City of Los Angeles

Department of City Planning • Environmental Analysis Section

City Hall • 200 N. Spring Street, Room 750 • Los Angeles, CA 90012

DRAFT ENVIRONMENTAL IMPACT REPORT

NORTHEAST LOS ANGELES COMMUNITY PLAN

Abode at Glassell Park Project

Case Number: ENV-2015-2354-EIR

Project Location: 2301, 2305, 2309, 2310, 2314, 2315, 2318, 2320 Haverhill Way; 2317, 2321, 2329, 2335, 2400, 2401, 2411, 2417, 2421, 2427, 2430, 2420, 2410 Haverhill Drive; 3963, 3970, 4000, 4001, 4006, 4009, 4012 Brilliant Drive; and 2414, 2410, 2406, 2402 Sundown Drive, Los Angeles, CA 90065

Council District: 1

Project Description: The Project includes development of the 32 lots that compose the Project site with one single-family home per lot. Each home would include three levels and include a garage. Additionally, the Project includes extension of the existing roadways Haverhill Drive and Brilliant Drive to serve the Project.

APPLICANT:	PREPARED BY:	ON BEHALF OF:
Glassell Park, LLC. 23622 Calabasas Road, Suite 220 Calabasas, CA 91302	CAJA Environmental Services 11990 San Vicente Boulevard Los Angeles, CA 90049	The City of Los Angeles Department of City Planning Environmental Analysis Section

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1. INTRODUCTION AND SUMMARY

INTRODUCTION TO THE EIR

The subject of this Environmental Impact Report (EIR) is the proposed Haverhill Drive Residential Project (the "Project"). A detailed description of the Project is included in Section 2 (Project Description) of this EIR.

Because the Project will require approval of certain discretionary actions by the City of Los Angeles (the "City"), the Project is subject to the California Environmental Quality Act (CEQA), for which the City is the designated Lead Agency. The City's Department of City Planning administers the process by which environmental documents for projects are prepared and reviewed. On the basis of these procedures, it was determined that the proposed Project may have a significant effect on the environment, and an EIR should be prepared.

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

This EIR was prepared in accordance with Section 15151 of the CEQA Guidelines, which defines the standards for EIR adequacy as follows:

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

EIR PROCESS

Notice of Preparation

In accordance with Section 21080.4 of the California Public Resources Code, a Notice of Preparation (NOP) was prepared by the Department of City Planning and distributed to the State Clearinghouse, Office of Planning and Research, responsible agencies, and other interested parties on October 23, 2015. The NOP was circulated for 30 days with the comment period ending on November 23, 2015. Appendix A to this EIR contains a copy of the NOP, comments received by the City in response to the NOP, as well as the Initial Study that was prepared for the Project.

Environmental Issues Analyzed in the EIR

Based on public comments in response to the NOP and a review of environmental issues by the staff of the Department of City Planning, this EIR includes an analysis of the following impact areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Transportation/Traffic

Environmental Review Process

The Draft EIR will be circulated for review and comment by the public and other interested parties, agencies, and organizations for a period of 60 days. After completion of the 60-day review period, a Final EIR will be prepared and will include responses to comments received on the Draft EIR that were submitted during the review period and modifications to the Draft EIR as required. Public hearings on the Project will be held after completion of the Final EIR. The City will make the Final EIR available to agencies and the public prior to considering certification of the EIR. Notice of the time and location will be published prior to the public hearing date. All comments or questions about the Draft EIR should be addressed to the following:

Karen Hoo
Department of City Planning
200 North Spring Street, Room 750
Los Angeles, CA 90048
Email: planning.envreview@lacity.org

ORGANIZATION OF THE DRAFT EIR

The Draft EIR is organized in sections as follows:

Section 1 (Introduction & Summary): This section provides an introduction to the Draft EIR and a description of the environmental review process and organization of the Draft EIR. This section also includes a summary of the Project description; lists the environmental issues that are addressed in the Draft EIR; a summary of the alternatives to the Project; lists the issues to be resolved; and a summary the environmental impacts and mitigation measures.

Section 2 (Project Description): The section includes a complete description of the Project including Project location, Project characteristics, Project objectives, and required discretionary actions.

Section 3 (Environmental Setting): This section includes an overview of the existing environmental conditions as they relate to the Project site and Project. A list of related projects is provided in this section.

Section 4 (Environmental Impact Analysis): This section is the primary focus of this Draft EIR. Each environmental issue contains a discussion of existing conditions for the Project area, an assessment and discussion of the significance of impacts associated with the Project, mitigation measures, cumulative impacts, and level of impact significance after mitigation.

Section 5 (General Impact Categories): This section includes a summary of significant and unavoidable impacts, a discussion of the potential growth inducement of the Project, and a discussion of the significant irreversible changes to the environment.

Section 6 (Alternatives to the Proposed Project): This section includes an analysis of a range of reasonable alternatives to the Project. The range of alternatives selected is based on their ability to feasibly attain most of the basic objectives of the Project and that would avoid or substantially lessen any of the significant effects of the Project.

Section 7 (Preparers of the EIR and Persons Consulted): This section presents a list of City and other agencies and consultant team members that contributed to the preparation of the Draft EIR.

Section 8 (Acronyms and Abbreviations): This section provides definitions for all of the acronyms and abbreviations used in this Draft EIR.

SUMMARY OF THE PROJECT

The Project site is located in a hillside area on Haverhill Drive, Haverhill Way, and Brilliant Drive and is bounded by existing single-family development to the north, east, and west and undeveloped area to the south/southeast. The Project includes development of the 32 lots that comprise the Project site with one single-family home per lot. Each home would include three levels, would include a garage, and would

range in size from approximately 2,161 to 2,577 square feet. Additionally, the Project includes extension of the existing roadways Haverhill Drive and Brilliant Drive to serve the Project.

ISSUES TO BE RESOLVED

Issues to be resolved include whether or how to mitigate potentially significant environmental impacts from the Project, and whether one of the alternatives should be approved rather than the Project.

ALTERNATIVES TO THE PROJECT

This EIR also considers a reasonable range of alternatives to the Project to provide informed decision-making in accordance with Section 15126(d) of the CEQA Guidelines. The alternatives analyzed in this EIR include: 1) No Project (Continuation of Existing Uses); 2) Reduced Density; and 3) Project Reconfigured. For further discussion of these alternatives, see Section 6 of this EIR. Based on the analysis in Section 6, Alternative 3 (Project Reconfigured) was selected as the environmentally superior alternative.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table 1-1 summarizes the various environmental impacts associated with the construction and operation of the Project. Mitigation measures are identified for significant impacts, and the level of significance after mitigation is also identified. Applicable Project design features and regulatory compliance measures are also noted.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
4.A. IMPACTS FOUND TO BE LESS THAN SIGNIFICANT		
Agricultural and Forestry Resources - The Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. The Project Site is not zoned for agricultural use, and the Project Site is not under Williamson Act Contract. The Project Site is not zoned as forest land or timberland.	None required.	No impact.
Hazards and Hazardous Materials - The Project, which includes development of 32 single-family residential units, would not require routine transport, use, or disposal of hazardous materials. In addition, the Project would not emit hazardous emissions or handle acutely hazardous materials within one-quarter mile of an existing or proposed school. Thus, the Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, impacts related to this issue would be less than significant. The Project Site has never been developed and as such, no hazardous materials associated with human activity exist at the Project Site that could be exposed during the Project's construction period. Additionally, the Project Site is not within a methane hazard zone as delineated by the City. Thus, the Project would not create significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, impacts related to this issue would be less than significant. The Project Site is not included on any list compiled pursuant to Government Code Section 65962.5, which includes sites such as waste facilities subject to corrective action, land designated as hazardous waste property, and sites with leaking underground storage tanks. Thus, the Project would not create a significant hazard to the public or the environment as a result of being listed on a list of hazardous	None required.	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
materials sites compiled pursuant to Government Code Section 65962.5. Therefore, no impacts related to this issue would occur. The Project Site is not located within two miles of a public airport or in the vicinity of a private airstrip. The closest airport is the Bob Hope Airport located approximately 12.7 miles northwest of the Project Site. Thus, the Project would not result in a safety hazard associated with an airport for people residing or working in the Project area. Therefore, no impacts related to this issue would occur. No aspects of the Project would inhibit access to hospitals, emergency response centers, school locations, communication facilities, highways and bridges, or airports. Further, the Project would comply with all applicable City policies related to disaster preparedness and emergency response. Thus, impacts related to this issue would be less than significant. The Project Site is located within a Very High Fire Hazard Severity Zone and would be required to be designed and constructed in accordance with the Los Angeles Fire Code and would be required to incorporate additional fire prevention measures and fire-resistant materials. Through compliance with the LAFD's requirements, impacts related to wildland fires would be less than significant.		
Mineral Resources - There are no known mineral resources on the Project Site or in the vicinity. Thus, the Project would not 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. Therefore, no impacts related to issue would occur.	None required.	No impact.
Population and Housing – The Project includes the development of 32 single-family homes, consistent with the approved tract, on a site that is zoned and designated by the City for such development. The Project does not propose additional housing units (and associated population) beyond what is permitted under the existing base land use designation and zoning. While the Project includes the extension of the	None required.	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
existing roadways Haverhill Drive and Brilliant Drive in order to serve the Project, the extended roads would serve only the Project Site and would not promote offsite development or induce substantial population growth in the area. Thus, the Project's residential population would not represent a substantial or significant growth as compared to projected growth. Therefore, no significant impacts related to population and housing would occur as a result of the Project. As no housing currently exists on the Project Site, the Project would not displace any existing housing or residents, necessitating the construction of replacement housing, and no impact would occur.		
Public Services – <u>Fire</u> During construction, the Project would implement good housekeeping practices and would comply with all applicable federal, state, and local requirements. In addition, the Project would implement a Construction Traffic Management Plan (CTMP), which would formalize how construction would be carried out to reduce the effects on the surrounding community. The Project would be required to be designed and constructed in accordance with the Los Angeles Fire Code and would be required to incorporate measures to reduce the demand on fire protection services. All ingress/egress associated with the Project would be designed and constructed in conformance to all applicable City Building and Safety Department and LAFD standards and requirements for design and construction. Moreover, LAFD's plan check process will ensure that the Project has adequate fire flow, fire hydrant placement, and other required fire protection equipment. While the Project could result in an increased need for fire protection and services at the Project Site, the Project's operational impacts to fire protection services, including response distance and time, fire flow, emergency access, and hydrant placement would not result in substantial adverse physical impacts associated with the provision of new or physically-altered	None required.	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
governmental facilities, or the need for new or physically-altered governmental facilities, the construction of which could cause a significant impact. As such, impacts would be less than significant. <u>Police</u> During construction, fencing and other security measures, as necessary, would be provided at the Project Site. In addition, the Project would implement a CTMP, which would formalize how construction would be carried out to reduce the effects on the surrounding community. The Project would include standard security measures such as adequate security lighting, controlled residential access, and secure parking facilities. These measures for the Project shall be approved by the LAPD prior to the issuance of building permits. While the Project could result in an increased need for police protection and services at the Project Site, the Project would comply with the mandatory requirements of the LAPD, and would not result in substantial adverse physical impacts associated with the provision of new or physically-altered governmental facilities, or the need for new or physically-altered governmental facilities, the construction of which could cause a significant impact. As such, impacts would be less than significant. <u>Schools</u> The schools serving the Project Site would have adequate capacity to accommodate the Project's student generation. However, two of the schools (Toland Way Elementary and Eagle Rock High School) are projected to become overcrowded in the future. Pursuant to the California Government Code Section 65995(h), mandatory payment of the school fees established by the LAUSD in accordance with existing rules and regulations regarding the calculation and payment of such fees would, by law, provide full and complete mitigation for any potential direct and indirect impacts to schools as a result of the Project. Therefore, Project impacts to school services would be less than		

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
significant. Parks/Recreation The L.A. CEQA Thresholds Guide requires an analysis of a project's impact on recreation and parks services and/or facilities when a project results in a net increase of 50 or more residential units. Projects that include fewer than 50 residential units would not normally have a significant impact on recreation and parks. The Project proposes 32 single-family residential homes, and as such, would be expected to result in no impact with respect to recreation and park facilities. Moreover, the Project would pay the recently adopted Park and Recreation fees, which would be used to create additional park facilities in the Project vicinity. In addition, the Project does not include development of any recreational facilities. Finally, it is expected that all required open space would be provided on site, and as such, a less than significant impact with respect to parks and recreational facilities would occur. Libraries The Project does not propose additional housing units (and associated population) beyond what is permitted under the existing base land use designation and zoning for the Project site. Thus, the Project's residential population would not represent a substantial or significant growth as compared to projected growth and would not create an unanticipated demand for library services. In addition, The Project would not cause the need for new or altered libraries. Therefore, Project impacts related to library services would be less than significant.		
Utilities – Wastewater The Project Site is served by an existing wastewater conveyance system. As part of the normal building	None required.	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
permit process, the Bureau of Sanitation would confirm and ensure that there is sufficient capacity in the local and trunk lines to accommodate the Project's projected wastewater flows. If the public sewer has insufficient capacity, then the Applicant shall be required to build sewer lines or upgrade existing lines to a point in the sewer system with sufficient capacity. A final approval for sewer capacity and connection permit will be made at that time. It is estimated the Project would generate approximately 7,360 gallons per day (gpd) (or 0.00736 mgd) of wastewater. There is adequate treatment capacity within the HTP system to accommodate the Project, and thus, the increase in wastewater generation would not have a significant impact on treatment plant capacity. As HTP complies with the State's wastewater treatment requirements and the Project's wastewater generation is well within the existing capacity, the Project would not exceed the wastewater treatment requirements of LAWQCB, and impacts would be less than significant. <u>Water</u> The Project is estimated to consume approximately 8,672 gpd (or 0.00867 mgd). With the remaining capacity of approximately 50 to 150 mgd, the LAAFP would have adequate capacity to serve the Project. The LADWP Water Service Organization (WSO) should be able to provide the domestic needs of the Project from the existing water system. As part of the normal construction/building permit process, the Project Applicant shall confirm with the LADWP WSO that the capacity of the existing water infrastructure can supply the domestic needs of the Project during the construction and operation phases. If the water infrastructure has insufficient capacity, the Project Applicant shall be required to build water lines or upgrade existing lines to a point in the system with sufficient capacity. Therefore, Project impacts related to water treatment and infrastructure would be less than significant. Finally, as the Project is consistent with the City's General Plan, its incremental demand for water is included in the Urban Water Management Plan, and impacts related to water supply would be less than significant.		

