minimum (floor-to-floor height).

c. Storefront Entrances. All ground floor tenant spaces that have street frontage shall have storefront entrances on the facade fronting a street.

d. Lobby Entrances. Lobby entrances to upper floor uses shall be located on a facade fronting a street.

e. Recessed Entrances. Storefront and lobby entrances may be recessed into the facade.

f. Awnings and Marquees. Awnings or marquees are required over storefront windows and entrances. Awning and marquees may project up to six (6) feet from the facade and extend over the sidewalk provided that at least eight (8) feet of vertical clearance is provided.

g. Projecting Elements (Balconies, Shade Structures, and Bay Windows). Projecting Elements on upper floors may project four (4) feet from the facade and project into the setback.

h. Sidewalk and Setback Treatment. The public sidewalk shall be improved with street trees with an average spacing of thirty (30) feet on-center and pedestrian-scaled street lights (no taller than fourteen (14) feet). If the front facade is setback from the public sidewalk, the setback shall be improved as an extension of the public sidewalk.

(Ord. No. 2834, § 6(Exh. A), 1-14-2014)

17.45.070 - Open space regulations.

This section provides open space standards for development within the mixed/multiuse zone (MMU).

A. Usable Open Space Defined. Usable open space areas are an open area or an indoor or outdoor recreational facility which is designed and intended to be used for outdoor living and/or recreation. Usable open space shall not include any portion of parking areas, streets, driveways, sidewalks, or

turnaround areas.

B. The following standards shall apply to the requirements for open space:

1. Private Residential Open Space.

a. For stand-alone multi-family residential projects or as part of a mixed-use development, each residential unit shall be provided with at least one area of private open space accessible directly from the living area of the unit, in the form of a fenced yard or patio, a deck or balcony at a minimum area of one hundred fifty (150) square feet per unit for first floor units and one hundred (100) square feet per unit for upper floors.

b. The minimum dimension, width or depth, of a balcony shall be five (5) feet.

2. Common Residential Open Space.

a. For stand-alone multi-family residential developments, each residential unit shall be provided with at least two hundred (200) square feet of common residential open space.

b. All common open space shall be conveniently located and accessible to all dwelling units on the site.

c. Common open space areas may include landscaping, pedestrian paths, and recreational facilities.

d. in projects containing fewer than ten (10) units, the common open space shall have a minimum width and depth of ten (10) feet. In projects containing ten (10) or more units, the minimum width and depth shall be twenty (20) feet.

3. Recreational Amenities/Facilities.

a. For projects containing twenty-five (25) or more residential units in stand-alone multi-family residential developments and as part of a mixed-use development, one common recreational amenity shall be provided for each twenty-five (25) units or fraction thereof. The following listed amenities satisfy the above recreational facilities requirements. Recognizing that certain facilities serve more people than others, have a wider interest or appeal, and/or occupy more area, specified items may be counted as two (2) amenities, as noted. In all cases, each square foot of land area devoted to a recreational amenity shall be credited as common open space on a 1:1 basis.

i. Clubhouse (two (2)).

ii. Swimming pool (two (2)).

iii. Tennis court (one per court).

iv. Basketball court (one per court).

v. Racquetball court (one per court).

vi. Weightlifting facility.

vii. Children's playground equipment.

viii. Sauna.

ix. Jacuzzi.

x. Day care facility (two (2)).

xi. Other recreational amenities deemed adequate by the Economic Development Director.

(Ord. No. 2834, § 6(Exh. A), 1-14-2014)

17.45.080 - Public space amenities requirements.

A. Each project proposed within the mixed/multiuse zone (MMU) must include a public open space amenity, or some form of physical interface for the pedestrian. Such features may include, but not be limited to:

1. Formal Plazas. A formal plaza would be a publicly accessible open space which has a design that is influenced by classical urban planning design. A formal plaza would typically include some sort of central water fountain and/or symmetrical landscaping.
2. Urban Gardens. An urban garden can be located on the ground level, or on upper levels of a structure. Urban gardens include ornamental landscaping arranged in raised or at-grade planters or planting areas, potted plants and trees. Many times there are sculptures or other forms of public art that are included within the urban garden.
3. Covered Colonnades. Colonnades are linear in design and generous in depth. The intent is to provide a comfortably wide, covered pathway that is adjacent to the openings of a building. Sometimes the second floor of a building is utilized to create the "covered" element of the colonnade.
4. Sidewalk Dining. Sidewalk dining may occur wherever a sidewalk space is ample enough to accommodate dining furniture without impeding pedestrian access of the sidewalk. Sidewalk dining may be defined with a railing or planters, or be open and accessible.
5. Pedestrian Alleys and Walkways. A pedestrian alley or walkway is typically a "lane" that does not follow the alignment of a vehicular street, but provides a pedestrian access to either a public space or some other feature within the interior of a development. Pedestrian alleys or walkways must be designed in such a manner so as to be inviting to pedestrians. Therefore, issues such as lighting, security, line of sight, cleanliness and visual appeal are important considerations to a well designed pedestrian alley or walkway. Sometimes public art, street furniture and access to shops and public spaces are features of pedestrian alleys and walkways.

(Ord. No. 2834, § 6(Exh. A), 1-14-2014)

17.45.090 - Live-work development.

This section provides operational and compatibility standards for the development of live/work units within the mixed/multiuse zone (MMU).

A. Allowed Uses.
   1. The nonresidential component of a live/work unit shall only be a nonresidential use allowed within the MMU zone, except that certain uses are determined to be not appropriate within a residential environment and are therefore prohibited as provided in subsection B, below.
   2. The residential component of a live/work unit shall only be a residential use allowed within the MMU zone.
B. Prohibited Uses.
   1. A live/work unit shall not be used for any of the following activities or similar activities as determined by the Director:
      a. Adult-oriented businesses;
      b. Animal care or boarding;
      c. Classroom instruction (e.g., art/music lessons, tutoring, and similar uses) involving five (5) or more students at any one time;
      d. Commercial food preparation activities;
      e. Industrial uses;
      f. Vehicle maintenance or repair (i.e., body or mechanical work, including boats and recreational vehicles), vehicle detailing and painting, upholstery, etc.;
      g. Storage of flammable liquids or hazardous materials beyond that normally associated with a residential use;
      h. Medical and dental offices, clinics, and laboratories (not including chiropractors or

counselors/psychotherapists);

2. Activities or uses that are not compatible with residential activities or that would clearly conflict with other live/work activities or the character of the surrounding neighborhood as determined by the Director; and
3. Activities or uses that would adversely affect the health or safety of live/work unit residents, because of dust, glare, heat, noise, noxious gases, odor, smoke, traffic, vibration, or other impacts, or that would be hazardous because of materials, processes, products, or wastes.

C. Site Planning and Design Standards.

1. Each live/work unit fronting a public right-of-way shall have a pedestrian-oriented frontage that allows views into the interior of the nonresidential areas of the unit.
2. Each live/work unit shall have a clearly identified, separate access from other live/work units within the structure or development. Access to individual units shall be from common access areas, parking lots, or walkways. Access to each unit shall be clearly identified to provide for emergency services.
3. The living space within the live/work unit shall be contiguous with the working space, with direct access between the two (2) areas.

D. Operational Standards.

1. No portion of a live/work unit shall be separately sold or rented.
2. The owner or developer of a structure containing live/work units shall provide written notice to all occupants, tenants, and users that the surrounding area may be subject to higher impacts associated with nonresidential uses (e.g., noise) than exist in more predominantly residential areas. Performance standards for live/work units shall be those applicable to nonresidential uses allowed in the zone in which the live/work units are located.
3. All activities related to the "work" component of a live/work unit shall be conducted within a completely enclosed building.
4. Up to two (2) additional persons who do not reside in the live/work unit may work in the unit.
5. Client and customer visits to live/work units are allowed.
6. Parking for each live/work unit shall be provided in compliance with Chapter 17.08 (Parking Requirements).
7. A live/work unit shall not be converted to either entirely residential use or entirely nonresidential use.
8. A live/work use may display a window or building-mounted sign up to a maximum of five (5) percent of the building frontage area used for commercial purposes. Signs shall not be illuminated, including neon signs.

(Ord. No. 2834, § 6(Exh. A), 1-14-2014)

17.45.100 - Vertical mixed-use development.

This section provides operational and compatibility standards for vertical mixed-use development within the mixed/multiuse zone (MMU).

A. Operational Standards.

1. Joint tenants and owners association.
   a. A joint tenants and owners association shall be formed to ensure the well-being of each tenant and owner in a mixed-use project.
   b. The association bylaws, including voting rights, shall be subject to review by the City Attorney

and approval by the Director. The association's bylaws shall include the following:

i. Assignment of parking spaces per each use.

ii. Identification of maintenance responsibilities for landscaping, parking facilities, and recycling and refuse storage facilities. Noise notification procedures.

iii. Relationship between uses regarding association representation

iv. Voting procedures.

v. Procedures for solving problems that may arise between the different types of uses or residents.

2. Loading and Unloading Activities. Where applicable, the covenants, conditions, and restrictions of a mixed-use project shall indicate the times when the loading and unloading of goods may occur on the street, provided that in no event shall loading or unloading take place after 10:00 p.m. or before 7:00 a.m. on any day of the week.

3. Noise Notification.

a. Residents, whether owners or tenants, of a mixed-use development project shall be notified in writing before taking up residence that they will be living in an urban type of environment and that the noise levels may be higher than a typical residential area.

b. The covenants, conditions, and restrictions of a mixed-use project shall require that the residents acknowledge their receipt of the written noise notification. Their signatures shall confirm receipt and understanding of this information

B. Parking. Residential parking shall be secured and separated from public parking.

C. Bicycle Storage Areas. All vertical mixed use developments shall provide common bicycle storage areas for the residents as follows: two (2) bicycle storage units for every five (5) dwelling units for the first twenty (20) dwelling units, and one bicycle storage unit for every five (5) additional dwelling units.