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
Solid Waste It is estimated the Project would generate approximately 391 pounds per day of solid waste, conservatively assuming no diversion of waste, which can be accommodated b the Sunshine Canyon Landfill. Solid waste generated on-site by the Project would be disposed of in accordance with all applicable federal, state, and local regulations and policies related to solid waste. Therefore, impacts would be less than significant. Electricity A total of approximately 11,392 gallons of diesel fuel, 15,780 gallons of gasoline, and 9,120 kWh of electricity would be consumed during Project construction. However, the Project's construction activities would be short term, would comply with applicable regulations to reduce consumption of petroleum-based fuels, and would not result in the wasteful, inefficient, or unnecessary use of energy resources, create energy utility system capacity problems, create problems with the provision of energy services, or result in a significant impact associated with the construction of new or expanded energy facilities. Further, Project construction would not violate state or federal energy standards or consume a substantially greater amount of energy than other similar projects. As such, impacts would be less than significant. The Project would demand approximately 180,048 kilowatt-hours (kw-h) of electricity per year (yr). The overall LADWP capacity Citywide for the year of operation (2018) is 23,667 gigawatt-hours (gw-h), with residential uses consisting of 8,381 gw-h and commercial uses consisting of 12,764 gw-h. Thus, the Project is within the anticipated demand of the LADWP system. Therefore, the LADWP's current and planned electricity supplies would be sufficient to support the Project's electricity		

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
consumption. LADWP is required to procure 33 percent of their energy their energy portfolio from renewable resources by 2020, which is higher than the statewide average of 15 percent. The Project would not require the acquisition of additional electricity supplies beyond those that exist or are anticipated by the LADWP. In addition, the Project would comply with Title 24 of the California Code of Regulations (CCR) (CalGreen) requiring building energy efficiency standards, and would also be built in compliance with the LA Green Building Code. As such, the Project's impacts with respect to electricity would be less than significant. <u>Natural Gas</u> The Project would demand approximately 128,368 cubic feet (cf) of natural gas per month (mo), or approximately 4,279 cf per day. The Southern California Gas Company (SCG) estimates the core peak day demand in 2018 to be 2,957 million cf/day. The Project's 0.0043 million cf/day therefor represents a negligible portion of the estimated peak day demand for 2018. Thus, there is adequate natural gas supply and capacity to serve the Project, and impacts would be less than significant.		
4.B AESTHETICS		
Visual Character During Construction - Temporary fencing would be installed around the Project Site during construction, which would partially shield views of construction activities and equipment. Though Project construction activities would be viewable from adjacent public and private vantage points, changes to the appearance of the Project Site would be temporary in nature. Therefore, impacts to visual character during construction would be less than significant.	None required.	Less than significant.
Visual Character During Operation - The Project would extend the existing hillside community from Sundown Drive to Haverhill Drive, Brilliant Drive to Haverhill Way, and Haverhill Way to Haverhill Drive, thereby completing 32 parcels previously approved within the subdivision/tract map no. 8943.	See Mitigation Measures D-2 through D-4, below.	Significant and unavoidable

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
While the Project would develop uses of the same size and scale that are already occurring in the immediate Project area, the Project would require the grading and development of a currently undeveloped Site and would require the removal of 129 walnut trees, which would alter the visual character of the Project Site. The Project homes would be integrated into the Project area through the careful placement of the homes on the hillside with different uphill and downhill floor plans and the undeveloped area to the south of the Project Site would remain. Replacement trees would be planted in accordance with Mitigation Measures D-2 through D-4 (in Section 4.D., Biological Resources). With implementation of these measures, impacts related to visual character would be reduced to less than significant. However, as the replacement trees would not be as mature as the ones removed, it is conservatively considered that there would be a significant impact until the replacement trees have grown to sufficient maturity.		until the replacement trees have grown to sufficient maturity.
Scenic Vistas – There are no State-designated scenic highways or scenic parkways, or City-designated scenic highways adjacent to or in the vicinity of the Project Site. Therefore, the Project would not substantially alter a recognized scenic vista.	None required.	Less than significant.
Valued Public Views - The Project would not create an additional obstruction of views of the San Gabriel Mountains from the streets surrounding the Project Site, and therefore, impacts related to views of these mountains would be less than significant. Limited public views of the existing walnut woodland located on the Project Site are available in the Project area. The Project proposes the removal of 129 walnut trees from the Project Site. While these existing trees are only viewable from limited public locations, the removal of these trees would conservatively be considered a significant impact. Implementation of Mitigation Measures D-2 through D-4 (in Section 4.D., Biological Resources) would require the planting of replacement trees. With implementation of these measures, impacts related to views of the walnut woodland would be reduced	See Mitigation Measures D-2 through D-4, below.	Significant and unavoidable until the replacement trees have grown to sufficient maturity.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
to less than significant; however, as the replacement trees would not be as mature as the ones removed, it is conservatively considered that there would be a significant impact until the replacement trees have grown to sufficient maturity.		
Shade and Shadow - The maximum height of any residence constructed as part of the Project is 45 feet, maximum building envelope height, from the existing grade. Therefore, as the Project is less than 60 feet in maximum height, impacts with respect to shade and shadow would be less than significant.	None required.	Less than significant.
Light and Glare - The Project would introduce some new lighting to the area, primarily due to illumination emanating through the windows of the proposed homes, as well as lighting on the exterior of the homes, and vehicles traveling on the Project streets. However, this lighting would be consistent with the existing lighting already in the area. The Project would also include Project Design Feature B-1, which would ensure that no direct beam illumination can be seen outside of the Project boundary. In addition, in order to minimize glare, the Project would be required to use non-reflective materials such as non-reflective glass, pursuant to LAMC Section 93.0117. As such, Project impacts with respect to light and glare would be less than significant.	**Project Design Feature** **B-1** Outdoor lighting shall be designed and installed with hooding and shielding, such that no direct beam illumination shall be seen from adjacent residential properties or the public right-of-way.	Less than significant.
4.C AIR QUALITY		
Construction Regional Emissions - The construction of the Project would produce VOC, CO, SO_X, PM_{10}, and $PM_{2.5}$ emissions that would not exceed the SCAQMD's regional thresholds. Should two or more construction phases overlap, regional emissions of NO_x could exceed regional SCAQMD thresholds. Implementation of Mitigation Measures C-1 through C-3 and Regulatory Compliance Measure C-4 would reduce the Project's regional construction emissions to below SCAQMD's significance thresholds, and Project impacts would be less than significant.	**Mitigation Measures** **C-1** All off-road construction equipment greater than 50 hp shall meet U.S. EPA Tier 3 emission standards, where available, to reduce NO_x, PM_{10}, and $PM_{2.5}$ emissions at	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	the Project site. In addition, all construction equipment shall be outfitted with Best Available Control Technology devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a CARB Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. **C-2** Require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export). If the Lead Agency determines that 2010 model year or newer diesel trucks cannot be obtained and verifies this with the SCAQMD, the Lead Agency shall require trucks that meet U.S. EPA 2007 model year NO_x emissions requirements. **C-3** At the time of mobilization of each applicable unit of equipment, a copy of each unit's certified tier specification, Best Available Control Technology (BACT) documentation, and CARB or SCAQMD operating permit shall be available on-site.	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	Regulatory Compliance Measure **C-4** Construction activities shall comply with SCAQMD Rule 403, including the following measures: • Apply water to disturbed areas of the site three times a day. • Require the use of a gravel apron or other equivalent methods to reduce mud and dirt trackout onto truck exit routes. • Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM generation. • Limit soil disturbance to the amounts analyzed in the Final EIR. • All materials transported off-site shall be securely covered or shall provide at least six inches of	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	freeboard • Apply non-toxic soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for ten days or more). • Traffic speeds on all unpaved roads shall be reduced to 5 mph or less.	
Construction Localized Emissions - The Project would produce emissions that do not exceed the SCAQMD's recommended localized standards of significance for CO during the construction phase. Should two or more construction phases overlap, localized emissions of NO_x, PM_{10}, and $PM_{2.5}$ could exceed localized SCAQMD thresholds. Implementation of Mitigation Measures C-1 through C-3 and Regulatory Compliance Measure C-4 would reduce the Project's localized construction emissions to below SCAQMD's significance thresholds, and Project impacts would be less than significant.	See Mitigation Measures C-1 through C-3 and Regulatory Compliance Measure C-4, provided above.	Less than significant.
Operational Emissions - The Project would produce long-term air quality emissions in the region, primarily from motor vehicles associated with the Project. However, operational emissions would not exceed SCAQMD's regional significance thresholds for VOC, NO_X, CO, PM_{10} and $PM_{2.5}$ emissions. Therefore, Project impacts related to operational emissions would be less than significant.	None required.	Less than significant.
Toxic Air Contaminants - The Project is not anticipated to generate a substantial number of truck trips, thus the Project would not be a source of diesel emissions. Based on the limited activity of TAC emissions sources, the Project would not warrant the need for a health risk assessment associated with	None required.	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
on-site activities, and any minimal TAC impacts would be less than significant.		
AQMP Consistency - The Project does not propose additional housing units (and associated population) beyond what is permitted under the existing base land use designation and zoning. Thus, the Project's residential population would not represent a substantial or significant growth as compared to regional population growth projections used by SCAG in their 2012 RTP/SCS to identify future air quality emissions that must be mitigated through the 2012 AQMP. As such, the Project would not jeopardize the region's attainment of air quality standards. As a result, the Project is consistent with the SCAQMD's 2012 AQMP, and would have a less than significant effect with respect to inconsistency with the AQMP.	None required.	Less than significant.
Odors - The Project includes development of typical residential land uses on the Project site and would not generate any odors. Therefore, the Project would not create objectionable odors affecting a substantial number of people.	None required.	No impact.
4.D BIOLOGICAL RESOURCES		
Special Status Species - Development of the Project would not affect any special-status species, and impacts related to this issue would be less than significant. Although not a special-status species, all nesting species are protected by CDFW and USFWS. It is possible that nesting species could be disturbed or harmed during construction of the Project. Therefore, Project impacts related to nesting species would be significant. With implementation of Mitigation Measure D-1, impacts related to nesting species would be less than significant.	**Mitigation Measure** **D-1** To avoid potential significant impacts to nesting birds, including migratory birds and raptors, the following shall be implemented by the Project Applicant: • To avoid disturbance of nesting and special status birds including raptorial species protected by the MBTA and Sections 3503, 3503.5, and 3513 of the	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	CFGC, activities related to the Project, including, but not limited to, vegetation removal, ground disturbance, and construction and demolition shall occur outside of the bird breeding season (February 1 through August 30), but variable based on seasonal and annual climatic conditions. If construction must begin within the breeding season, then a pre-construction nesting bird survey shall be conducted no more than 3 days prior to initiation of ground disturbance and vegetation removal. The nesting bird pre-construction survey shall be conducted within the disturbance footprint and a 300-foot buffer within inaccessible areas (i.e. private lands) surveyed by binoculars. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in Los Angeles County. • If nests are found, an avoidance buffer (which is dependent upon the species,	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	the proposed work activity, and existing disturbances associated with land uses outside of the site) shall be determined and demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to mark the boundary. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No ground disturbing activities shall occur within this buffer until the avian biologist has confirmed that breeding/nesting is completed and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist.	
Sensitive Plant Community - While the Project area contains a stand of California black walnut woodland trees in generally good health, the value of this habitat has been significantly degraded due to an intensive annual fuel management regime required by City regulations, which has prevented the development of a functional shrub or herbaceous layer, both of which enhance a vegetation community's value to a range of wildlife species. The brush clearance regime does not appear to be detrimental to the health of the existing trees, but it precludes the establishment of young trees that	None required.	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
would eventually replenish aging trees on the site. The quality of the site is also negatively affected by invasion of exotic plant species as well as its close proximity to residential development. Since the habitat within the site is fragmented and significantly degraded, mitigation for impacts to California walnut trees by replacement of walnut woodland habitat acreage is not warranted, and impacts with respect to a sensitive plant community would be less than significant.		
Jurisdictional Waters and Wetlands – While the Project Site does not contain any federally protected waters or wetlands, one erosional feature had been previously documented at the Site. However, the feature showed no evidence of ordinary conveyance of storm waters such as bed and bank, channel bottom, scouring, matted vegetation, or any other characteristics of an active stream course. Furthermore, no clear hydrologic connection to any potentially jurisdictional drainages downstream of the Site was observed. The erosional features contained no riparian vegetation, only sparse scatterings of California walnut, laurel sumac, and non-native annual grasses. The features have limited to no functional value or associated resources that are distinctively different from adjacent uplands. Due to the absence of these indicators of jurisdictional waters and wetlands, these features do not meet USACE, RWQCB, or CDFW established criteria for jurisdictional areas (i.e. OHWM, bed, bank, and channel). Therefore, no impacts related to jurisdictional waters or wetlands would occur as a result of the Project.	None required.	No impact.
Migratory Corridors - The City's General Plan Framework EIR does not identify the Project Site as a Biological Resource Area (BRA) or Significant Ecological Area (SEA). In addition, the Project Site is highly constricted by residential development on all sides and is not within or proximate to any native wildlife corridors, native wildlife nursery sites, critical habitat, land trust, habitat conservation plan or any other regional planning areas, as identified by the City or any other local, regional, state or federal agency.	None required.	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
Tree Preservation - Implementation of the Project would result in the removal of 129 protected trees and 39 significant trees. Thirty-nine protected trees and 11 significant trees would be preserved. Twenty of the 39 protected trees to remain would sustain some degree of encroachment to their Tree Protection Zones. Therefore, Project impacts related to tree preservation would be potentially significant. With implementation of Mitigation Measures D-2 through D-4, impacts related to tree preservation would be less than significant.	**Mitigation Measures** **D-2** <u>Protected Trees</u> • Removal of 129 'protected' trees shall require mitigation tree plantings at a ratio of 4:1, which equals 516 trees. • Mitigation trees shall consist of *Quercus agrifolia, Platanus racemosa, Juglans californica* var. *californica,* or *Umbellularia californica*. Mitigation trees shall be planted on-site in the natural or manufactured slope areas of the lots. • Removal trees that are in the public streets rights-of-way may be replaced at a lower ratio of 2:1. The City of Los Angeles will make the final determination in this regard. • The City of Los Angeles' Urban Forestry Division generally requires 24-inch box trees to be planted on-site for mitigation. Depending on nursery availability, especially for Southern	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	California black walnuts *(Juglans californica* var. *californica)* one- to fifteen-gallon container sizes may be more appropriate for mitigation trees. Therefore, the applicant may propose to plant smaller container sizes, subject to approval by the Urban Forestry Division in the final landscape/mitigation planting plans. • Mitigation trees shall be planted in natural groupings, as well as individually, as space allows on each lot and in open spaces of the Project. A sample of the proposed mitigation planting schedule on a typical lot is provided in Exhibit K of the Carlberg 2016 report. • The Project landscape architect shall incorporate mitigation trees into the landscape plans for the 32 lots. The color-coded mitigation trees shall be required on the landscape and irrigation plans and irrigation shall be provided for all mitigation trees to the satisfaction	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	of the Urban Forestry Division as outlined in the final Protected Tree Removal Permit. • Mitigation trees shall be guaranteed under a bond for a period of three years. The bond amount shall be determined through negotiations between the applicant team and the Urban Forestry Division prior to issuance of a grading permit. The bond shall be posted prior to issuance of a grading permit. • Mitigation trees that are planted in private yards shall be protected by Project Conditions, Covenants, and Restrictions (CC&Rs) or other legal instrument. The CC&Rs or other legal instrument shall ensure access for reasonable mitigation monitoring, as required. • The Urban Forestry Division shall be notified at least ten (10) days prior to the date of the approved Protected Tree removals. The applicant's Tree Expert (Project arborist) shall be on-site for the	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	duration of the tree removals to ensure that the proper trees are removed. A post-tree removal site meeting with an Urban Forestry Division arborist shall be required one day after the removals are complete. • The Urban Forestry Division shall be notified no later than five days after completion of the tree replacement plantings. • The applicant, along with the Project arborist and landscape architect, shall be responsible to ensure that the tree removal permit tree replacement conditions are met. Monitoring and compliance documentation shall be required as outlined in the requirements set forth in measure D-4 below. • The mitigation tree bond shall be released upon satisfactory compliance with the Protected Tree Removal Permit and all associated conditions. **D-3** <u>Significant Trees</u>	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	• In compliance with the Mount Washington/Glassell Park Specific Plan, removal of 39 'significant' trees shall require mitigation tree plantings at a ratio of 1:1, which equals 39 trees. • Mitigation (replacement) trees shall have a minimum trunk diameter of two inches and a height of eight feet at the time of planting. Each replacement tree planted on a slope shall be a minimum of 15 gallons in size and shall be surrounded by native plants according to xeriscape and landform planting specifications. Replacement trees on substantially level grades shall be no smaller in diameter, measured 12 inches above the ground, than the trees removed, except that no trees larger than 24-inch box size shall be required. • The Project landscape architect shall design mitigation trees into the landscape plans for the 32 lots. The color-coded mitigation trees shall be required on the landscape and irrigation	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	plans and irrigation shall be provided for trees planted in the natural areas of the site. **D-4** <u>All Trees</u> • Any demolition, digging, excavating, or trenching within the protected zone of any protected tree to remain shall be monitored by a qualified arborist. • Exposed roots to remain shall be covered with burlap, carpet remnants or other material that may be kept moist until soil can be replaced. • The Carlberg 2016 arborist report shall be part of the set of plans given to the contractors. Contractors shall be familiar with the specific instructions and responsibilities pertaining to protected trees. A professional arborist shall be retained and shall meet with the contractor and his personnel prior to commencement of the Project. • If canopy pruning is found to be	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	necessary for trees to remain, it shall only be performed by a qualified ISA Certified Arborist or ISA Certified Tree Worker. Climbing "gaffs" shall not be used by any tree climber except in an emergency to reach an injured climber or when removing a tree. • Protected trees shall not be removed until/unless approval is granted by the City of Los Angeles' Urban Forestry Division. • Pruning or removals shall occur outside of the nesting bird season as defined by the California Department of Fish and Wildlife and other jurisdictional agencies. If removals must occur in nesting bird season, biological monitoring shall be required in accordance with Mitigation Measure D-1. • Construction monitoring reports shall be submitted to the Urban Forestry Division at appropriate intervals. Intervals may vary depending on the	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	level of activity on-site. A monitoring and reporting program shall be developed by the Project arborist for various phases of the development process. This program shall be submitted to the Urban Forestry Division prior to issuance of grubbing, grading, or demolition permits. A final compliance report shall be prepared for submission to Urban Forestry upon completion of the Project. • A maintenance and monitoring program for mitigation trees shall be included in the monitoring and reporting program that shall be developed by the Project arborist. This program shall be developed in coordination with the Project landscape architect. At least three (3) years of monitoring for mitigation trees is recommended. The Urban Forestry Division shall dictate the actual monitoring period for mitigation trees. • Equipment, materials, and vehicles shall	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	not be stored, parked, or operated within the protected zone of trees to remain. • Equipment with overhead exhaust shall not be placed in such a manner as to scorch overhanging branches or foliage. Smaller equipment shall be used in such areas as deemed necessary by the monitoring arborist. • Five (5) foot high chain link fencing shall be installed as illustrated on the Tree Protection Plan prior to submission of this report to the Urban Forestry Division of the City of Los Angeles (reports may not be deemed complete by the Division if fencing is not in place). Photographs of the fencing shall be submitted with the report. When performing their inspection, Urban Forestry requires that the protective fencing be in place. • A 'Warning' sign shall be prominently displayed on each protective enclosure. The sign shall be a minimum of 8.5 inches x 11 inches and clearly indicate	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	the presence of a tree protection zone. • Because of the close proximity of construction to protected and significant trees, a professional arborist with construction monitoring experience shall be retained to monitor and report on various phases of the Project. • The Urban Forestry Division shall be notified immediately if any Protected Tree Removal Permit conditions have been violated or cannot be fulfilled.	
Habitat Conservation Plan - The Project Site is not subject to a Habitat Conservation Plan, a Natural Community Conservation Plan, or other such plan. Therefore, the Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, and no impacts would occur.	None required.	No impact.
4.E CULTURAL RESOURCES		
Historic Resources - No historic structures are located on the Project site. Thus, the Project would not cause a substantial adverse change in the significance of a historical resource as defined in §15064.5. Therefore, no impacts related to historical resources would occur as a result of the Project.	None required.	No impact.
Archaeological Resources - While there are some signs of prior disturbance to the native soil in the area, it is unclear, given the overgrowth of vegetation and generally undeveloped landscape of the Project area, how extensive previous disturbance related to the construction of the existing offsite residences may be. From the field survey, however, it appears that the Monterey Formation is	**Regulatory Compliance Measure** **E-2** If any archaeological materials are encountered during the course of Project	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
immediately below surface, with exposures already observed at the surface. Thus, it appears that archaeological sensitivity is low. Through compliance with the requirements contained in California Public Resources Code Section 21083.2 (formally provided as Regulatory Compliance Measure E-2 below), potential Project impacts to unknown archaeological resources would be less than significant.	development, all further development activity shall be halted in the area of the discovery and: a. The services of an archaeologist shall then be secured by contacting the South Central Coastal Information Center located at California State University Fullerton, or a member of the Society of Professional Archaeologists (SOPA), or a SOPA-qualified archaeologist, who shall assess the discovered material(s) and prepare a survey, study, or report evaluating the impact. b. The archaeologist's survey, study, or report shall contain a recommendation(s), if necessary, for the preservation, conservation, or relocation of the resource. c. The applicant shall comply	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	with the recommendations of the evaluating archaeologist, as contained in the survey, study, or report. d. Project development activities may resume once copies of the archaeological survey, study, or report are submitted to the South Central Coastal Information Center at California State University Fullerton. e. Prior to the issuance of any building permit, the applicant shall submit a letter to the case file indicating what, if any, archaeological reports have been submitted, or a statement indicating that no material was discovered. f. A covenant and agreement binding the applicant to this condition shall be recorded prior to issuance of a grading	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	permit.	
Paleontological Resources - The presence of Monterey Formation exposures at the surface is indicative of a high sensitivity for paleontological resources. Additionally, while no paleontological resources were noted during the survey, this does not preclude the discovery of subsurface paleontological resources. A records search with the Natural History Museum of Los Angeles County showed that important paleontological fossils have been discovered within the Project area. Due to the high paleontological potential of the Monterey Formation, potential Project impacts related to paleontological resources would be potentially significant. With implementation of Mitigation Measure E-1, impacts would be less than significant.	**Mitigation Measure** **E-1** All earth-moving activities that occur within the Monterey Formation shall be monitored by a qualified paleontologist. If any paleontological materials are encountered during the course of Project development, all further development activities shall be halted in the area of the discovery and: a. The paleontologist shall assess the discovered material(s) and prepare a survey, study, or report evaluating the impact. b. The paleontologist's survey, study, or report shall contain a recommendation(s), if necessary, for the preservation, conservation, or relocation of the resource. c. The applicant shall comply with the recommendations of the evaluating paleontologist, as contained in the survey,	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	study, or report. d. Project development activities may resume once copies of the paleontological survey, study, or report are submitted to the Los Angeles County Natural History Museum. e. Prior to the issuance of any building permit, the applicant shall submit a letter to the case file indicating what, if any, paleontological reports have been submitted, or a statement indicating that no material was discovered. f. A covenant and agreement binding the applicant to this condition shall be recorded prior to the issuance of a grading permit.	
Human Remains - No human remains are known to exist at the Project Site. Through compliance with California Health and Safety Code Section 7050.5, (formally provided as Regulatory Compliance Measure E-3, below), potential Project impacts to human remains would be less than significant.	**Regulatory Compliance Measure** **E-3** In the event that human remains are discovered during excavation activities, the	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	following procedure shall be observed: a. Stop immediately and contact the County Coroner. b. The coroner has two working days to examine human remains after being notified by the responsible person. If the remains are Native American, the coroner has 24 hours to notify the Native American Heritage Commission. c. The Native American Heritage Commission will immediately notify the person it believes to be the most likely descendant of the deceased Native American. d. The most likely descendant has 48 hours to make recommendations to the owner, or representative, for the treatment or disposition, with proper dignity, of the human remains and grave gods.	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	e. If the descendant does not make recommendations within 48 hours, the owner shall reinter the remains in an area of the property secure from further disturbance. f. If the owner does not accept the descendant's recommendations, the owner or the descendant may request mediation by the Native American Heritage Commission.	
4.F GEOLOGY AND SOILS		
Seismic Ground Shaking - Given the Project Site's location in a seismically active region, the Project Site could experience seismic groundshaking in the event of an earthquake. However, the City would require the Project Applicant to design and construct the Project in conformance to the most recently adopted Building Code and applicable recommendations made in a Final Geotechnical Report prepared for the Project. Conformance with the City's current Building Code requirements would minimize the potential for structural failure, injury, and loss of life during an earthquake event and thus, not cause or accelerate geologic hazards or expose people to substantial risk of injury. Therefore, Project impacts related to groundshaking would be less than significant.	**Project Design Features** **F-1** The Project shall comply with the conditions contained within the Department of Building and Safety's Geology and Soils Report Approval Letter for the Proposed Project, and as it may be subsequently amended or modified.	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	F-2 **Geotechnical Engineering Investigation** All structures and buildings shall be constructed to industry standards and agency regulations for all geotechnical considerations, including seismic, soil excavation, de-watering requirements, grading, foundation design, settlement, pavement recommendations, retaining walls, drainage, shoring, and any other relevant recommendations within the Geotechnical Investigation.	
Fault Rupture - The Project Site is not located within an Alquist-Priolo Earthquake Fault Zone, and no known faults exist on the Project Site. Thus, the Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault on the Project site. Therefore, no significant impacts related to this issue would occur.	None required.	Less than significant.
Ground Failure/Liquefaction/Landslide - The Project Site is located outside of the liquefaction hazard zones. The susceptibility of the site soils to liquefaction is further mitigated by the presence of bedrock at a shallow depth.	See Project Design Features F-1 and F-2, provided above.	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
However, the proposed lots situated on the east side of Haverhill Drive and Haverhill Way are located within potential, seismically-induced landslide hazard zones. The results of the slope stability analyses indicate that the slopes within the Project Site possess factors of safety against static and seismic stability in excess of minimum Building Code requirements. Additionally, as stated previously, the City would require the Project Applicant to design and construct the Project in conformance to the most recently adopted Building Code and applicable recommendations made in a Final Geotechnical Report prepared for the Project. Conformance with the City's current Building Code requirements would minimize the potential for structural failure, injury, and loss of life associated with ground failure, liquefaction, and landslides. Therefore, Project impacts related to ground failure, liquefaction, and landslides would be less than significant.		
Expansive Soil – The topsoil at the Project Site is classified as medium to high expansive. However, the Project Applicant would be required by the City to design and construct the Project in conformance to the most recently adopted Building Code and applicable recommendations made in the Geotechnical Report. Conformance with the City's current Building Code requirements would ensure that no significant impacts related to expansive soil would occur as a result of the Project. Therefore, Project impacts related to expansive soils would be less than significant.	None required.	Less than significant.
Septic Tanks - The Project would connect to the City's existing sewer system and would not require the use of septic tanks or alternative wastewater disposal systems. Thus, the Project would not result in any impacts related to soils that are incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. Therefore, no impacts related to this issue would occur.	None required.	No impact.
4.G GREENHOUSE GAS EMISSIONS		
Construction - Construction emissions of CO_2 would peak in 2017, when up to 22,763 pounds of CO_2e	None required.	Less than