D. Fences and walls. In addition to the regulations in Table 17.06.120 (Fences, Walls, and Hedges), fences and walls shall be subject to the following regulations:

1. Separation Wall Required. A masonry separation wall shall be constructed on all property lines adjacent to any single-family residential district. Pedestrian access points are encouraged and may be allowed subject to approval of the Director. The separation wall shall be six (6) feet in height, as measured from the highest elevation of land contiguous to the wall, except in a required front setback area and in a required exterior side setback area for a corner, reverse corner or key lot, where the wall shall be limited to thirty-six (36) inches in height.

2. Other Fences and Walls. Fences and walls are allowed in any yard area subject to the following height regulations:

a. Front yard and street side yard setback area. In the front yard and street side yard setback area, fences and walls are prohibited.

b. All other areas. In all other areas, the height shall be limited to six (6) feet, as measured from the side of the fence or wall with the highest grade.

3. Location. All perimeter fences and walls shall be constructed on the property line unless a different location is permitted by the Economic Development Director. No parallel wall or fence shall be constructed less than five (5) feet from an existing wall or fence, unless approved by the Economic Development Director.

4. Materials.

a. Chain link fencing is prohibited, except that chain link fencing may be used for temporary fencing needs (construction sites, special events, vacant lots, etc.).

b. Barbed wire and concertina wire are prohibited.

E. Trash Enclosures. Enclosures shall be required for refuse and recycling bins and there location shall be clearly indicated on required site plan. Outside trash enclosures shall be a minimum six (6) feet in height and shall be architecturally compatible with main building. Enclosures are not permitted in required front yard or street side yard setback area.

F. Landscaping. Landscaping shall comply with Section 17.10 (Landscaping) and Chapter 4.1 Section E. Landscape Design, of the El Monte Comprehensive Design Standards.

G. Screening and Buffering—Mechanical Equipment and Trash Facilities. All mechanical equipment, heat and air-conditioning equipment shall be architecturally screened from view and buffered and trash facilities shall be screened and buffered.

H. Signs. Signs shall comply with Chapter 17.12 (Sign Standards and Signage Regulation). In addition, in the MMU zone where both residential and nonresidential uses are allowed, the signage rights and responsibilities applicable to a particular use shall be determined as follows: residential uses shall be treated as if they were located in the residential area where that type of use would be allowed as a matter of right, and nonresidential uses shall be treated as if they were located in a zone where that particular use would be allowed, either as a matter of right or subject to a discretionary process.

I. Sound mitigation. Residential dwelling units shall be designed to be sound attenuated against present and future project noise. New projects or new nonresidential uses in existing projects shall provide an acoustical analysis report, by an acoustical engineer, describing the acoustical design features of the structure required to satisfy the exterior and interior noise standards.

J. Design Criteria.

1. A mixed-use development project shall be designed and constructed to:
   a. Be pedestrian in its focus by:
      i. Providing direct pedestrian linkages to adjacent public sidewalks.
      ii. Creating enhanced pedestrian connections throughout the project between residential and nonresidential uses and parking areas.
      iii. Providing enhanced pedestrian amenities throughout the project, including seating, pedestrian area lighting, special paving, public art, water features, common open space, directories, and similar items to create a pleasant pedestrian experience.
   b. Incorporating architectural design elements and materials that relate to a pedestrian scale.
   c. Locate uses in proximity to one another without large intervening parking lots so that it is convenient for people to walk between the various uses and park their vehicles only once.
   d. Create a pedestrian scale and character of development along the street by providing significant wall articulation and varying roof heights, incorporating pedestrian scale elements (e.g., doors, windows, lighting, landscaping), and locating storefronts and common open space areas (e.g., plaza, courtyard, outdoor dining) near the public sidewalk to contribute to an active street environment.
2. Consistent use of architectural details and materials. Architectural style and use of quality materials shall be compatible and consistent throughout an entire mixed-use project. However, differences in architectural details and materials may occur to differentiate between the residential and nonresidential portions of the project. The overall project design and site layout shall be one that promotes a strong pedestrian environment and active street frontage. This can be accomplished by incorporating features into the project as outlined in subsection 3, below.
3. Features.
   a. Street Level Features. Variations in the front building plane shall be incorporated through the use of varying building setbacks, variations in wall planes, and the inclusion of pedestrian

amenities (e.g., plaza, courtyard, outdoor dining, landscaping). Long expanses of blank walls shall be prohibited.

b. Pedestrian-Oriented Features. At least seventy-five (75) percent of the building frontage facing a public street, primary pedestrian way, or parking lot shall be devoted to pedestrian-oriented features (e.g., storefronts, pedestrian entrances to nonresidential uses; transparent display windows; landscaping).

c. Upper Level Features. Upper floor balconies, bays, and windows shall be provided whenever opportunities exist for these types of features.

d. Entrances. When nonresidential and residential uses are located in a vertical mixed use structure, separate pedestrian entrances shall be provided for each use. The entrances for nonresidential uses shall be designed to be visually distinct from the entrances for residential uses. Entrances to individual residential units in a vertical mixed use project shall not be allowed along a street frontage. Instead shared entrances to residential units located above the ground floor shall be from lobbies that serve multiple units.

e. Neighborhood Interface. The design of new infill development shall be sensitive to the scale and design characteristics of established structures in abutting residential neighborhoods, with the objective of achieving a harmonious transition between the new development and existing neighborhood. Consideration shall be given to factors including, but not limited to, orientation of architectural features, building articulation, and exterior building treatments.

f. Lighting. Lighting shall be incorporated along sidewalks or other pedestrian walkways, plazas, paseos, courtyards, and other common open areas to enhance the pedestrian environment and increase public safety. Lighting for nonresidential uses shall be designed, located, and shielded to ensure that they do not adversely impact the residential uses, but shall provide sufficient illumination for access and security purposes.

g. Security. Projects shall be designed to minimize security risks to residents and to minimize the opportunities for vandalism and theft. This may be accomplished by:

i. Maximizing visibility to common open space areas, internal walkways, and public sidewalks. Use opportunities for natural surveillance to increase visibility.

ii. Using walkways, low fences, lighting, signage, and landscaping to clearly guide people and vehicles to and from the proper entrances.

iii. Eliminating areas of concealment, hiding places, and dead spaces.

iv. Using lighting to improve the visibility of common areas while enhancing the pedestrian environment. Lighting should not be overly bright and should provide a uniform level of light over the subject area to eliminate dark spaces.

(Ord. No. 2834, § 6(Exh. A), 1-14-2014)

17.45.110 - Outdoor dining.

This section provides standards for outdoor dining areas within the mixed/multiuse zone (MMU). Outdoor dining restricted is restricted to the ground floor only.

A. Public Property. Outdoor dining on public property shall require approval of an encroachment permit by the Public Works Director and compliance with the standards of the Public Works Department.

B. Private Property. Outdoor dining on private property shall comply with the following standards:

1. Coordinated Design Scheme. The design and appearance of proposed improvements or furniture (e.g., tables, chairs, benches, umbrellas, planters, menu boards, etc.) to be placed in an outdoor dining area shall present a coordinated theme and shall be compatible with the appearance and

design of the primary structure, as determined by the Director.

2. Hours of Operation. Hours of operation for outdoor dining areas shall coincide with those of the associated indoor restaurant.
3. Property Maintenance. The operator shall maintain the outdoor dining area(s) in a neat, clean, and orderly condition at all times. This shall include all tables, benches, chairs, displays, or other related furniture. An adequate number of trash receptacles shall be provided to serve the outdoor dining area.
4. Outdoor Bar Prohibited. A bar designed and/or operated to sell or dispense any alcoholic beverages shall not be allowed in the outside dining area.
5. Location. Outdoor dining areas may be allowed to locate in required setback areas but shall not encroach into required parking areas. They may be allowed to encroach into a public right-of-way with an approved encroachment permit issued by the City Engineer.
6. Noise. Amplified sound (e.g., music, television, etc.) shall not be audible beyond the lot line.

C. Review Criteria. When reviewing an application to allow outdoor dining, the review authority shall consider the relation of outdoor dining areas to sensitive noise receptors (e.g., hospitals, schools, and residential uses). Mitigation measures shall be applied to eliminate potential impacts related to glare, light, loitering, and noise.

(Ord. No. 2834, § 6(Exh. A), 1-14-2014)

17.45.120 - Signs.

A. Signage. All development within the MMU zone shall have a "master sign program" as part of the project design. The sign program shall identify the location for all signage that may be located on the building, the allowable sign materials, lighting methods and sign design. In addition, temporary signs and banners will be included in the sign program, as to whether or not they are allowed, and if they are allowed, then where these signs may be located within the development project. At no time, shall the sign program allow for signage in excess of those standards within Section 17.12 (Sign Standards and Signage Regulation). "Box" signs, "canister" or "can" signs are prohibited.

Pedestrian-oriented, way finding and non-illuminated hanging "blade" signs that either hang under a colonnade or canopy, or project from the façade of a building, shall not be counted within the sign area formula that is used to calculate the maximum amount of sign area for each building. In other words, the hanging or projecting blade sign is a "free" sign in regards to being included in calculating the maximum amount of sign area that a development or store may have. In no case, shall a pedestrian-oriented, non-illuminated hanging or projecting blade sign exceed two (2) square feet maximum per sign face, or two (2) square feet for a double-faced blade sign.

(Ord. No. 2834, § 6(Exh. A), 1-14-2014)

17.45.130 - Housing element implementation.

A. To comply with housing element law, Government Code Sections 65583.2(h) and (i) and 65583(c)(1) (AB 2348), which requires the city to demonstrate adequate sites for the Housing Element update and facilitate development of affordable housing within the MMU zone, the city must ensure at least ten and one-half (10.5) acres within the MMU zone are designated for exclusively residential uses allowing a minimum twenty (20) dwelling units per acre to accommodate at least fifty (50) percent of the city's lower-income Regional Housing Needs Allocation (RHNA).

B. Pursuant to Government Code Section 56863, if a designated parcel is developed with a mix of residential and nonresidential uses or at less than twenty (20) units per acre, the city will immediately identify an alternative site with established minimum density requirements.