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
per day are anticipated. In accordance with the SCAQMD's guidance, GHG emissions from construction were amortized over the lifetime of the Project. The SCAQMD defines the lifetime of a project as 30 years. Therefore, total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions, and then added to the operational emissions.		significant.
Operation – The Project is expected to result in 1,773 metric tons of CO_2e ($MTCO_2e$) per year, which is below the draft SCAQMD screening threshold for residential projects. In addition, the Project would be consistent with numerous plans and policies including the AB 32 Scoping Plan, Executive Order S-3-05, SCAG's 2016-2040 Sustainable Communities Strategy, and the City of Los Angeles's Green Building Ordinance. As a result, the Project's contribution to global climate change is not cumulatively considerable and impacts would be less than significant.	None required.	Less than significant.
4.H HYDROLOGY AND WATER QUALITY		
Storm Drain Capacity – The Project would provide adequate storm drain facilities to accommodate the Project's drainage. As such, the Project would not cause flooding on- or off-site. Therefore, Project impacts related to flooding would be less than significant.	None required.	Less than significant.
Groundwater – The Project Site is not a source of groundwater recharge, and under the Project, this condition would remain unaltered. Additionally, all water consumption associated with the Project would be supplied by LADWP, and not from groundwater beneath the Project Site. Finally, the Project Site is not located within an aquifer area. Thus, the Project would have no effect on groundwater supplies or recharge, and impacts related to this issue would be less than significant.	None required.	Less than significant.
Drainage Pattern – During construction, the Project would be required to implement a SWPPP, in accordance with the NPDES General Permit. Through compliance with the existing regulations, the Project would not result in any significant impacts related to soil erosion and siltation during the	None required.	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
construction phase. Additionally, during the Project's operational phase, most of the Project Site would be developed with impervious surface, and all stormwater flows would be directed to storm drainage features and would not come into contact with bare soil surfaces. Thus, no significant impacts related to erosion and siltation would occur as a result of Project operation.		
Water Quality - During construction, the Project would be required to implement a SWPPP, in accordance with the NPDES General Permit. Through compliance with the existing regulations, the Project would not result in any significant impacts related to water quality during the construction phase. During operation, the Project would comply with the City's LID Ordinance, which would ensure that the Project meets the City's water quality standards. Therefore, Project impacts related to water quality would be less than significant.	None required.	Less than significant.
100-Year Flood - The Project Site is not located within a 100-year flood hazard area. Thus, the Project would not 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. Therefore, no impacts related to this issue would occur.	None required.	No impact.
Levee or Dam Failure - The Project Site is not located in any area susceptible to floods associated with a levee or dam. Therefore, the Project would not 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, and no impacts related to this issue would occur.	None required.	No impact.
Seiche, Tsunami, Mudflow - The Project Site is not in an area susceptible to seiches, tsunamis, or mudflows. Therefore, the Project would not expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow, and no impacts related to this issue would occur.	None required.	No impact.
4.I LAND USE AND PLANNING		

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
Physically Divide an Established Community – The Project Site is located in a hillside area surrounded by existing single-family development to the north, east, and west, and undeveloped area to the south/southeast. Other land uses in the Project area include commercial/retail land uses along Eagle Rock Boulevard approximately 1.0 mile north and west of the Project Site and the Glassell Park Recreation Center and Youth Center on Verdugo Road approximately 0.75 mile northwest of the Project Site. Given the fact that the Project Site is largely surrounded by existing development, the Project would not physically divide an established community. Therefore, no impacts related to this issue would occur.	None required.	No impact.
Consistency Analysis - The Project would be consistent with all applicable policies of the Compass Blueprint, 2016-2040 RTP/SCS, General Plan Framework Element, and the Northeast Los Angeles Community Plan.	None required.	Less than significant.
Zoning - The Project Site is zoned R1-1 (One-Family Zone, Height District 1), which allows for one single-family home to be constructed on each lot. The proposed single-family residential land uses are allowed under the current zoning, and all aspects of the Project would conform to the LAMC requirements that pertain to development of the Project Site. The Project would not conflict with the LAMC. Therefore, no impacts related to conflicts with the LAMC would occur as a result of the Project.	None required.	No impact.
Conservation Plan – The Project Site is not subject to any applicable habitat conservation plan or natural community conservation plan, and no impact would occur.	None required.	No impact.
4.J NOISE		
Construction Noise - Construction activities would generate noise from construction activities that would vary over the 17 months of activity on- and off-site. Although Regulatory Compliance Measure J-1, Mitigation Measures J-2 through J-7, and Project Design Feature J-13 would ensure that construction noise	**Regulatory Compliance Measure** **J-1** The Project shall comply with the City of	Significant and unavoidable.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
levels not exceed the 75 dBA threshold pursuant to LAMC Section 112.05, projected noise level increases at all monitored sensitive receptor locations would still exceed the 5.0 dBA thresholds instituted by the City's *CEQA Thresholds Guide* and LAMC. As a result, Project construction noise impacts would be significant and unavoidable.	Los Angeles Building Regulations Ordinance No. 178048, which requires a construction site notice to be provided that includes the following information: job site address, permit number, name and phone number of the contractor and owner or owner's agent, hours of construction allowed by code or any discretionary approval for the site, and City telephone numbers where violations can be reported. The notice shall be posted and maintained at the construction site prior to the start of construction and displayed in a location that is readily visible to the public. **Mitigation Measures** **J-2** Two weeks prior to commencement of construction, notification shall be provided to the off-site residential and other sensitive land uses within 500 feet of the Project site that discloses the construction schedule, including the types of activities and equipment that would be used throughout the	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	duration of the construction period. **J-3** Temporary sound barriers capable of achieving a sound attenuation of at least 15 dBA (e.g., construction sound wall with sound blankets), and capable of impeding line-of-sight to adjacent residences, shall be installed. **J-4** All powered construction equipment shall be equipped with exhaust mufflers or other suitable noise reduction devices. **J-5** All construction areas for staging and warming-up equipment shall be located as far as possible from adjacent residences. **J-6** Portable noise sheds for smaller, noisy equipment, such as air compressors, dewatering pumps, and generators shall be provided where feasible. **J-7** A haul route for exporting cut materials from the site to a nearby landfill shall minimize	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	travel on residential streets that are home to sensitive receptors. **Project Design Feature** **J-13** Power construction equipment (including combustion engines), fixed or mobile, shall be equipped with state-of-the-art noise shielding and muffling devices (consistent with manufacturers' standards). All equipment shall be properly maintained to assure that no additional noise, due to worn or improperly maintained parts would be generated.	
Operational Noise - The Project would produce both direct noise from residential-related activities, as well as indirect noise impacts from vehicles traveling on local streets to access the Site. The direct sources would generate noise on a seasonal, irregular, or infrequent basis and would not individually or collectively elevate ambient noise levels substantially at nearby sensitive receptors. In addition, vehicles traveling to and from the Site would only generate nominal noise increases. Therefore, impacts related to operational noise would be less than significant.	None required.	Less than significant.
Groundborne Vibration - Groundborne vibration would be predominantly generated by grading activities, such as those necessitating the usage of large bulldozers and other tractor-type equipment. Other potential types of construction equipment would produce less vibration and have lesser potential	**Mitigation Measures** **J-8** Distances greater than those utilized to	Significant and

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
impacts on neighboring sensitive receptors. Construction-related PPV levels would exceed the FTA's 0.2 in/sec building damage threshold for non-engineered timber and masonry buildings at 2438 Haverhill Drive. Therefore, the Project's building damage vibration impacts would be considered significant prior to mitigation. In terms of human annoyance, project-related construction would exceed FTA residential thresholds at all receptors due to the proximity of residential receptors to the Project. Therefore, the Project's human annoyance impacts would be considered significant prior to mitigation. With implementation of Mitigation Measures J-8 through J-12, construction-related groundborne vibration levels would not exceed relevant FTA thresholds for building damage. However, with implementation of Mitigation Measures J-8 through J-12, construction-related groundborne vibration levels would exceed the relevant FTA threshold for human annoyance at 2438 Haverhill, but would be reduced to below the FTA threshold at the other three sensitive receptors. Therefore, the Project's temporary impacts with respect to construction vibration would be significant and unavoidable.	model the Project's potential vibration impacts shall be maintained to avoid or lessen potential construction-related vibration impacts. Earthmoving equipment, in particular, shall be operated as far as possible from vibration-sensitive receptors. The distances are as follows: • 2438 Haverhill Drive residence: 5 feet • 2421 Sundown Drive residence: 20 feet • 3829 Division Street residence: 20 feet • 3957 Brilliant Drive residence: 15 feet **J-9** Less vibration-intensive construction equipment (e.g., rubber-tired bulldozers, rather than large bulldozers with steel tracks) shall be used within 25 feet of neighboring residential buildings. **J-10** Heavily-laden vehicles shall be routed away	unavoidable.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	from vibration-sensitive locations to minimize travel on local residential streets. Construction haul trucks shall avoid driving over potholes and dips when arriving at or leaving the Project Site. **J-11** Construction activities that produce large amounts of groundborne vibration, specifically demolition, excavation, earthmoving, and ground impacting activities, shall be sequenced in such a way so that the vibration sources do not operate simultaneously. **J-12** If a vibration complaint is filed during project construction, monitoring shall be conducted in the vicinity of the area in question. If monitoring exceeds FTA standards for frequent, occasional, or infrequent activities, the contractor shall modify the construction plan to reduce vibration exposure using the methods identified in this mitigation plan.	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	Project Design Feature **J-14** Project construction shall not include the use of driven piles systems.	
Airport Noise - The Project Site is not located within an airport land use plan or within two miles of a public airport or public use airport. Therefore, the Project would not expose people residing or working in the Project area to excessive noise levels, and no impact would occur.	None required.	No impact.
4.K TRANSPORTATION/TRAFFIC		
Construction – During the weekday, nearly all construction-related trips would occur outside of the peak hours. The City would require the Project Applicant to prepare and implement a Construction Traffic Management Plan (CTMP) for the Project (Project Design Feature K-1). With implementation of safety procedures and other controls set forth in the CTMP, construction would not create hazards for roadway travelers or bus riders. The impacts of construction activity on the overall transportation system would be temporary in nature and would cause minimal interruption to the regular operation of the facilities surrounding the Project Site. Impacts on traffic associated with construction are typically considered short-term adverse impacts, but not significant.	**Project Design Feature** **K-1** A detailed Construction Traffic Management Plan, including detour plans, haul routes, and staging plans shall be prepared and submitted to the City for review and approval. The Construction Traffic Management Plan shall formalize how construction would be carried out and identify specific actions that shall be required to reduce effects on the surrounding community. The Construction Traffic Management Plan shall be based on the nature and timing of the specific construction	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	activities and other projects in the vicinity of the Project Site, and shall include the following elements as appropriate: • Prohibition of construction worker parking on adjacent residential streets; • Provisions to prohibit construction equipment or material deliveries within the public right-of-way; • Provisions for temporary traffic control during all construction activities adjacent to public right-of-way to improve traffic flow on public roadways (e.g., flag men); • Scheduling of construction activities to reduce the effect on traffic flow on surrounding arterial streets; • Rerouting construction trucks to reduce travel on congested	

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
	streets to the extent feasible; • Construction-related vehicles shall not park on surrounding public streets; • Provisions of safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers; • Provisions to accommodate the equipment; • Scheduling of construction-related deliveries to reduce travel during commuter peak hours as identified in this study; and • Obtaining the required permits for truck haul routes from the City prior to issuance of any permit for the Project.	
Existing Plus Project - During the Existing With Project scenario, the Division Street/Cazador Street intersection is forecast to operate at LOS A during both peak hour periods, and impacts would be less than significant.	None required.	Less than significant.