C. The city will report on the progress of residential development in the MMU zone in its annual progress reports required pursuant to Government Code Section 65400 and due on April 1st of each year. The inventory of available sites will also be made available to the development community through various outreach methods.

(Ord. No. 2834, § 6(Exh. A), 1-14-2014)

17.45.140 - Other applicable regulations.

In addition to the requirements contained in this Chapter 17.45, regulations contained in the following chapters of this Title 17 shall apply to development in the MMU zone:

Chapter 17.06: General regulations.

Chapter 17.08: Parking requirements.

Chapter 17.10: Landscaping standards.

Chapter 17.11: Water efficiency.

Chapter 17.12: Sign standards and signage regulation.

Chapter 17.24: Conditional use permits.

Chapter 17.14: Nonconforming provisions.

Chapter 17.22: Design review.

Chapter 17.86: Comprehensive design guidelines.

El Monte Comprehensive Design Guidelines—Chapter 4 Implementing the Vision: Multi-Family Residential and Mixed-Use Design Guidelines.

(Ord. No. 2834, § 6(Exh. A), 1-14-2014)

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ECONOMIC DEVELOPMENT DEPARTMENT
PLANNING DIVISION

City Hall West
11333 Valley Boulevard
El Monte, CA. 91731-3293

MITIGATION MONITORING REPORT

FOR

VALLEY & RAMONA RESIDENTIAL PROJECT AT 11127 RAMONA BOULEVARD

Zoning Change (ZC) 01-15, Tentative Tract Map (TTM) 73528,
Variance 03-15, Design Review (DR) 05-15

Prepared for:

City of El Monte

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March 7, 2016

MITIGATION MONITORING REPORT

VALLEY & RAMONA RESIDENTIAL PROJECT AT 11127 RAMONA BOULEVARD

The following environmental mitigation measures shall be incorporated into the Project development as conditions of approval. Each of the measures are applicable to the Valley & Ramona Residential Project. The Applicant for the Project shall secure a signed verification for the mitigation measures that indicates that the mitigation measures have been complied with and implemented, and fulfill the City environmental and other requirements (Public Resources Code Section 21081.6.) Final clearance shall require all applicable verifications as included in the following table. The City of El Monte Economic Development Department has primary responsibility for monitoring and reporting the implementation of the mitigation measures. The mitigation measures are identified by impact category and numbered for ease of reference.

Mitigation measure	Timing	Verification of Compliance		
Complete description of mitigation measure.	*When the mitigation measure must be completed.*	**Department:**	**Signature:**	**Date:**
AIR QUALITY				
AQ-1: Commercial uses in the Live/Work units of the Valley & Ramona Residential (project part #1) shall be limited to those that do not generate odors discernibly greater than those associated with a typical residential use. This provision shall be included in the Project Covenants, Conditions and Restrictions (CC&R's).	Prior to final map, and on-going.	Economic Development		
BIOLOGICAL RESOURCES				
BIO-1: Removal of any trees or vegetation shall occur outside the bird nesting season, which occurs between January 1st to September 15th (which accommodates the nesting period for passerine birds and raptors). If the nesting season cannot be avoided and tree or vegetation removal occurs between January 1st to September 15th, the Applicant shall retain a	Prior to clearing, demolition or grading.	Economic Development		

Mitigation measure	Timing	Verification of Compliance		
Complete description of mitigation measure.	*When the mitigation measure must be completed.*	**Department:**	**Signature:**	**Date:**
qualified biologist subject to the review and approval of the City Economic Development Department to verify the presence of nesting birds and to develop a plan for avoidance. The Applicant shall comply with the plan for avoidance if required.				
BIO-2: Prior to issuance of building permits, the Applicant shall provide to the City arborist all required application materials to ensure compliance with Chapter 14.03 of the El Monte Municipal Code.	Prior to issuance of building permits.	Economic Development		
CULTURAL RESOURCES				
CR-1: If potential Native American resources are uncovered during grading, the Applicant shall be required to halt work in the immediate area of the find, inform the Economic Development Department immediately and retain a qualified professional archaeologist and an experienced and certified Native American monitor acceptable to the City to examine the material to determine whether it is a "unique cultural resource" as defined in Section 21083.2 (g) of the State CEQA Statues. If this determination is positive, the scientifically consequential information shall be fully recovered by the archaeologist. Work may continue outside the area of the find. However, no further work shall occur in the immediate location of the find until all information recovery has been completed and a report concerning same filed with the City, a designated repository as appropriate and made available to interested representatives of Native American tribes that are traditionally and culturally affiliated with the Project area.	During grading.	Economic Development		
HAZARDS AND HAZARDOUS MATERIALS				

Mitigation measure	Timing	Verification of Compliance		
Complete description of mitigation measure.	*When the mitigation measure must be completed.*	**Department:**	**Signature:**	**Date:**
HAZ-1: During grading activities on the Valley & Ramona Residential Project site, the Applicant shall provide evidence to the City Economic Development Department that a soil management plan (SMP) is in place and all lead and arsenic impacted soil has been excavated and removed pursuant to the approved Los Angeles County Fire Department, Hazardous Material Division (LACFD) remedial action plan (RAP) and LACFD has issued a "No Further Action" letter for the lead and arsenic issue at the site.	During grading.	Economic Development		
HAZ-2: After grading activities on the Valley & Ramona Residential Project site, the Applicant shall provide evidence to the City Economic Development Department that a human health risk assessment (HHRA) has been completed that established concentration of detected PCE soil vapors. Where concentrations of PCE are detected above the established thresholds, the Applicant shall ensure placement of a vapor barrier below the residences to prevent intrusion of the soil vapor into the overlying structure. Those structures that require vapor barriers will require a deed notification and restriction to ensure protection of the barrier over time. No certificate of occupancy shall be issued for the Project until these measures are completed and LACFD has inspected and provided concurrence placement for each affected unit on the Project Site.	After grading.	Economic Development		
NOISE				
NOI-1: During all grading and construction activities for the Valley & Ramona project, the Applicant shall demonstrate to the satisfaction of the Economic Development Department that: (1) All equipment shall be equipped with properly operating and maintained mufflers. (2) Equipment and materials shall be staged in areas that will create the greatest distance	During all grading.	Economic Development		

Mitigation measure	Timing	Verification of Compliance		
Complete description of mitigation measure.	*When the mitigation measure must be completed.*	**Department:**	**Signature:**	**Date:**
between construction-related noise sources and the noise-sensitive receptors nearest the Project site during all Project construction. (3) All construction-related activities shall be restricted to the construction hours outlined in the City's Noise Ordinance.				
NOI-2: Prior to the issuance of building permits for the Valley & Ramona Residential project, the Applicant shall provide a supplemental acoustical analysis for review and approval of the Economic Development Department to verify that adequate structural noise protection exists in perimeter residences adjoining the roadways to meet the 45 dBA CNEL interior standard. Supplemental ventilation (most likely air conditioning with a fresh make-up air inlet) is required in any livable space where window closure to shut out transportation noise is needed to meet interior standards.	Prior to issuance of building permits.	Economic Development		
NOI-3: Prior to the issuance of building permits for the Valley & Ramona Residential project, the Applicant shall provide a supplemental acoustical analysis for review and approval of the Economic Development Department to verify that for residential units adjacent to the rail tracks, appropriate noise attenuation measures will be in place to reduce exterior rail noise to 70 dB CNEL which is a conditionally acceptable level. Appropriate measures that can achieve the reduction to 70 dB CNEL include: • Sound barriers that are (1) high enough and long enough to break the line-of-sight between the sound source and the receiver, (2) of an impervious material, and (3) not have any gaps or holes between the panels or at the bottom. • A 14-foot high CMU or stucco sound wall at the residential Project property line.	Prior to issuance of building permits.	Economic Development		

Mitigation measure	Timing	Verification of Compliance		
Complete description of mitigation measure.	*When the mitigation measure must be completed.*	**Department:**	**Signature:**	**Date:**
• All windows throughout the Project will be dual-paned glass and all upstairs living and bedrooms of units abutting the tracks shall be equipped with supplemental ventilation supplying at least 30 cubic feet per minute (CFM) of fresh make-up air (CBC requirement), and • Upstairs side windows of living or bedrooms in units abutting the tracks shall be rated at sound transmission class (STC) =33 or better (single event noise nuisance reduction).				
NOI-4: Prior to the issuance of building permits for the Valley & Ramona Residential project, the Applicant shall provide documentation satisfactory to the Economic Development Department that all units facing the railroad tracks will be equipped with dual-paned windows with upgraded seals for noise control would reduce window rattling and other vibration effects to acceptable levels.	Prior to issuance of building permits.	Economic Development		
Transportation/Traffic				
TR-1: Prior to certificate of occupancy for the Valley & Ramona Residential project, the Applicant shall implement the following improvements: (1) Construct Valley Boulevard from the north project boundary to Ramona Boulevard at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary. (2) Construct Ramona Boulevard from Valley Boulevard to the east project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary. (3) Sight distance at the project access shall comply with standard California Department of Transportation and City of El	Prior to issuance of certificate of occupancy.	Economic Development		

Mitigation measure	Timing	Verification of Compliance		
Complete description of mitigation measure.	*When the mitigation measure must be completed.*	**Department:**	**Signature:**	**Date:**
Monte sight distance standards. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City Public Works Department and approved as consistent with this measure prior to issue of grading permits. (4) The project shall provide sufficient parking spaces to meet the City of El Monte parking code requirements in order to service on-site parking or as otherwise approved by the City through the modification process. (5) On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.				

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

DARYL L. OSBY
FIRE CHIEF
FORESTER & FIRE WARDEN

March 2, 2016

Tony Bu, Contract Planner
City of El Monte
Planning Division
11333 Valley Boulevard
El Monte, CA 91731

Dear Mr. Bu:

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION, ZONE CHANGE NO. 01-15, TENTATIVE TRACT MAP NO. 73528, REQUESTS TO CONSTRUCT A NEW 62-UNIT TOWNHOME DEVELOPMENT ON A 3.1 ACRE VACANT SITE WITHIN DOWNTOWN EL MONTE, 11127 RAMONA BOULEVARD, EL MONTE (FFER 201600028)

The Notice of Intent to Adopt a Mitigated Negative Declaration has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION:

Table 8 - Fire Station Resources should be corrected as follows. Corrections are underlined.

TABLE 8. FIRE STATION RESOURCES		
Name and Location	Equipment	Daily Firefighter Staffing
Fire Stations in El Monte		

Station 166 at *3615* Santa Anita Ave	1 quint[1]	*4*
Station 167 at 11567 Bryant Road	1 engine and 1 paramedic squad	5
Station 168 at 3207 Cogswell Road	1 engine	3
Station 169 at 5112 N. Peck Road	1 engine	3
Fire Stations within One Mile of El Monte City Limits		
TABLE 8. FIRE STATION RESOURCES - CONTINUED		
Station 42 at 9319 E. Valley Boulevard in City of Rosemead, about 0.2 mile west of El Monte city limits	1 engine	4
Station 90 at 10115 E. Rush Street in City of South El Monte, about 0.5 mile south of El Monte city limits	1 engine and 1 paramedic squad	5
[1] A quint is a combination fire engine and ladder truck		

LAND DEVELOPMENT UNIT:

1. The proposed development may necessitate multiple ingress/egress access for the circulation of traffic and emergency response issues.

2. The development of this project must comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows, and fire hydrants.

3. Specific fire and life safety requirements for the construction phase will be addressed at the building fire plan check. There may be additional fire and life safety requirements during this time.

4. Every building constructed shall be accessible to Fire Department's apparatus by way of access roadways with an all-weather surface of not less than the prescribed width. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.

5. When involved with subdivision in a city contracting fire protection with the County of Los Angeles Fire Department, Fire Department's requirements for access, fire flows, and hydrants are addressed during the subdivision tentative map stage.

6. Fire Department's requirements for access, fire flows, and hydrants are addressed during the building permit stage.

7. Fire sprinkler systems are required in some residential and most commercial occupancies. For those occupancies not requiring fire sprinkler systems, it is strongly suggested that fire sprinkler systems be installed. This will reduce potential fire and life losses. Systems are now technically and economically feasible for residential use.

8. The development may require fire flows up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for up to a five-hour duration. Final fire flows will be based on the size of the buildings, their relationship to other structures, property lines, and types of construction used.

9. Fire hydrant spacing shall be 300 feet and shall meet the following requirements:

    a) No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant.

    b) No portion of a building shall exceed 400 feet via vehicular access from a properly spaced fire hydrant.

    c) When cul-de-sac depth exceeds 200 feet, hydrants will be required at the corner and midblock.

    d) Additional hydrants will be required if the hydrant spacing exceeds specified distances.

10. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in-length and at the end of all cul-de-sacs.

11. All on-site driveways shall provide a minimum unobstructed width of 28 feet, clear-to-sky. The 28 foot width does not allow for parking and shall be designated as a "Fire Lane", and have appropriate signage. The centerline of

the on-site driveway shall be located parallel to and within 30 feet of an exterior wall on one side of the proposed structure. The on-site driveway is to be within 150 feet of all portions of the exterior walls of the first story of any building.

12. The 28 feet in width shall be increased to:

    a) 34 feet in width when parallel parking is allowed on one side of the access way.

    b) 36 feet in width when parallel parking is allowed on both sides of the access way.

    c) Any access way less than 34 feet in width shall be labeled "Fire Lane" on the final recording map and final building plans.

    d) For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING - FIRE LANE" in three-inch high letters. Driveway labeling is necessary to ensure access for Fire Department use.

13. When serving land zoned for residential uses having a density of more than four units per net acre:

    a) A cul-de-sac shall be a minimum of 34 feet in width and shall not be more than 700 feet in length.

    b) The length of the cul-de-sac may be increased to 1000 feet if a minimum of 36 feet in width is provided.

    c) A Fire Department approved turning area shall be provided at the end of a cul-de-sac.

14. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in-length and at the end of all cul-de-sacs.

15. Fire Department's access shall provide a minimum unobstructed width of 28 feet, clear-to-sky and be within 150 feet of all portions of the exterior walls of the first story of any single unit. If exceeding 150 feet, provide 20 feet minimum paved width "Private Driveway/Fire Lane" clear-to-sky to within 150 feet of all portions of

the exterior walls of the unit. Fire Lanes serving three or more units shall be increased to 26 feet.

16. Streets or driveways within the development shall be provided with the following:

    a) Provide 36 feet in width on all streets where parking is allowed on both sides.

    b) Provide 34 feet in width on cul-de-sacs up to 700 feet in length. This allows parking on both sides of the street.

    c) Provide 36 feet in width on cul-de-sacs from 701 to 1,000 feet in length. This allows parking on both sides of the street.

    d) For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING - FIRE LANE" in three-inch high letters. Driveway labeling is necessary to ensure access for Fire Department use. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road.

17. All access devices and gates shall comply with California Code of Regulations, Title 19, Articles 3.05 and 3.16.

18. All access devices and gates shall meet the following requirements:

    a) Any single gated opening used for ingress and egress shall be a minimum of 26 feet in-width, clear-to-sky.

    b) Any divided gate opening (when each gate is used for a single direction of travel i.e., ingress or egress) shall be a minimum width of 20 feet clear-to-sky.

    c) Gates and/or control devices shall be positioned a minimum of 50 feet from a public right-of-way and shall be provided with a turnaround having a minimum of 32 feet of turning radius. If an intercom system is used, the 50 feet shall be measured from the right-of-way to the intercom control device.

d) All limited access devices shall be of a type approved by the Fire Department.

e) Gate plans shall be submitted to the Fire Department prior to installation. These plans shall show all locations, widths, and details of the proposed gates.

19. All proposals for traffic calming measures (speed humps/bumps/cushions, traffic circles, roundabouts, etc.) shall be submitted to the Fire Department for review prior to implementation.

20. Provide three sets of alternate route (detour) plans with a tentative schedule of planned closures prior to the beginning of construction. Complete architectural/ structural plans are not necessary.

21. Disruptions to water service shall be coordinated with the County of Los Angeles Fire Department and alternate water sources shall be provided for fire protection during such disruptions.

22. The County of Los Angeles Fire Department's Land Development Unit's comments are only general requirements. Specific fire and life safety requirements will be addressed at the building and fire plan check phase. There may be additional requirements during this time.

23. The County of Los Angeles Fire Department, Land Development Unit appreciates the opportunity to comment on this project.

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:

1. The statutory responsibilities of the County of Los Angeles Fire Department's Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance. Potential impacts in these areas should be addressed.

HEALTH HAZARDOUS MATERIALS DIVISION:

1. The Site Mitigation Unit (SMU) of the Health Hazardous Materials Division (HHMD) of the Los Angeles County Fire Department will be providing environmental oversight of the assessment and remediation of soil impacts at the project site.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,

KEVIN T. JOHNSON, ACTING CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

KTJ:ad

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA E-MAIL AND USPS:
tbu@elmonteca.gov

February 26, 2016

Mr. Tony Bu, Contract Planner
City of El Monte, Planning Commission
11333 Valley Boulevard
El Monte, CA 91731

Draft Mitigated Negative Declaration (Draft MND) for the Proposed 11127 Ramona Boulevard Project

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The following comments are meant as guidance for the Lead Agency and should be incorporated into the Final ND.

The Lead Agency proposes to demolish the existing shopping center and construct a new 62-unit townhome development. Since the project includes demolition, the Lead Agency must comply with SCAQMD Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities. Please provide additional information regarding compliance with SCAQMD Rule 1403 in the Final ND.

The lead agency used AERMOD (version 14134) to prepare the dispersion modeling for the HRA even though AERMOD (version 15181) was available for at the time of analysis (8/23/15). Therefore, SCAQMD staff recommends using AERMOD (version 15181), the most recent available version, for all future analyses.

The SCAQMD staff is available to work with the Lead Agency to address these concerns and any other air quality questions that may arise. Please contact Jack Cheng, Air Quality Specialist at (909) 396-2448, if you have any questions regarding these comments. We look forward to reviewing and providing comments for the Final ND associated with this project.

Sincerely,

Jillian Wong

Jillian Wong, Ph.D.
Program Supervisor
Planning, Rule Development & Area Sources

JW:JC

LAC 160211-06
Control Number

Los Angeles County
Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA 90012-2952

213.922.2000 Tel
metro.net

Metro

February 29, 2016

Tony Bu
City of El Monte
Planning Division
11333 Valley Blvd.
El Monte, CA 91731

RE: 11127 Ramona Boulevard, 11105 and 11107 Ramona Boulevard- City of El Monte- Mitigated Negative Declaration

Dear Mr. Bu:

Thank you for the opportunity to comment on the Mitigated Negative Declaration for the proposed development project located at 11127 Ramona Boulevard, 11105 and 11107 Ramona Boulevard in the City of El Monte. The proposed project consists of the construction of a new 62-unit townhome development on a 3.1 acre vacant site within Downtown El Monte. The site is designed with 45 off-street surface parking spaces and each unit will provide an attached 2-car garage. The proposed plans include 14,411 square feet of common open space with landscaping and active amenities. This letter conveys recommendations from the Los Angeles County Metropolitan Transportation Authority (LACMTA) concerning issues that are germane to our agency's statutory responsibility in relation to our facilities and services that may be affected by the proposed project.

Metro bus lines 190 and 194 operate on Valley Boulevard, adjacent to the proposed project. Although the project is not expected to result in any long-term impacts on transit, the developer should be aware of the bus services that are present. Please contact Metro Bus Operations Control Special Events Coordinator at 213-922-4632 regarding construction activities that may Impact Metro bus lines at least 30 days in advance of initiating construction activities. For closures that last more than six months, Metro's Stops and Zones Department will also need to be notified at 213-922-5188, 30 days in advance of initiating construction activities. Other municipal bus operators may also be impacted and should be included in construction outreach efforts.