Table 1-1
Summary of Project Impacts

Environmental Impacts	Mitigation Measures/Project Design Features/Regulatory Compliance Measures	Level of Impact Significance After Mitigation
Future Plus Project - During the Future (2018) Plus Project scenario, the Division Street/Cazador Street intersection is forecast to continue to operate at LOS A during both peak hour periods, and impacts would be less than significant.	None required.	Less than significant.
CMP – The largest peak hour trip generation would be 32 trips during the PM peak hour. Therefore, the CMP thresholds would not be exceeded and no further CMP arterial or freeway analysis is warranted.	None required.	No impact.
Design Hazards – The Project does not include any sharp curves, dangerous intersections or incompatible uses. The internal street would be designed in accordance with all applicable requirements. No off-site traffic impacts are proposed or warranted in the area surrounding the Project Site.	None required.	Less than significant.
Air Traffic Patterns - The Project includes development of 32 single-family residential units, with heights consistent with the existing homes in the Project area. Further, the Project Site is not located near any airports. Thus, the Project would not 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.	None required.	No impact.
Emergency Access - All ingress/egress associated with the Project would be designed and constructed in conformance to all applicable City Building and Safety Department and City Fire Department standards and requirements for design and construction. Therefore, the Project would not result in any significant impacts related to emergency access.	None required.	Less than significant.
Alternative Transportation – The Project includes development of the Project Site with single-family homes, consistent with the existing zoning and land use designation. The Project would not affect any existing or planned alternative transportation infrastructure or plans or programs for development of such infrastructure. Thus, the Project would not conflict with adopted policies, plans, or programs supporting alternative transportation.	None required.	No impact.

2. PROJECT DESCRIPTION

ENVIRONMENTAL SETTING

Project Site

The Project site is located in the Northeast Los Angeles Community Plan Area of the City of Los Angeles (the "City"). The Project site comprises 32 undeveloped, subdivided single-family lots. The addresses, assessors parcel numbers (APNs), zoning, General Plan Land Use designation, and approximate lot sizes associated with the Project site are shown on Table 2-1.

Table 2-1
Project Site Information

Addresses	APN	Zone	General Plan Land Use	Area (sf)
2427 N Haverhill Dr	5462024024	R1-1	Low Residential	5,379.23
2421 N Haverhill Dr	5462024025			6,456.23
2417 N Haverhill Dr	5462024026			5,775.80
2411 N Haverhill Dr	5462024027			4,977.01
2401 N Haverhill Dr	5462024028			5,450.29
2335 N Haverhill Dr	5462024029			5,309.95
2329 N Haverhill Dr	5462024030			5,019.94
2321 N Haverhill Dr	5462024031			5,287.37
2317 N Haverhill Dr	5462024032			7,585.72
2430 N Haverhill Dr	5462023006			5,173.52
2420 N Haverhill Dr	5462023007			4,842.63
2410 N Haverhill Dr	5462023008			6,882.97
2414 N Sundown Dr	5462022009			5,167.43
2410 N Sundown Dr	5462022010			4,680.03
2406 N Sundown Dr	5462022029			4,749.42
2402 N Sundown Dr	5462022012			4,975.81
2400 N Haverhill Dr	5462022013			8,363.46
2318 Haverhill Way	5462022014			5,325.74
2314 Haverhill Way	5462022015			5,139.25
2310 Haverhill Way	5462022016			4,949.98
3963 N Brilliant Dr	5462022017			5,310.70
3970 N Brilliant Dr	5462021003			5,549.66

4000 N Brilliant Dr	5462021004			5,262.95
4006 N Brilliant Dr	5462021005			4,270.28
4012 N Brilliant Dr	5462021006			4,808.16
4009 N Brilliant Dr	5462021012			6,183.27
4001 N Brilliant Dr	5462021013			5,571.30
2301 N Haverhill Way	5462021014			4,818.71
2305 N Haverhill Way	5462021015			4,997.86
2309 N Haverhill Way	5462022016			5,000.00
2315 N Haverhill Way	5462022017			4,895.83
2320 N Haverhill Dr	5462022018			4,371.26
			Total	**172,531.76**
Source: Zone Information & Map Access System (ZIMAS): http://zimas.lacity.org, July 2015.				

The Project site is located in a hillside area on Haverhill Drive, Haverhill Way, and Brilliant Drive and is bound by existing single-family development to the north, east, and west and undeveloped area to the south/southeast. Elevations on the Project site vary from approximately 680 feet above sea level (asl) to approximately 740 asl. The Project site location is shown on Figures 2-1 and 2-2. The existing land use designation and zoning are shown on Figures 2-3 and 2-4, respectively.

PROJECT CHARACTERISTICS

The Project includes development of the 32 lots that compose the Project site with one single-family home per lot. Each home would include three levels, would include a garage, and would range in size from approximately 2,161 to 2,577 square feet (for a total of approximately 72,636 square feet of floor area). The Project also includes the extension of the existing roadways Haverhill Drive and Brilliant Drive to serve the Project.

The existing Glassell Park community is an amalgam of classic historic styles and new contemporary designs, including custom homes and builder homes of the past. Current single-family development in the Project area consists of an eclectic mix of styles, colors, and materials. The Project considers both the modern and contemporary trends apparent throughout the existing neighborhood and proposes elevation styles reminiscent of three distinct architectural themes: (1) Irving Gill's California modern; (2) contemporary Californian; and (3) traditional. The Irving Gill California modern style favors flat roofs without eaves, casement windows with transoms, white or near-white exterior walls, cubic or rectangular massing, and ground level arches at the entry in the manor of classic California missions. This style utilizes simplistic details and clean lines throughout.

The Contemporary style homes are similar in massing to the Irving Gill California modern style homes, but provide for deeper recesses and asymmetrical yet balanced placement of windows and doors. The

contemporary homes feature more complex details such as metal railings and awnings and casement windows combined with fixed glass panes. It is also the most materialistic of all styles proposed as part of the Project and is expressive through multiple materials and colors including ceramic tile, concrete block veneer, wood, and stucco finish.

The traditional style homes differentiate themselves from the Contemporary and Irving Gill California modern flat roof schemes and utilize large pitched roofs that mimic the slope of the hillside. This also serves to reduce the overall massing of the homes as they appear to slope down with the hill. This style utilizes stucco and wood look cement fiber siding maintaining a traditional appearance but with the longevity of durable materials. It is further characterized by casement and sliding windows with grids, transom glass at the entry, and extended eave overhangs with large modern kicker and outlooker braces.

Consistent with the eclectic mix in the area, the Project would be developed in one of the three architectural themes described above, and includes five different floor plans, three different elevation styles, and 12 different materials schemes, resulting in 32 distinct homes. A conceptual site plan is shown on Figure 2-5 and a conceptual site perspective view is shown on Figure 2-6. Individual plans and elevations are provided in Figures 2-7 through 2-28.

Environmental Design Features

The Project will comply with the Los Angeles Green Building Code (LAGBC), which is based on the 2010 California Green Building Standards Code (CalGreen).

Construction

Construction of the Project would take approximately 17 months, and would consist of the following phases: 1) site improvements (e.g., clearing and grubbing); 2) grading; 3) street improvements (Phase 1); 4) construction; 5) paving; 6) street improvements (Phase 2); and 7) architectural coatings. The total amount of export would be approximately 13,251 cubic yards.

Haul Route

The truck haul route would comply with the approved truck routes designated within the City. Haul trucks traveling to and from the Project site would be required to use designated truck routes. It is anticipated that outbound haul trucks would exit the Project site and proceed north on Haverhill Drive; turn right onto Cazador Street; turn left onto Division Street; turn left onto West Avenue 42; turn left onto Scandia Way; turn right onto West Avenue 40; turn left onto Eagle Rock Boulevard; turn onto northbound State Route (SR) 2; transition to eastbound SR 135; transition to eastbound Interstate (I)-210; exit at Buena Vista Street and proceed south to Avenida Barbosa; and proceed southbound to the Irwindale landfill site.

It is anticipated that inbound haul trucks would depart the landfill site and proceed eastbound on Arrow Highway; transition to I-605 northbound; transition to I-10 westbound; transition to SR 134 westbound; transition to SR 2 southbound; exit at Verdugo Road and proceed southbound; transition to southbound West Avenue 40; turn left onto Scandia Way; turn right onto West Avenue 42; turn right onto Division

Street; turn right onto Cazador Street; and then turn left onto Haverhill Drive and proceed to the Project site.

PROJECT OBJECTIVES

1. Design and develop a project that is functionally compatible with the site conditions, including full utilization of the Project Site, adjacent land uses, and the environment.

2. Provide single-family residential land uses that are consistent with the approved tract, current R-1 zoning, City of Los Angeles General Plan Framework, Northeast Los Angeles Community Plan, and Mt. Washington/Glassell Park Specific Plan.

3. Building homes of sufficient size to meet the changing needs of families, including having sufficient private open space.

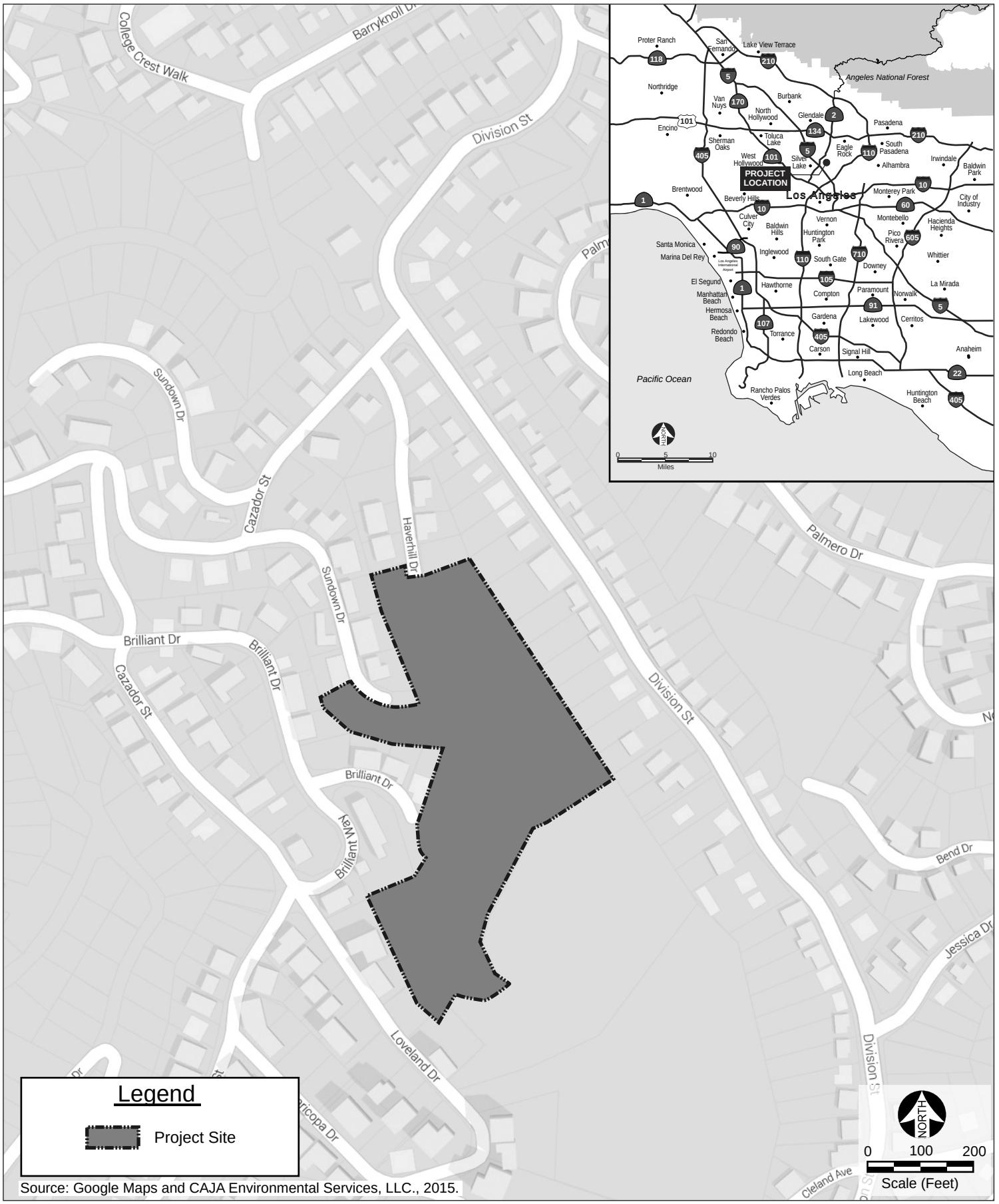
4. Maximize housing stock at an infill location that is close to retail amenities and jobs.

5. Construct a development that incorporates high quality design and landscaping, including onsite replacement of walnut trees.

REQUESTED DISCRETIONARY ACTIONS

In order to implement the Project, the Project Applicant is requesting the following approvals from the City:

- Project Permit Compliance with the Mt. Washington - Glassell Park Specific Plan;
- Approval of Grading and Building Permits; and
- Approval of a Haul Route Permit.



Source: Google Maps and CAJA Environmental Services, LLC., 2015.