It is noted that the northern boundary of the project site is adjacent to an LACMTA and Union Pacific Railroad (UPRR)-owned Railroad Right-of-Way (ROW). This ROW is operated and maintained by the Southern California Regional Rail Authority (SCRRA) to run the Metrolink commuter rail service, Amtrak intercity passenger trains and Union Pacific Railroad freight trains also operate on this line. The following concerns related to the project's proximity to the ROW should be addressed:

1. The project sponsor is advised that rail service operates in both directions and that trains may operate, in and out of revenue service, 24 hours a day, seven days a week, in the ROW adjacent to the proposed project.

2. Considering the proximity of the proposed project to the railroad ROW, trains will produce noise, vibration and visual impacts. A recorded Noise Easement Deed in favor of LACMTA is required, a form of which is attached. The easement recorded in the Deed will extend to successors and tenants, as well. In addition, any noise mitigation required for the project will be borne by the developers of the project and not LACMTA or the operating railroads.

3. There shall be no encroachment onto the railroad ROW. Any future work performed on the proposed project's structures (walls, fencing, utilities) or property requiring access to the railroad ROW, shall be covered by specific Right-of-Entry temporary access permits with specific requirements. SCRRA should be contacted for these Right-of Entry requirements. Information can be found on their website at www.metrolinktrains.com. Other requirements may include permits for construction of buildings and walls, and any future repairs, painting, graffiti removal, etc, including the use of overhead cranes or any other equipment that could potentially impact railroad operations and safety. Frequent access for maintenance tasks such as graffiti removal, will necessitate an active license agreement. This agreement will include an annual license fee, and other requirements that meet safety standards for access to a ROW with active rail operations.

4. During construction, a protection barrier shall be constructed to prevent objects, material, or debris from falling onto the ROW.

5. The project sponsor will be required to notify LACMTA and SCRRA of any changes to the construction/building plans that may or may not impact the ROW.

6. LACMTA and/or SCRRA staff shall be permitted to monitor construction activity to ascertain any impact to the ROW.

If you have any questions regarding this response, please contact Elizabeth Carvajal at 213-922-3084 or by email at DevReview@metro.net.

LACMTA Development Review
One Gateway Plaza MS 99-23-4
Los Angeles, CA 90012-2952

Sincerely,

Elizabeth Carvajal
Transportation Planning Manager

METROLINK®

Southern California Regional Rail Authority

February 29, 2016

Tony Bu
City of El Monte
Planning Division
11333 Valley Blvd.
El Monte, CA 91731

RE: 11127 Ramona Boulevard, 11105 and 11107 Ramona Boulevard - City of El Monte-Mitigated Negative Declaration (MND)

Dear Mr. Bu:

The Southern California Regional Rail Authority (SCRRA) has received the Notice of Intent (NOI) to adopt a MND for the 11127 Ramona Boulevard 62 unit townhome development project. Thank you for the opportunity to comment on key issues relative to SCRRA and operations of the railroad adjacent to the project site. As background information, SCRRA is a five-county Joint Powers Authority (JPA) that operates the regional commuter rail system known as Metrolink. Additionally, SCRRA provides rail engineering, construction, operations and maintenance services to its five JPA member agencies. The JPA consists of the Los Angeles County Metropolitan Transportation Authority (METRO), San Bernardino Associated Governments (SANBAG), Orange County Transportation Authority (OCTA), Riverside County Transportation Commission (RCTC) and Ventura County Transportation Commission (VCTC).

The railroad right of way that we operate over in the vicinity of your project are owned by Metro with a parallel rail right of way owned and operated by Union Pacific Railroad (UPRR) north of our tracks.

Below is a list of general comments that are of concern for all proposed projects near or adjacent to the railroad right of way. Please note that these are initial general comments submitted to meet the public comment period. SCRRA may follow up with more specific comments for consideration if further analysis deems it necessary. Comments are as follows:

1. Metrolink commuter trains along with Amtrak passenger trains and UPRR freight trains run daily on the two tracks immediately adjacent to the northern boundary of your project. Trains can run 24 hours a day seven days a week.
2. Trains produce noise and vibrations and proper construction mitigation to the homes and development should be considered.

One Gateway Plaza, Floor 12 Los Angeles, CA 90012 T (213) 452.0200 metrolinktrains.com

3. It is imperative that no construction activities for this project impact any and all train schedules or safety. There shall not be any encroachment into the railroad Right of Way. If temporary access is needed for construction of any part of the project (such as walls and utilities) the contractor will be required to obtain a Temporary Right of Entry Agreement (Form 6) as well as having an SCRRA qualified flagger present. The SCRRA Right of Way Encroachment Process, the Right of Way Encroachment Application and the Right of Entry (Form 6) requirements can be found on our website at http://www.metrolinktrains.com/agency/page/title/engineering_construction.
4. All drainage of the project site shall be directed into existing storm drains and not allowed to drain into the track area.
5. The project site shall be completely walled off from the railroad Right of Way so as not to allow any trespassing into the track area. Any plans for construction or modifications to the walls abutting the railroad property shall be sent to SCRRA for review and approval prior to construction.
6. Detailed plans for any other temporary or permanent encroachment, shall be also be submitted for review and approval by Metrolink Engineering Department.

Thank you again for cooperating with SCRRA to help ensure the development of a successful project. If you have any questions regarding these comments please contact me at 213-452-0456 or via e-mail at mathieur@scrra.net.

Sincerely,

Ron Mathieu
Sr. Public Projects Specialist

Cc: Roderick Diaz, SCRRA
Naresh Patel, SCRRA
Patricia Watkins, SCRRA
Don Sepulveda, Metro
Haylee Madfis, Metro
Elizabeth Carvajal, Metro

From: ROBERT TORRES [mailto:roberthtorres@yahoo.com]
Sent: Tuesday, March 08, 2016 5:22 PM
To: Tony Bu
Cc: Marcella Magdaleno; Mariela Laspesa
Subject: 11127 Ramona Boulevard

Good Evening Mr. Bu,

Upon reviewing the public information pertaining to the subject project, I have the following comments/concerns that I would like to submit as part of tonight's public hearing:

? In performing a detailed review of the Noise Impact Analysis (NIA), specifically the potential negative impacts due to immediately adjacent train noise, I have identified significant deficiencies that warrant further City review. The deficiencies relate to poor or inaccurate assumptions within the analysis that do not properly represent the future impact of train noise on townhomes proposed to be constructed directly adjacent to the railroad tracks. The specific details within the NIA in question are the following:

- An outdoor noise level of 70 dB is incorrectly used as an "ALLOWABLE" limit, as opposed to a "conditionally acceptable" limit, and misinterprets the El Monte Noise Compatibility guidelines. Per the NIA, *"The City of El Monte guidelines recommend an exterior noise exposure of less than 60 dB CNEL in usable outdoor space for residential noise sensitive uses as "normally acceptable" and up to 70 dB CNEL are considered "conditionally acceptable" and may be permitted if noise mitigation is included in the design."* Additionally, NIA states, "*Although the El Monte guidelines allows exterior noise levels of up to 70 dB CNEL, a noise level of 65 dB is the level at which ambient noise begins to interfere with one's ability to carry on a normal conversation at reasonable separation without raising one's voice.*" When these statements are properly interpreted, a noise level of up 70 dB is acceptable **BEFORE MITIGATION ARE INCORPORATED**, and resulting noise levels should be no greater than 65 dB. The NIA reports an existing maximum train noise level of 78 dB, along with a resulting outdoor train noise level **AFTER MITIGATIONS ARE INCORPORATED** of 69 dB. Although a reduction in noise level is identified, the resulting noise level is still well above the acceptable noise level of 65 dB. With correct interpretation of the El Monte Noise Guidelines, the maximum resulting outdoor noise level should between 60 dB to 65 dB, not 69 dB. The intent of the required mitigations for exterior noise levels **UP TO** 70 dB is to reduce such levels as close to 60 dB as possible, and the NIA fails to yield these results.
- Regarding vibration levels, the NIA States that, *"Rail activity vibration may exceed the City of El Monte nocturnal annoyance threshold for hard surfaced floors for the proposed homes abutting the tracks. Nocturnal residential activities occur mainly in areas of carpeting where the standard is not exceeded. The federal nuisance standard for infrequent events (<70 trains per day) would not be exceeded on either carpeted or hard floor surfaces. The inability to meet the more restrictive nocturnal City vibration standards on hard floor surfaces is not considered a significant impact."* This statement is simply an option and no evidence or data is provided to properly qualify its validity.

Additionally, floor covering, such as carpet, is an inadequate and unacceptable mitigation given its temporary and easily removable characteristics.

Separately, the NIA also states, *"For this project a -10 dB coupling loss "credit" was taken per building since the proposed buildings are at three stories high. Freight train vibration levels of 84 VdB at 40 feet from the track for a locomotive-powered freight train traveling at 30 mph would exceed the VdB significance threshold without the effects of coupling losses."* The coupling credit, or noise reduction credit, reference is only to be incorporated if the proposed buildings are 3-stories high and of MASONRY CONSTRUCTION, which I believe is not the proposed material for all townhomes directly adjacent to the railroad tracks. If the subject townhomes are not proposed to be constructed of masonry material, a coupling loss "credit" cannot be applied, therefore yielding the resulting vibration levels unacceptable.

The NIA also states, "It should be noted that the federal vibration guidelines for infrequent events (<70 day) are 80 VdB. Neither daytime nor nocturnal train passage vibration levels will exceed the federal 80 VdB annoyance threshold on second or third story residential floors." This statement would be true if all technical assumptions within the NIA were accurate, however the noise "credit" for 3-story masonry buildings mentioned above is not applicable if wood construction is proposed.

Per El Monte code, *"If vibration-related impacts are found, mitigation measures, such as use of concrete, iron, steel, or masonry materials to ensure that levels of vibration amplification are within acceptable limits to building occupants, shall be implemented."*

- Regarding train horn noise levels, the NIA states that, "*Although the interior CNEL-based standard can be met without any extraordinary acoustical measures, single event noise may be intrusive even if the interior standard is met. Window upgrades from "standard" to "premium" are recommended for habitable rooms for the units closest to the tracks."* Within the NIA, the issue of train horn noise is frequently dismissed and this is unacceptable. Additional, the lack if information related to freight train traffic is questionable and severely detrimental to the findings within NIA. According the Alameda Corrida East Authoruty (ACE), current freight train traffic along the adjacent line is approximately 20 train per day, and Amtrack traffic is approximately 6 trains per day. These trains are in addition to the 18 Metrolink trains per day stated in the NIA, which yields a total of 44 trains per day that will pass the proposed development.

Per the Federal Railroad Administration (FRA), trains are required to sound their horns 15 to 20 seconds before approaching an at-grade crossing. As you know, just west of the project is the Tyler Ave railroad at-grad crossing, which require all trains to sound their horns directly adjacent to the proposed development. This will result in a total of 22 train horns per day, with and additional 44 train horn blasts just west of the development. Additionally, ACE predicts that train traffic will double by 2025, which will result in detrimental magnification of the train horn noise to the adjacent residents with the first 5 years of purchase.

The report should be revised to address this issue in greater detail and possible mitigations, such as the establishment of a Quiet Zone at Tyler Ave, should be considered.

Since challenges to the decision of the Planning Commission may be limited to raising only those issues raised at the public hearing, please make my comments part of the public record.

Regards

Robert Torres, Resident

References

ACE: "The grade separation project will reduce vehicle emissions and traffic congestion by an estimated 13 vehicle-hours of delay each day due to lowered gates at the crossing which is traversed by 20 trains per day."
http://www.theaceproject.org/newsroom/Closure%20of%20Puente%20Ave.pdf

ACE: "Located on the transcontinental ACE Trade Corridor, the highway-rail grade separation is used daily by 18 freight trains, projected to increase to 40 trains by 2025 and to 59 trains if the route is double-tracked by the railroad. Once opened to traffic next month, the underpass will accommodate 28,000 vehicles a day. The Federal Railroad Administration has logged two train-vehicle collisions at the crossing over the last 10 years."
http://www.theaceproject.org/newsroom/Baldwin%20Ave%20dedication%20ceremony--Day-of%20release.pdf

ACE: "As shipments increase at the ports of Long Beach and Los Angeles and more trains carry freight up the 19-mile Alameda Corridor and eastward across the San Gabriel Valley and into the heartland, the number of freight trains crossing the intersection is projected to increase to 40 by 2025."
http://www.theaceproject.org/press012415.php

Under the Train Horn Rule (49 CFR Part 222), locomotive engineers must begin to sound train horns at least 15 seconds, and no more than 20 seconds, in advance of all public grade crossings. If a train is traveling faster than 60 mph, engineers will not sound the horn until it is within ¼ mile of the crossing, even if the advance warning is less than 15 seconds. There is a "good faith" exception for locations where engineers can't precisely estimate their arrival at a crossing and begin to sound the horn no more than 25 seconds before arriving at the crossing. Train horns must be sounded in a standardized pattern of 2 long, 1 short and 1 long blasts. The pattern must be repeated or prolonged until the lead locomotive or lead cab car occupies the grade crossing. The rule does not stipulate the durations of long and short blasts. The maximum

volume level for the train horn is 110 decibels which is a new requirement. The minimum sound level remains 96 decibels.

Based on the above information from the Federal Railroad Administration, all westbound trains will blast their horns directly adjacent to the proposed development given it's 1,1000 to 15,000 foot distance from the Tyler Ave at-grade crossing to the west.

Minh Thai,
Economic Development
Director

CITY OF EL MONTE
ECONOMIC DEVELOPMENT DEPARTMENT

March 7, 2016

Kevin T. Johnson, Acting Chief
Forestry Division Prevention Services Bureau
County of Los Angeles Fire Department
1320 North Eastern Avenue
Los Angeles, CA 90062-3294

Re: NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION, ZONE CHANGE NO. 01-15, TENTATIVE TRACT MAP NO. 73528, REQUESTS TO CONSTRUCT A NEW 62-UNIT TOWNHOME DEVELOPMENT ON A 3.1 ACRE VACANT SITE WITHIN DOWNTOWN EL MONTE, 11127 RAMONA BOULEVARD, EL MONTE

Dear Mr. Johnson:

Thank you for your letter dated March 2, 2016 in regard to the above mentioned project. The City of El Monte's acknowledges the following comments made in your letter.

Planning Division:

Table 8 of the MND is corrected as follows:

TABLE 8. FIRE STATION RESOURCES

Name and Location	Equipment	Daily Firefighter Staffing
Fire Stations in El Monte		
Station 166 at 3615 Santa Anita Ave.	1 quint[1]	4
Station 167 at 11567 Bryant Road	1 engine and 1 paramedic squad	5
Station 168 at 3207 Cogswell Road	1 engine	3
Station 169 at 5112 N. Peck Road	1 engine	3
Fire Stations within One Mile of El Monte City Limits		
Station 42 at 9319 Valley Boulevard in City of Rosemead, about 0.2 mile west of El Monte city limits	1 engine	4
Station 90 at 10115 E. Rush Street in City of South El Monte, about 0.5 mile south of El Monte city limits	1 engine and 1 paramedic squad	5

[1] A quint is a combination fire engine and ladder truck

Land Development:

1. The proposed development may necessitate multiple ingress/egress access for the circulation of traffic and emergency response issues.

The MND considered two access scenarios for the Valley & Ramona Residential project: (1) Alternative 1 which provides access on Valley Boulevard and an emergency access only on Ramona Boulevard; (2) Alternative 2 which provides access on Valley Boulevard and an access on Ramona Boulevard. Both alternatives were found not to have significant impacts on the study area intersections for Opening Year (2017) With project traffic conditions and would provide for adequate emergency access. As summarized in a February 26, 2016 letter from Kunzman Associates, the traffic consultant that prepared the Traffic Study for the MND, a project scenario with one access only on Valley Boulevard would not have significant impacts on the study area intersections for Opening Year (2017) With project traffic conditions as this project scenario is identical to the Alternative 1 scenario in terms of trip generation and distribution as analyzed in the TIA. In addition, an emergency vehicle situated on either Valley Boulevard or Ramona Boulevard can reach the farthest point of the project site in less than 1,000 feet. This ensures that adequate emergency access is provided for this project scenario.

2. The development of this project must comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows, and fire hydrants.

As a condition of development, the project will be required to comply with all applicable codes and ordinances including the County of Los Angeles Fire Code.

3. Specific fire and life safety requirements for the construction phase will be addressed at the building fire plan check. There may be additional fire and life safety requirements during this time.

Comment noted.

4. Every building constructed shall be accessible to Fire Department's apparatus by way of access roadways with an all-weather surface of not less than the prescribed width. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.

As a condition of development, the project will be required to comply with all applicable codes and ordinances including the County of Los Angeles Fire Code.

5. When involved with subdivision in a city contracting fire protection with the County of Los Angeles Fire Department, Fire Department's requirements for access, fire flows, and hydrants are addressed during the subdivision tentative map stage.

Comment noted.

6. Fire Department's requirements for access, fire flows, and hydrants are addressed during the building permit stage.

Comment noted.

7. Fire sprinkler systems are required in some residential and most commercial occupancies. For those occupancies not requiring fire sprinkler systems, it is strongly suggested that fire sprinkler systems be installed. This will reduce potential fire and life losses. Systems are now technically and economically feasible for residential use.

Comment noted.

8. The development may require fire flows up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for up to a five-hour duration. Final fire flows will be based on the size of the buildings, their relationship to other structures, property lines, and types of construction used.

Comment noted.

9. Fire hydrant spacing shall be 300 feet and shall meet the following requirements:
    a) No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant.
    b) No portion of a building shall exceed 400 feet via vehicular access from a properly spaced fire hydrant.
    c) When cul-de-sac depth exceeds 200 feet, hydrants will be required at the corner and midblock.
    d) Additional hydrants will be required if the hydrant spacing exceeds specified distances.

Comment noted.

10. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in-length and at the end of all cul-de-sacs.

Comment noted.

11. All on-site driveways shall provide a minimum unobstructed width of 28 feet, clear-to-sky. The 28 foot width does not allow for parking and shall be designated as a "Fire Lane", and have appropriate signage. The centerline of the on-site driveway shall be located parallel to and within 30 feet of an exterior wall on one side of the proposed structure. The on-site driveway is to be within 150 feet of all portions of the exterior walls of the first story of any building.

Comment noted.

12. The 28 feet in width shall be increased to:
    a) 34 feet in width when parallel parking is allowed on one side of the access way.

b) 36 feet in width when parallel parking is allowed on both sides of the access way.
c) Any access way less than 34 feet in width shall be labeled "Fire Lane" on the final recording map and final building plans.
d) For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING FIRE LANE" in three-inch high letters. Driveway labeling is necessary to ensure access for Fire Department use.

Comment noted.

13. When serving land zoned for residential uses having a density of more than four units per net acre:
    a) A cul-de-sac shall be a minimum of 34 feet in width and shall not be more than 700 feet in length.
    b) The length of the cul-de-sac may be increased to 1000 feet if a minimum of 36 feet in width is provided.
    c) A Fire Department approved turning area shall be provided at the end of a cul-de-sac.

Comment noted.

14. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in-length and at the end of all cul-de-sacs.

Comment noted.

15. Fire Department's access shall provide a minimum unobstructed width of 28 feet, clear-to-sky and be within 150 feet of all portions of the exterior walls of the first story of any single unit. If exceeding 150 feet, provide 20 feet minimum paved width "Private Driveway/Fire Lane" clear-to-sky to within 150 feet of all portions of the exterior walls of the unit. Fire Lanes serving three or more units shall be increased to 26 feet.

16. Streets or driveways within the development shall be provided with the following:
    a) Provide 36 feet in width on all streets where parking is allowed on both sides.
    b) Provide 34 feet in width on cul-de-sacs up to 700 feet in length. This allows parking on both sides of the street.
    c) Provide 36 feet in width on cul-de-sacs from 701 to 1,000 feet in length. This allows parking on both sides of the street.
    d) For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING FIRE LANE" in three-inch high letters. Driveway labeling is necessary to ensure access for Fire Department use. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road.

Comment noted.