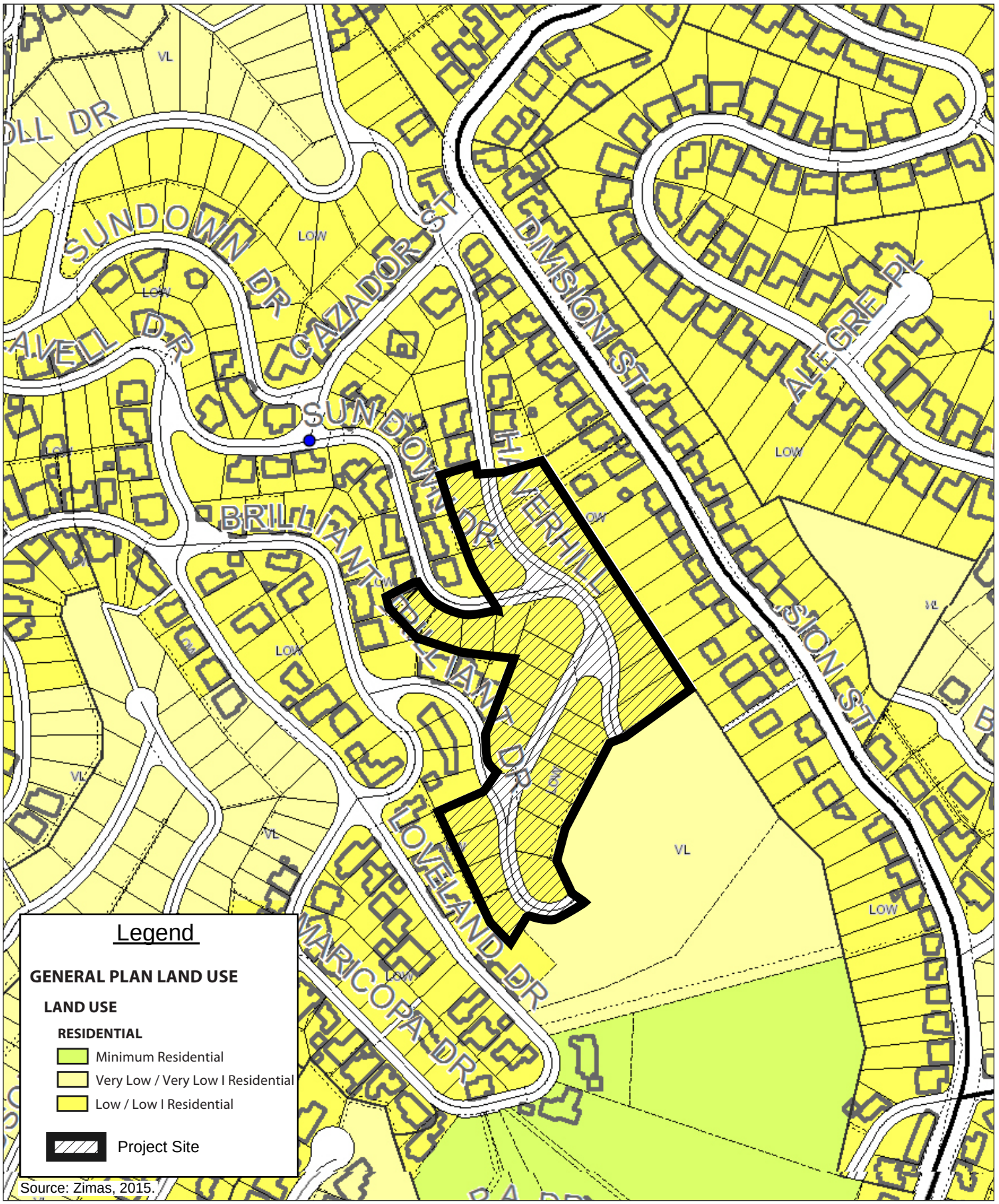
CAJA Environmental Services, LLC

Figure 2-1
Project Site Regional and Local Map



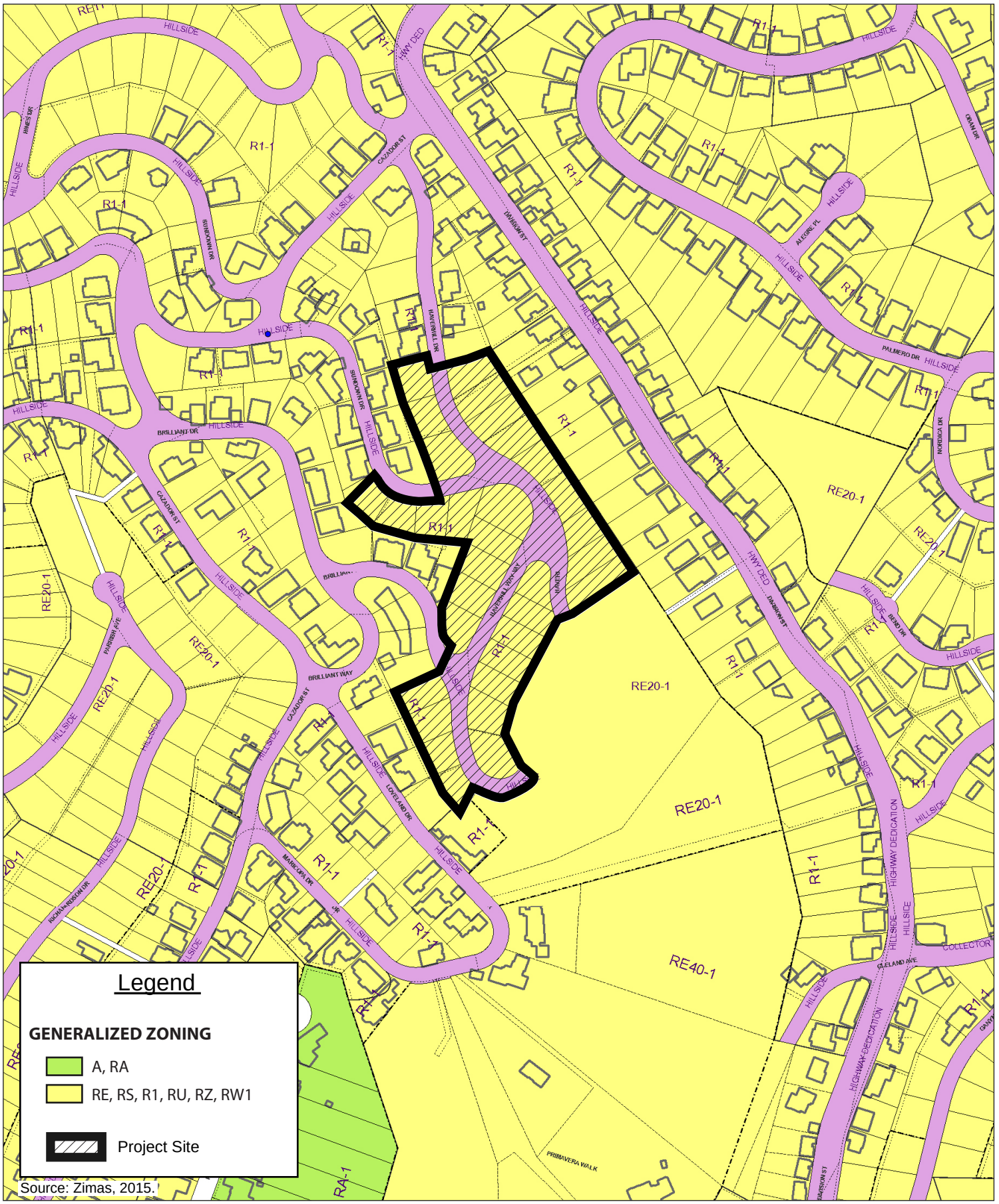
CAJA Environmental Services, LLC

Figure 2-2
Aerial Photo of Project Site



CAJA Environmental Services, LLC

Figure 2-3
Existing Land Use Designation



CAJA Environmental Services, LLC

Figure 2-4
Existing Zoning



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-5
Site Plan



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-6
Conceptual Site Perspective



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-7
Uphill Plan 1A – Conceptual Perspective

COLOR AND MATERIAL SCHEME VARIES PER LOT
(SEE ARCHITECTURAL SITE FLOOR PLAN MATRIX)

SCHEME	BODY 1	BODY 2	TRIM	ACCENT 1	ACCENT 2	PORCELAIN TILE SIDING	CORONADO CONCRETE VENEER
1	SW 7005 Pure White		SW 6170 Techno Gray	SW 6006 Black Bean		TERRACE Red Land Hill P531	1 x 8 x 16 Veneer

DETAILS

WAYNE DALTON GARAGE DOOR

16' Wide - 4 Panel w/ Satin Etched Privacy Glass, Clear Anodized Aluminum Frame

THERMA TRU ENTRY DOORS

FIBER GLASS ENTRY DOOR SB18CL

NOTE:
GRADING, REAR YARD, AND SIDE YARD STAIR CONDITIONS VARY PER LOT, SEE CIVIL DRAWINGS



FRONT

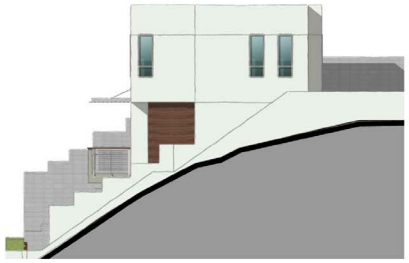
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MATERIAL LEGEND

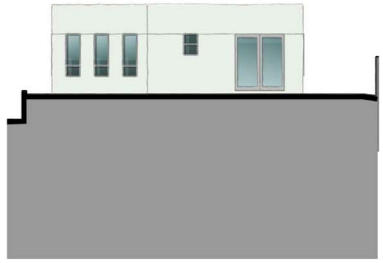
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2. PARAPET
3. STUCCO FINISH
4. STUCCO FINISH TRIM SURROUND ON STUCCO
5. CEMENT FIBER BOARD SIDING
6. WOOD OR CEMENT FIBER BOARD TRIM ON SIDING
7. PORCELAIN TILE SIDING
8. CONCRETE VENEER (BLOCK LOOK)
9. METAL RAILING
10. VINYL WINDOW SYSTEM
11. METAL SECTIONAL GARAGE DOOR
12. DECORATIVE DOWNWARD DIRECTED LIGHT FIXTURE
13. DECORATIVE METAL TRELLIS



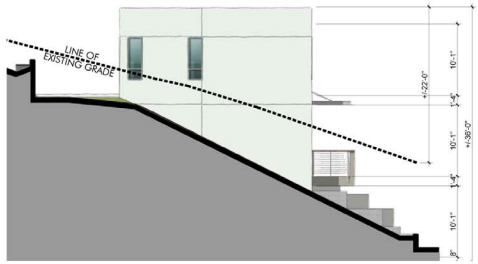
ROOF PLAN



RIGHT



BACK



LEFT

Source: KTGY Group, Inc. Architecture+Planning, 2015.



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-9
Uphill Plan 1B – Conceptual Perspective

COLOR AND MATERIAL SCHEME VARIES PER LOT
(SEE ARCHITECTURAL SITE FLOOR PLAN MATRIX)

SCHEME

	BODY 1	TRIM	ACCENT 1	ACCENT 2	BORAL ROOFING
8	SW 7632 Modern Gray	SW 6005 Folkstone	SW 6062 Rugged Brown	SW 7068 Grizzle Gray	Saxony 900 Slate 1FACS1430 Charcoal Blend

DETAILS

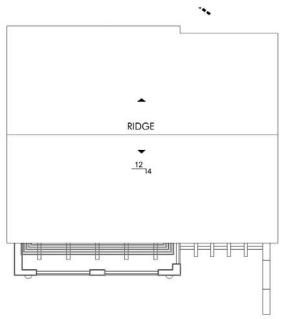
WAYNE DALTON GARAGE DOOR

40 Series - Double Car
Rough Sawn Plywood

THERMA TRU ENTRY DOORS

Fiber Glass Entry Door
CCR100

NOTE:
GRADING, REAR YARD, AND SIDE YARD STAIR CONDITIONS VARY PER LOT, SEE CIVIL DRAWINGS



ROOF PLAN



MATERIAL LEGEND

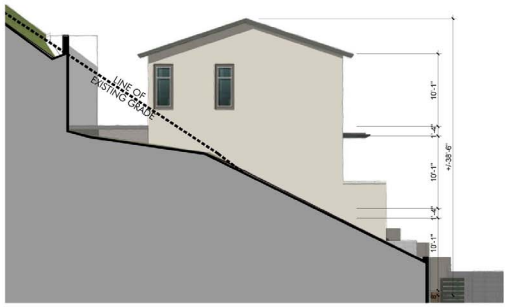
1	FLAT ROOFING 1/2" PER FOOT SLOPE MIN.
2	PARAPET
3	STUCCO FINISH
4	STUCCO FINISH TRIM SURROUND ON STUCCO
5	FLAT CONCRETE TILE ROOFING
6	WOOD FASCIA BOARD
7	WOOD RAFTER TAILS
8	WOOD OR METAL KICKER & OUTLOOKER
9	WOOD OR METAL RAILING
10	VINYL WINDOW SYSTEM
11	METAL SECTIONAL GARAGE DOOR
12	DECORATIVE DOWNWARD DIRECTED LIGHT FIXTURE
13	DECORATIVE METAL OR WOOD TRELLIS



RIGHT



BACK



LEFT

Source: KTGY Group, Inc. Architecture+Planning, 2015.

Figure 2-10
Uphill Plan 1B – Elevations



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-11
Uphill Plan 2A – Conceptual Perspective

COLOR AND MATERIAL SCHEME VARIES PER LOT
(SEE ARCHITECTURAL SITE FLOOR PLAN MATRIX)

SCHEME	BODY 1	BODY 2	TRIM	ACCENT 1	ACCENT 2	PORCELAIN TILE SIDING	CORONADO CONCRETE VENEER
(2)	SW 6148 Wool Skein		SW 6075 Garret Gray	SW 2848 Roycroft Pewter		FOREST PARK Timberland FP97	1 x 8 x 16 Veneer

DETAILS

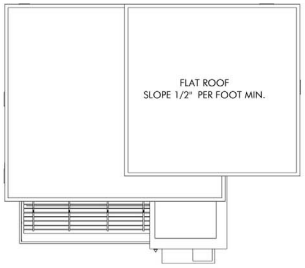
WAYNE DALTON GARAGE DOOR

16' Wide - 4 Panel w/ Satin Etched Privacy Glass, Clear Anodized Aluminum Frame

THERMA TRU ENTRY DOORS

STEEL ENTRY DOOR SYSTEM
TS87xn

NOTE:
GRADING, REAR YARD, AND SIDE YARD STAIR CONDITIONS VARY PER LOT, SEE CIVIL DRAWINGS

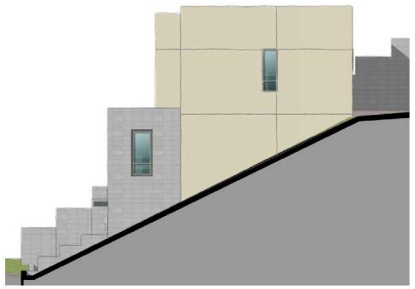


ROOF PLAN



MATERIAL LEGEND

1	FLAT ROOFING 1/2" PER FOOT SLOPE MIN.
2	PARAPET
3	STUCCO FINISH
4	STUCCO FINISH TRIM SURROUND ON STUCCO
5	CEMENT FIBER BOARD SIDING
6	WOOD OR CEMENT FIBER BOARD TRIM ON SIDING
7	PORCELAIN TILE SIDING
8	CONCRETE VENEER (BLOCK LOOK)
9	METAL RAILING
10	VINYL WINDOW SYSTEM
11	METAL SECTIONAL GARAGE DOOR
12	DECORATIVE DOWNWARD DIRECTED LIGHT FIXTURE
13	DECORATIVE METAL TRELLIS



RIGHT



BACK



LEFT

Source: KTGY Group, Inc. Architecture+Planning, 2015.

Figure 2-12
Uphill Plan 2A – Elevations



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-13
Uphill Plan 2B – Conceptual

COLOR AND MATERIAL SCHEME VARIES PER LOT
(SEE ARCHITECTURAL SITE FLOOR PLAN MATRIX)

SCHEME

	BODY 1	TRIM	ACCENT 1	ACCENT 2
8	SW 7632 Modern Gray	SW 6005 Folkstone	SW 6062 Rugged Brown	SW 7068 Grizzle Gray

DETAILS

WAYNE DALTON GARAGE DOOR



40 Series - Double Car
Rough Sawn Plywood

THERMA TRU ENTRY DOORS



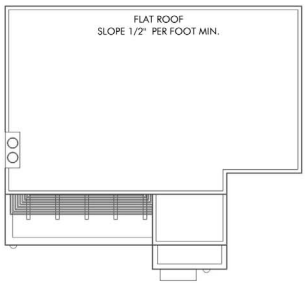
Fiber Glass Entry Door
CCR100

NOTE:
GRADING, REAR YARD, AND SIDE YARD STAIR CONDITIONS VARY PER LOT, SEE CIVIL DRAWINGS

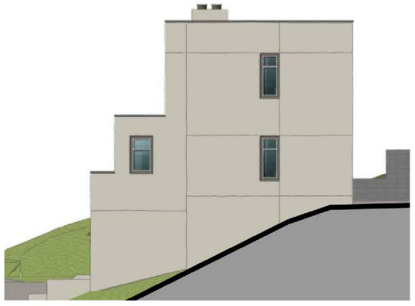


MATERIAL LEGEND

1. FLAT ROOFING 1/2" PER FOOT SLOPE MIN.
2. PARAPET
3. STUCCO FINISH
4. STUCCO FINISH TRIM SURROUND ON STUCCO
5. FLAT CONCRETE TILE ROOFING
6. WOOD FASCIA BOARD
7. WOOD RAFTER TAILS
8. WOOD OR METAL KICKER & OUTLOOKER
9. WOOD OR METAL RAILING
10. VINYL WINDOW SYSTEM
11. METAL SECTIONAL GARAGE DOOR
12. DECORATIVE DOWNWARD DIRECTED LIGHT FIXTURE
13. DECORATIVE METAL OR WOOD TRELLIS



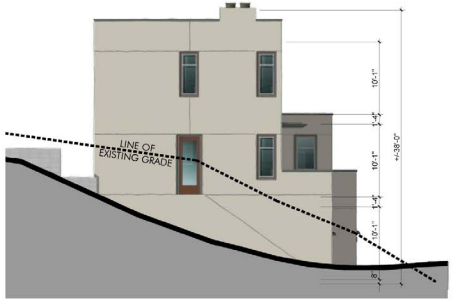
ROOF PLAN



RIGHT



BACK



LEFT

Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-14
Uphill Plan 2B – Elevations



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-15
Downhill Plan 1AR – Conceptual Perspective

COLOR AND MATERIAL SCHEME VARIES PER LOT
(SEE ARCHITECTURAL SITE FLOOR PLAN MATRIX)

SCHEME	BODY 1	BODY 2	TRIM	ACCENT 1	ACCENT 2	PORCELAIN TILE SIDING	CORONADO CONCRETE VENEER
5	SW 7628 Windfresh White		SW 6053 Reddened Earth	SW 6992 Inkwell		TERRACE Red Land Hill P531	1 x 8 x 16 Veneer

DETAILS

WAYNE DALTON GARAGE DOOR

16' Wide - 4 Panel w/ Satin Etched Privacy Glass, Clear Anodized Aluminum Frame

THERMA TRU ENTRY DOORS

FIBER GLASS ENTRY DOOR S81RCL



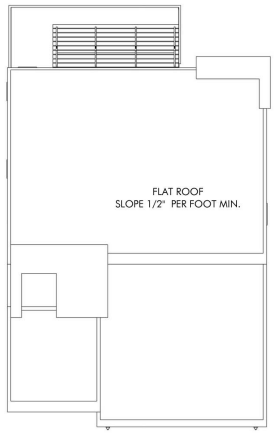
FRONT

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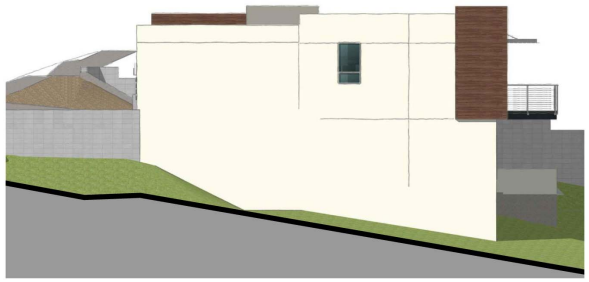
MATERIAL LEGEND

1	FLAT ROOFING 1/2" PER FOOT SLOPE MIN.
2	PARAPET
3	STUCCO FINISH
4	STUCCO FINISH TRIM SURROUND ON STUCCO
5	CEMENT FIBER BOARD SIDING
6	WOOD OR CEMENT FIBER BOARD TRIM SIDING
7	PORCELAIN TILE SIDING
8	CONCRETE VENEER (BLOCK LOOK)
9	METAL RAILING
10	VINYL WINDOW SYSTEM
11	METAL SECTIONAL GARAGE DOOR
12	DECORATIVE DOWNWARD DIRECTED LIGHT FIXTURE
13	DECORATIVE METAL TRELLIS

NOTE:
GRADING, REAR YARD, AND SIDE YARD STAIR CONDITIONS VARY PER LOT, SEE CIVIL DRAWINGS



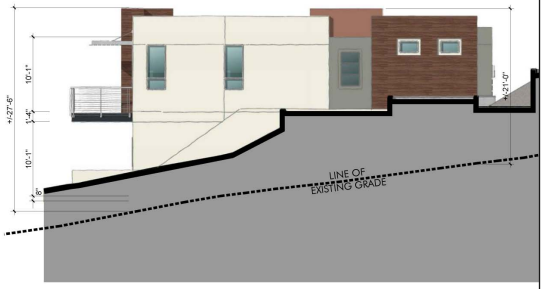
ROOF PLAN



RIGHT



BACK



LEFT

Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-16
Downhill Plan 1AR – Elevations



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-17
Downhill Plan 1B – Conceptual Perspective

COLOR AND MATERIAL SCHEME VARIES PER LOT
(SEE ARCHITECTURAL SITE FLOOR PLAN MATRIX)

SCHEME

	BODY 1	TRIM	ACCENT 1	ACCENT 2
7	SW 7008 Alabaster	SW 7038 Tony Taupe	SW 6186 Dried Thyme	SW 7624 Slate Tile

DETAILS

WAYNE DALTON GARAGE DOOR



40 Series - Double Car
Rough Sawn Plywood

THERMA TRU ENTRY DOORS



Fiber Glass Entry Door
CCR100

NOTE:
GRADING, REAR YARD, AND SIDE YARD STAIR CONDITIONS VARY PER LOT, SEE CIVIL DRAWINGS

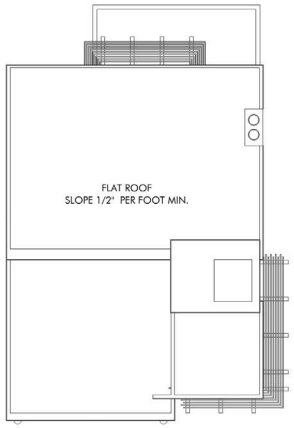


FRONT

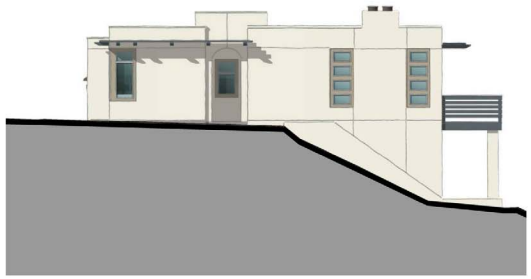
0 2 4 8

MATERIAL LEGEND

1. FLAT ROOFING 1/2" PER FOOT SLOPE MIN.
2. PARAPET
3. STUCCO FINISH
4. STUCCO FINISH TRIM SURROUND ON STUCCO
5. FLAT CONCRETE TILE ROOFING
6. WOOD FASCIA BOARD
7. WOOD RAFTER TAILS
8. WOOD OR METAL KICKER & OUTLOOKER
9. WOOD OR METAL RAILING
10. VINYL WINDOW SYSTEM
11. METAL SECTIONAL GARAGE DOOR
12. DECORATIVE DOWNWARD DIRECTED LIGHT FIXTURE
13. DECORATIVE METAL OR WOOD TRELLIS



ROOF PLAN



RIGHT



BACK



LEFT

Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-18
Downhill Plan 1B – Elevations



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-19
Downhill Plan 1CR – Conceptual Perspective

COLOR AND MATERIAL SCHEME VARIES PER LOT
(SEE ARCHITECTURAL SITE FLOOR PLAN MATRIX)

SCHEME

	BODY 1	BODY 2	TRIM	ACCENT 1	FIBER CEMENT SIDING
1	SW 7005 Pure White		SW 6170 Techno Gray	SW 6006 Black Bean	SW 6423 Ryegrass

DETAILS

WAYNE DALTON GARAGE DOOR

16' Wide - 4 Panel w/ Satin Etched Privacy Glass, Clear Anodized Aluminum Frame

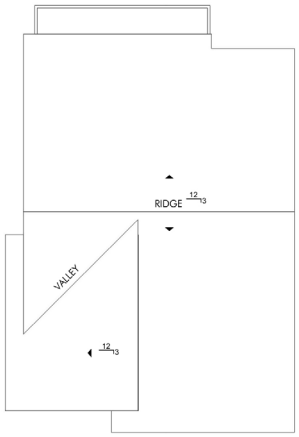
THERMA TRU ENTRY DOORS

FIBER GLASS ENTRY DOOR FCM83CL



MATERIAL LEGEND

1. FLAT ROOFING 1/2" PER FOOT SLOPE MIN.
2. PARAPET
3. STUCCO FINISH
4. STUCCO FINISH TRIM SURROUND ON STUCCO
5. FLAT CONCRETE TILE ROOFING
6. CEMENT FIBER BOARD SIDING
7. WOOD OR CEMENT FIBER BOARD TRIM ON SIDING
8. WOOD OR METAL KICKER & OUTLOOKER
9. WOOD OR METAL RAILING
10. VINYL WINDOW SYSTEM
11. METAL SECTIONAL GARAGE DOOR
12. DECORATIVE DOWNWARD DIRECTED LIGHT FIXTURE
13. DECORATIVE METAL TRELLIS
14. WOOD FASCIA BOARD
15. WOOD RAFTER TAILS