17. All access devices and gates shall comply with California Code of Regulations, Title 19, Articles 3.05 and 3.16.

Comment noted.

18. All access devices and gates shall meet the following requirements:
    a) Any single gated opening used for ingress and egress shall be a minimum of 26 feet in-width, clear-to-sky.
    b) Any divided gate opening (when each gate is used for a single direction of travel i.e., ingress or egress) shall be a minimum width of 20 feet clear-to-sky.
    c) Gates and/or control devices shall be positioned a minimum of 50 feet from a public right-of-way and shall be provided with a turnaround having a minimum of 32 feet of turning radius. If an intercom system is used, the 50 feet shall be measured from the right-of-way to the intercom control device.
    d) All limited access devices shall be of a type approved by the Fire Department.
    e) Gate plans shall be submitted to the Fire Department prior to installation. These plans shall show all locations, widths, and details of the proposed gates.

Comment noted.

19. All proposals for traffic calming measures (speed humps/bumps/cushions, traffic circles, roundabouts, etc.) shall be submitted to the Fire Department for review prior to implementation.

Comment noted.

20. Provide three sets of alternate route (detour) plans with a tentative schedule of planned closures prior to the beginning of construction. Complete architectural/ structural plans are not necessary.

Comment noted.

21. Disruptions to water service shall be coordinated with the County of Los Angeles Fire Department and alternate water sources shall be provided for fire protection during such disruptions.

Comment noted.

22. The County of Los Angeles Fire Department's Land Development Unit's comments are only general requirements. Specific fire and life safety requirements will be addressed at the building and fire plan check phase. There may be additional requirements during this time.

Comment noted.

23. The County of Los Angeles Fire Department, Land Development Unit appreciates the opportunity to comment on this project.

Forestry Division — Other Environmental Concerns:

1. The statutory responsibilities of the County of Los Angeles Fire Department's Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance. Potential impacts in these areas should be addressed.

Comment noted.

Health Hazardous Materials Division:

1. The Site Mitigation Unit (SMU) of the Health Hazardous Materials Division (HHMD) of the Los Angeles County Fire Department will be providing environmental oversight of the assessment and remediation of soil impacts at the project site.

The Los Angeles County Department approved a remedial action plan (RAP) for the project site on January 21, 2016. The RAP presents a method to excavate and remove the lead and arsenic impacted soil from the site to specified cleanup goals suitable for human habitation. Mitigation Measures HAZ-1 and HAZ-2 have been added to the project to ensure that Los Angeles County Fire Department reviews and approval final site cleanup as specified in the RAP.

Changes to Table 8 of the MND as described in Planning Division comment above are incorporated in the MND. These changes clarify information but do not alter the analysis or findings of the MND. Other comments made in the County Fire Department letter provide valuable information to the City about the project implementation but do not require changes to the MND. Consequently, recirculation of the MND is not required. Please don't hesitate to contact me if you have questions.

Sincerely,

Jason C. Mikaelian, AICP
City Planner

Minh Thai
Economic Development Director

cc: Tony Bu, Contract Planner

Minh Thai,
Economic Development
Director

CITY OF EL MONTE
ECONOMIC DEVELOPMENT DEPARTMENT

March 7, 2016

Jillian Wong, Ph.D.
Program Supervisor
Planning, Rule Development & Area Sources
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178

Re: NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION, ZONE CHANGE NO. 01-15, TENTATIVE TRACT MAP NO. 73528, REQUESTS TO CONSTRUCT A NEW 62-UNIT TOWNHOME DEVELOPMENT ON A 3.1 ACRE VACANT SITE WITHIN DOWNTOWN EL MONTE, 11127 RAMONA BOULEVARD, EL MONTE

Dear Ms. Wong:

Thank you for your letter dated February 26, 2016 in regard to the above mentioned project. The City of El Monte's acknowledges the following comments made in your letter.

- The Lead Agency proposes to demolish the existing shopping center and construct a new 62-unit townhome development. Since the project includes demolition, the Lead Agency must comply with SCAQMD Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities. Please provide additional information regarding compliance with SCAQMD Rule 1403 in the Final ND.

As discussed in the MND, the project consists of two components: Part #1, which is the Valley & Ramona Residential project that proposes to create a sixty-two (62) unit residential community with six common areas at 11127 Ramona Boulevard (project site #1) in the City of El Monte. The project site #1 is 3.08 acres (134,035 square feet) in size, currently undeveloped and covered with paving and scattered vegetation. The demolition of the paving is included as part of the project and incorporated in the MND analysis.

Part #2 is a City initiated rezoning of the adjacent property to Mixed/Multiuse (MMU) zone. Project site #2 is located at 11105 and 11107 Ramona Boulevard in the City of El Monte and consists of approximately 11,000 square feet with two existing buildings. No development entitlements, demolition or construction are proposed for project part #2.

Rule 1403 is mandatory and therefore the project would be required to comply with the rule during demolition as applicable. Because only project part #2 contains buildings, Rule 1403 is applicable to future demolition activities at that project site. This requirement is acknowledged and is herein incorporated as part of the project record.

- The lead agency used AERMOD (version 14134) to prepare the dispersion modeling for the HRA even though AERMOD (version 15181) was available for at the time of analysis (8/23/15). Therefore, SCAQMD staff recommends using AERMOD (version 15181), the most recent available version, for all future analyses.

This comment is noted.

Comments made in SCAQMD's letter provide valuable information to the City about Rule 1403 and the AERMOD model. These comments clarify information but do not alter the analysis or findings of the MND. Consequently, changes to or recirculation of the MND is not required. Please don't hesitate to contact me if you have questions.

Sincerely,

Jason C. Mikaelian, AICP
City Planner

Minh Thai
Economic Development Director

cc: Tony Bu, Contract Planner

Minh Thai,
Economic Development
Director

CITY OF EL MONTE

ECONOMIC DEVELOPMENT DEPARTMENT

March 7, 2016

Elizabeth Carvajal
Transportation Planning Manager
Metro
Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012-2952

Re: NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION, ZONE CHANGE NO. 01-15, TENTATIVE TRACT MAP NO. 73528, REQUESTS TO CONSTRUCT A NEW 62-UNIT TOWNHOME DEVELOPMENT ON A 3.1 ACRE VACANT SITE WITHIN DOWNTOWN EL MONTE, 11127 RAMONA BOULEVARD, EL MONTE

Dear Ms. Carvajal:

Thank you for your letter dated February 29, 2016 in regard to the above mentioned project. The City of El Monte's acknowledges the following comments made in your letter.

- Metro bus lines 190 and 194 operate on Valley Boulevard, adjacent to the proposed project. Although the project is not expected to result in any long-term impacts on transit, the developer should be aware of the bus services that are present. Please contact Metro Bus Operations Control Special Events Coordinator at 213-922-4632 regarding construction activities that may Impact Metro bus lines at least 30 days in advance of initiating construction activities. For closures that last more than six months, Metro's Stops and Zones Department will also need to be notified at 213-922-5188, 30 days in advance of initiating construction activities. Other municipal bus operators may also be impacted and should be included in construction outreach efforts.

This comment is noted.

- It is noted that the northern boundary of the project site is adjacent to an LACMTA and Union Pacific Railroad (UPRR)-owned Railroad Right-of-Way (ROW). This ROW is operated and maintained by the Southern California Regional Rail Authority (SCRRA) to run the Metrolink commuter rail service, Amtrak intercity passenger trains and Union Pacific Railroad freight trains also operate on this line. The following concerns related to the project's proximity to the ROW should be addressed:

  1. The project sponsor is advised that rail service operates in both directions and that trains may operate, in and out of revenue service, 24 hours a day, seven days a week, in the ROW adjacent to the proposed project.

This comment is noted.

2. Considering the proximity of the proposed project to the railroad ROW, trains will produce noise, vibration and visual impacts. A recorded Noise Easement Deed in favor of LACMTA is required, a form of which is attached. The easement recorded in the Deed will extend to successors and tenants, as well. In addition, any noise mitigation required for the project will be borne by the developers of the project and not LACMTA or the operating railroads.

This comment is noted. A condition of approval has been added to address this comment.

3. There shall be no encroachment onto the railroad ROW. Any future work performed on the proposed project's structures (walls, fencing, utilities) or property requiring access to the railroad ROW, shall be covered by specific Right-of-Entry temporary access permits with specific requirements. SCRRA should be contacted for these Right-of Entry requirements. Information can be found on their website at www.metrolinktrains.com. Other requirements may include permits for construction of buildings and walls, and any future repairs, painting, graffiti removal, etc, including the use of overhead cranes or any other equipment that could potentially impact railroad operations and safety. Frequent access for maintenance tasks such as graffiti removal, will necessitate an active license agreement. This agreement will include an annual license fee, and other requirements that meet safety standards for access to a ROW with active rail operations.

This comment is noted. A condition of approval has been added to address this comment.

4. During construction, a protection barrier shall be constructed to prevent objects, material, or debris from falling onto the ROW.

This comment is noted. A condition of approval has been added to address this comment.

5. The project sponsor will be required to notify LACMTA and SCRRA of any changes to the construction/building plans that may or may not impact the ROW.

This comment is noted. A condition of approval has been added to address this comment.

6. LACMTA and/or SCRRA staff shall be permitted to monitor construction activity to ascertain any impact to the ROW.

This comment is noted. A condition of approval has been added to address this comment.

Comments made in Metro's letter provide valuable information to the City about project implementation but do not require changes to the MND. Consequently, recirculation of the MND is not required. Please don't hesitate to contact me if you have questions.

Sincerely,

Jason C. Mikaelian, AICP
City Planner

Minh Thai
Economic Development Director

cc: Tony Bu, Contract Planner

Minh Thai,
Economic Development
Director

CITY OF EL MONTE
ECONOMIC DEVELOPMENT DEPARTMENT

March 7, 2016

Ron Mathieu
Sr. Public Projects Specialist
Southern California Regional Rail Authority (SCRRA)
Metrolink
One Gateway Plaza, Floor 12
Los Angeles, CA 90012

Re: NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION, ZONE CHANGE NO. 01-15, TENTATIVE TRACT MAP NO. 73528, REQUESTS TO CONSTRUCT A NEW 62-UNIT TOWNHOME DEVELOPMENT ON A 3.1 ACRE VACANT SITE WITHIN DOWNTOWN EL MONTE, 11127 RAMONA BOULEVARD, EL MONTE

Dear Mr. Mathieu:

Thank you for your letter dated February 29, 2016 in regard to the above mentioned project. The City of El Monte's acknowledges the following comments made in your letter.

1. Metrolink commuter trains along with Amtrak passenger trains and UPRR freight trains run daily on the two tracks immediately adjacent to the northern boundary of your project. Trains can run 24 hours a day seven days a week.

This comment is noted.

2. Trains produce noise and vibrations and proper construction mitigation to the homes and development should be considered.

Mitigation measures NOI-2 and NOI-3 have been added to the project to reduce impacts to future project residents from rail related noise. Mitigation measure NOI-4 has been added to the project to reduce impacts to future project residents from rail related vibration. As discussed in the MND, with inclusion of these measures, potential project impacts related to rail noise and vibration would be reduced to less than significant levels.

3. It is imperative that no construction activities for this project impact any and all train schedules or safety. There shall not be any encroachment into the railroad Right of Way. If temporary access is needed for construction of any part of the project (such as walls and utilities) the contractor will be required to obtain a Temporary Right of Entry Agreement (Form 6) as well as having an SCRRA qualified flagger present. The SCRRA Right of Way Encroachment Process, the Right of Way Encroachment Application and the Right of Entry (Form 6) requirements can be found on our website at http://www.metrolinktrains.com/agency/page/title/engineering construction.

This comment is noted. A condition of approval has been added to address this comment.

4. All drainage of the project site shall be directed into existing storm drains and not allowed to drain into the track area.

As discussed in the MND, the Valley and Ramona Residential project (project site #1) proposes to capture site drainage through private street gutters and into a drywell infiltration system, where the runoff will be treated and infiltrated before being released into the public storm drain system. The storm drains would be installed and maintained in compliance with the County's MS4 and LID standards. Future development of the adjacent property (project site #2) would be subject to City review and approval of a LID study and its prescribed BMPs. As such, the project drainage would be directed into existing storm drains and would not drain into the track area.

5. The project site shall be completely walled off from the railroad Right of Way so as not to allow any trespassing into the track area. Any plans for construction or modifications to the walls abutting the railroad property shall be sent to SCRRA for review and approval prior to construction.

As discussed in the MND, the Valley and Ramona Residential project would be walled off from the railroad Right of Way. The City acknowledges the request for plans for construction or modifications to the walls abutting the railroad property to be sent to SCRRA for review and approval prior to construction, and will incorporate this review as part of project implementation.

6. Detailed plans for any other temporary or permanent encroachment, shall be also be submitted for review and approval by Metrolink Engineering Department.

The City acknowledges the request for plans for any encroachment to be submitted to Metrolink for review and approval, and will incorporate this review as part of project implementation.

Comments made in SCRRA's letter provide valuable information to the City about project implementation but do not require changes to the MND. Consequently, recirculation of the MND is not required. Please don't hesitate to contact me if you have questions.

Sincerely,

Jason C. Mikaelian, AICP
City Planner

Minh Thai
Economic Development Director

cc: Tony Bu, Contract Planner

GIROUX & ASSOCIATES
ENVIRONMENTAL CONSULTANTS

1800 E. Garry Street, Santa Ana, CA 92705 Phone (949) 387-5477 hgiroux@att.net

March 18, 2016

Public comments have been received from Robert Torres, regarding the adequacy of the train activity noise and vibration impacts on townhomes proposed to be constructed adjacent to the railroad tracks. The noise/vibration comments are all directed toward the effects of the ambient environment upon the project. The most recent CEQA decision by the California Supreme Court clearly ruled as follows:

> Under what circumstances, if any, does the California Environmental Quality Act (CEQA) (Pub. Resources Code 21000 et seq.) require an analysis of how existing environmental conditions will impact future residents or users of a proposed project? In light of CEQA's text, statutory structure, and purpose, we conclude that agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents.
>
> *California Building Industry Association v. Bay Area Air Quality Management District, filed 12/17/15*

Although the comments submitted by Robert Torres fall outside the scope of CEQA requirements, responses have been provided in the interest of full public disclosure.

Comment: 70 dB CNEL is incorrectly used as an "ALLOWABLE" limit.

- Response: The requirement in the City's guideline is to reduce outdoor usable space noise exposure to 65 dB CNEL where reasonable and feasible. It is correct that exterior noise levels near the train tracks cannot be reasonably mitigated to the 65 dB CNEL with feasible measures that still meet the project objectives. However, these guidelines are not meant to exclude wide areas of the City from new careful residential development near the I-10, the train tracks or other major transportation sources. A number of residential uses west of the proposed project site approaching Tyler have zero exterior acoustic protection. The requirement for new residences is that the interior must achieve 45 dB CNEL in habitable areas per the California Uniform Building Code. The exterior goal is 65 dB CNEL in usable outdoor space. The project provides recreational amenities meeting this goal within the project interior. The inability to meet the 65 dB CNEL exterior goal along the development tier closest to the tracks is not considered a significant CEQA impact, particularly in light of the recent California Supreme Court decision regarding the exclusion of impacts of the ambient environment upon a proposed project in CEQA significance findings.

Comment: Rail vibration levels may exceed the City's nocturnal annoyance threshold for homes closest to the tracks.

- Response: Wall-to-wall carpeting in bedrooms is expected to be a standard feature. If the owner/occupant elects to convert carpeted surfaces to hard floors, they would do so of their own volition. Disclosure that padding and carpeting have been provided as a measure to reduce nocturnal train passage vibration would be appropriate in any real estate transfer documents.

Comment: A 10 dB vibration coupling loss credit was taken inappropriately since the project will not likely be of masonry construction.

- Response: The NIA statement is in error. A coupling loss credit of -5 VdB for wood framed construction and -2 VdB for upstairs living /sleeping areas was taken, not -10 VdB as incorrectly stated. The correct value of -7 VdB was used in the vibration impact analysis for upstairs "soft floor" living and sleeping quarters for wood-framed multi-story buildings, with no masonry building construction assumed. The critical technical assumption is whether such habitable uses would most likely have pads and carpets which is the presumed standard flooring configuration for these rooms.

Comment: A "quiet zone" should be established if feasible.

- Response: Both the request to establish a quiet zone and the measures to implement such a noise reduction measure is the responsibility of the City if it chooses to pursue such an approach. The cost to construct a grade separation at Tyler is around $20 million such that traffic control measures at the crossing are likely less costly. However, the proposed project will incorporate all reasonable and feasible measures even though establishment of a quiet zone is beyond any individual developer's authority.

Please call us with any questions regarding our findings,

Hans D. Giroux

Hans D. Giroux
Senior Scientist
Giroux & Associates

Minh Thai
Economic Development Director

CITY OF EL MONTE

ECONOMIC DEVELOPMENT DEPARTMENT

March 22, 2016

Robert Torres
roberthtorres@yahoo.com

Subject: **NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION (MND) 11127 Ramona Boulevard (VTTM/TTM No. 73528, ZC No. 01-15, DR No. 05-15, CUP No. 07-15)**

Dear Mr. Torres:

Thank you for your email comments sent March 8, 2016 in regards to the above mentioned project. The City of El Monte acknowledges the comments made in your letter. Hans Giroux of Giroux & Consultants prepared the Noise Study for the project, and prepared the attached responses to your comments.

As explained in Mr. Giroux's responses, the requirement in the City's guidelines is to reduce outdoor usable space noise exposure to 65 dB CNEL where reasonable and feasible. It is correct that exterior noise levels near the train tracks cannot be reasonably mitigated to the 65 dB CNEL. However, this guideline is not meant to exclude residential development, but rather to guide new development to implement appropriate mitigation and achieve 45 dB CNEL in habitable areas consistent with the California Uniform Building Code. The exterior goal is 65 dB CNEL in usable outdoor space. The project provides recreational amenities meeting this goal within the project. The inability to meet the 65 dB CNEL exterior goal along the development tier closest to the tracks is not considered a significant CEQA impact, particularly in light of the recent California Supreme Court decision (California Building Industry Assoc. v. Bay Area Air Quality Management District, Dec. 17, 2015) regarding the exclusion of impacts of the ambient environment upon a proposed project in CEQA significance findings.

Mr. Giroux's responses also explain that, in regard to vibration impacts, wall-to-wall carpeting in bedrooms is expected to be a standard feature of the project. If the owner/occupant elects to convert carpeted surfaces to hard floors, they would do so of their own volition. Disclosure that padding and carpeting have been provided as a measure to reduce nocturnal train passage vibration would be appropriate in any real estate transfer documents.

Mr. Giroux also explains that a coupling loss credit of -5 VdB for wood framed construction and -2 VdB for upstairs living /sleeping areas was taken, not -10 VdB as incorrectly stated. The correct value of -7 VdB was used in the vibration impact analysis for upstairs "soft floor" living and sleeping quarters for wood-framed multi-story buildings, with no masonry building construction assumed. The critical technical assumption is whether such habitable uses would most likely have pads and carpets which is the presumed standard flooring configuration for these rooms.

Regarding the request for a "quiet zone", Mr. Giroux notes that the request to establish a quiet zone and the measures to implement such a noise reduction measure is the responsibility of the City if it chooses to pursue such an approach. The cost to construct a grade separation at Tyler is around $20 million such that traffic control measures at the crossing are likely less costly. However, the proposed project will incorporate all reasonable and feasible measures even though establishment of a quiet zone is beyond any individual developer's authority.

Comments made in your letter provide valuable input, but do not require changes to the analysis or findings of the MND. Consequently, recirculation of the MND is not required. If you have any questions regarding this matter, please contact Tony Bu at (626) 580-2152 or tbu@elmonteca.gov.

Sincerely,

Jason C. Mikaelian, AICP
City Planner

Minh Thai
Economic Development Director

cc: Tony Bu, Contract Planner