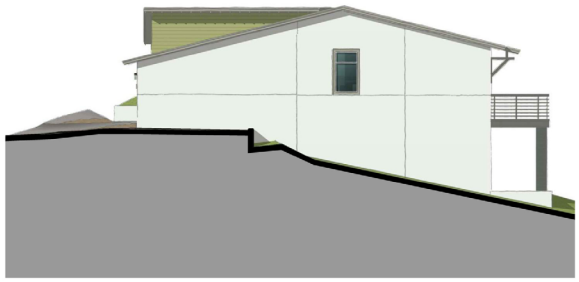


ROOF PLAN

NOTE:
GRADING, REAR YARD, AND SIDE YARD STAIR CONDITIONS VARY PER LOT, SEE CIVIL DRAWINGS

FRONT

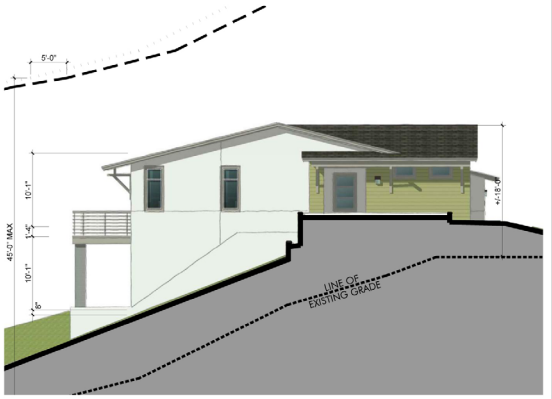
0 2 4 8



RIGHT



BACK



LEFT

Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-20
Downhill Plan 1CR – Elevations



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-21
Downhill Plan 2A – Conceptual Perspective

COLOR AND MATERIAL SCHEME VARIES PER LOT
(SEE ARCHITECTURAL SITE FLOOR PLAN MATRIX)

SCHEME

	BODY 1	BODY 2	TRIM	ACCENT 1	ACCENT 2	PORCELAIN TILE SIDING	CORONADO CONCRETE VENEER
3	SW 7002 Downy	SW 7040 Smoke House	SW 7048 Urbane Bronze	SW 6914 Eye Catching	SW 6062 Rugged Brown	FOREST PARK Timberland FP97	1 x 8 x 16 Veneer

DETAILS

WAYNE DALTON GARAGE DOOR

16' Wide - 4 Panel w/ Satin Etched Privacy Glass, Clear Anodized Aluminum Frame

THERMA TRU ENTRY DOORS

FIBER GLASS ENTRY DOOR FCH83CL

NOTE:
GRADING, REAR YARD, AND SIDE YARD STAIR CONDITIONS VARY PER LOT, SEE CIVIL DRAWINGS

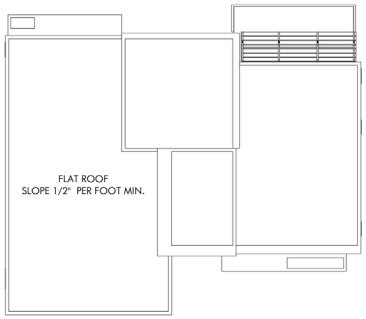


FRONT

0 2 4 8

MATERIAL LEGEND

1	FLAT ROOFING 1/2" PER FOOT SLOPE MIN.
2	PARAPET
3	STUCCO FINISH
4	STUCCO FINISH TRIM SURROUND ON STUCCO
5	CEMENT FIBER BOARD SIDING
6	WOOD OR CEMENT FIBER BOARD TRIM ON SIDING
7	PORCELAIN TILE SIDING
8	CONCRETE VENEER (BLOCK LOOK)
9	METAL RAILING
10	VINYL WINDOW SYSTEM
11	METAL SECTIONAL GARAGE DOOR
12	DECORATIVE DOWNWARD DIRECTED LIGHT FIXTURE
13	DECORATIVE METAL TRELLIS



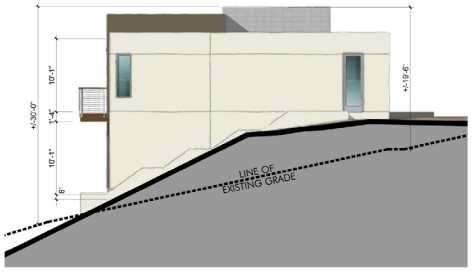
ROOF PLAN



RIGHT



BACK



LEFT

Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-22
Downhill Plan 2A – Elevations



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

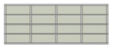
Figure 2-23
Downhill Plan 3A – Conceptual

COLOR AND MATERIAL SCHEME VARIES PER LOT
(SEE ARCHITECTURAL SITE FLOOR PLAN MATRIX)

SCHEME	BODY 1	BODY 2	TRIM	ACCENT 1	FIBER CEMENT SIDING
4	SW 7029 Agreeable Gray	SW 7628 Windfresh White	SW 7048 Urbane Bronze	SW 6353 Chivalry Copper	SW 6122 Camelback

DETAILS

WAYNE DALTON GARAGE DOOR



16' Wide - 4 Panel w/ Satin Etched Privacy Glass, Clear Anodized Aluminum Frame

THERMA TRU ENTRY DOORS

FIBER GLASS ENTRY DOOR SB1RCL

NOTE:
GRADING, REAR YARD, AND SIDE YARD STAIR CONDITIONS VARY PER LOT, SEE CIVIL DRAWINGS

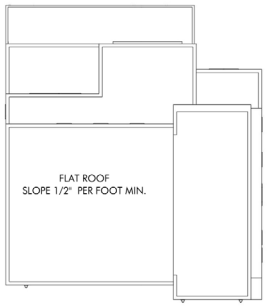


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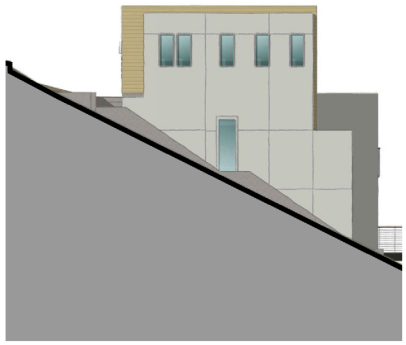
0 2 4 8

MATERIAL LEGEND

1 FLAT ROOFING 1/2" PER FOOT SLOPE MIN.
2 PARAPET
3 STUCCO FINISH
4 STUCCO FINISH TRIM SURROUND ON STUCCO
5 CEMENT FIBER BOARD SIDING
6 WOOD OR CEMENT FIBER BOARD TRIM ON SIDING
7 PORCELAIN TILE SIDING
8 CONCRETE VENEER (BLOCK LOOK)
9 METAL RAILING
10 VINYL WINDOW SYSTEM
11 METAL SECTIONAL GARAGE DOOR
12 DECORATIVE DOWNWARD DIRECTED LIGHT FIXTURE
13 DECORATIVE METAL TRELLIS



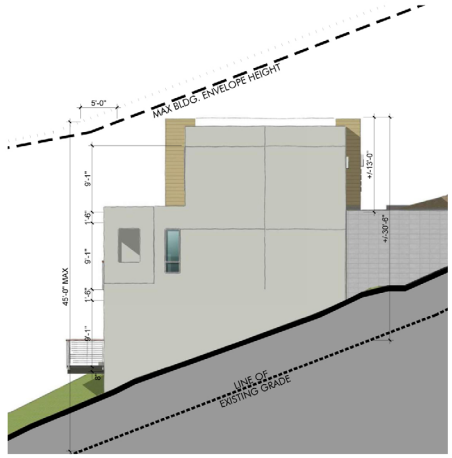
ROOF PLAN



RIGHT



BACK



LEFT

Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-24
Downhill Plan 3A – Elevations



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-25
Downhill Plan 3B – Conceptual Perspective

COLOR AND MATERIAL SCHEME VARIES PER LOT
(SEE ARCHITECTURAL SITE FLOOR PLAN MATRIX)

SCHEME

9

BODY 1	TRIM	ACCENT 1	ACCENT 2
SW 7003 Toque White	SW 6061 Tanbark	SW 6222 Riverway	SW 6166 Eclipse

DETAILS

WAYNE DALTON GARAGE DOOR

40 Series - Double Car
Rough Sawn Plywood

THERMA TRU ENTRY DOORS

Fiber Glass Entry Door
CCR100

NOTE:
GRADING, REAR YARD, AND SIDE YARD STAIR CONDITIONS VARY PER LOT, SEE CIVIL DRAWINGS

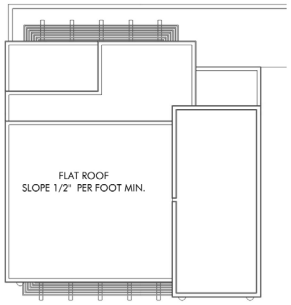


FRONT

0 2 4 8

MATERIAL LEGEND

1 FLAT ROOFING 1/2" PER FOOT SLOPE MIN.
2 PARAPET
3 STUCCO FINISH
4 STUCCO FINISH TRIM SURROUND ON STUCCO
5 FLAT CONCRETE TILE ROOFING
6 WOOD FASCIA BOARD
7 WOOD RAFTER TAILS
8 WOOD OR METAL KICKER & OUTLOOKER
9 WOOD OR METAL RAILING
10 VINYL WINDOW SYSTEM
11 METAL SECTIONAL GARAGE DOOR
12 DECORATIVE DOWNWARD DIRECTED LIGHT FIXTURE
13 DECORATIVE METAL OR WOOD TRELLIS



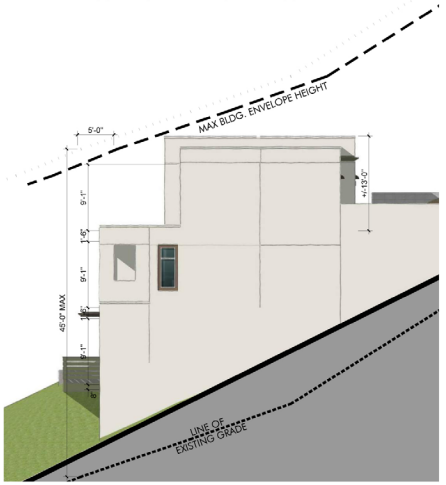
ROOF PLAN



RIGHT



BACK

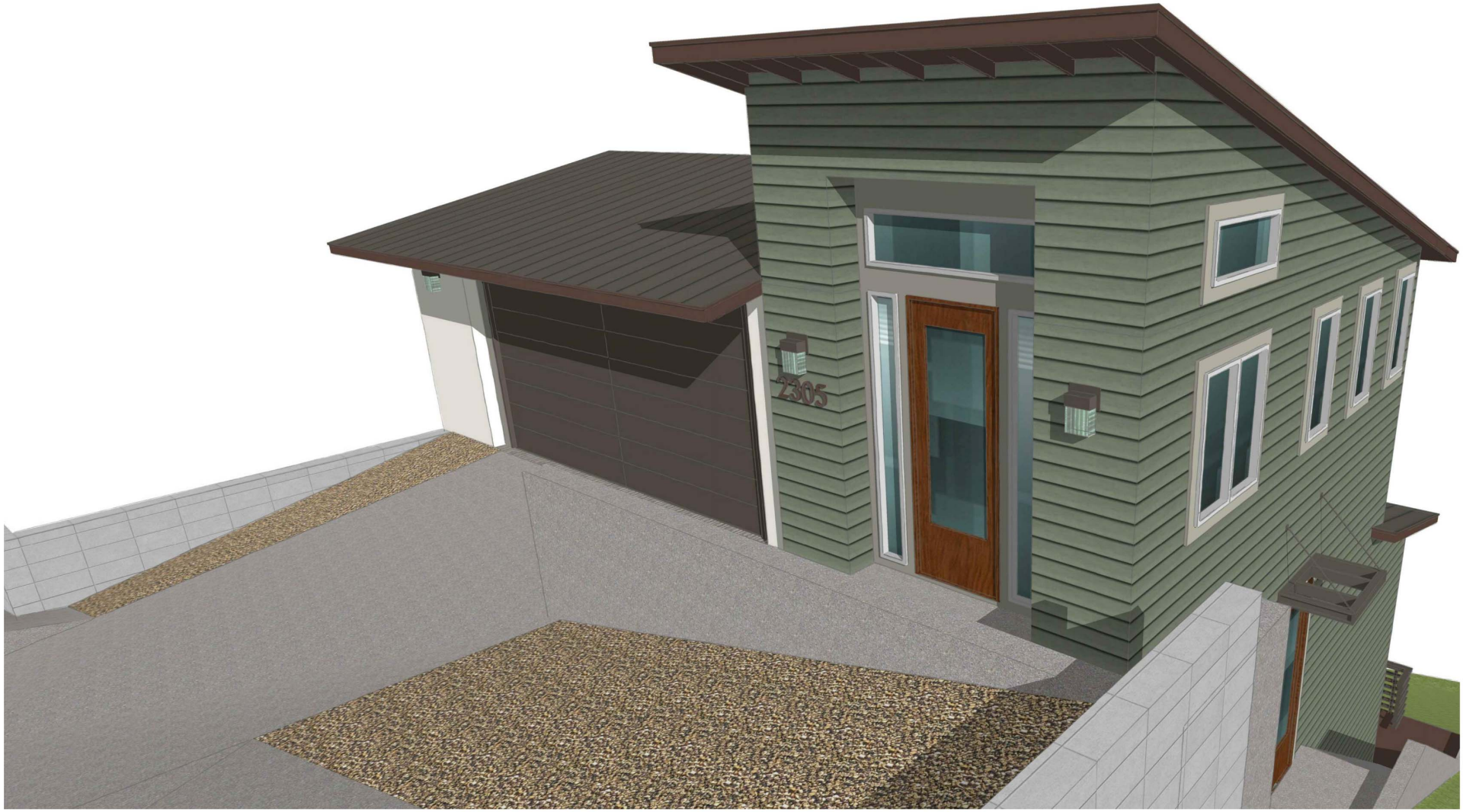


LEFT

Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-26
Downhill Plan 3B – Elevations



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-27
Downhill Plan 3C – Conceptual Perspective

COLOR AND MATERIAL SCHEME VARIES PER LOT
(SEE ARCHITECTURAL SITE FLOOR PLAN MATRIX)

SCHEME

	BODY 1	TRIM 1	TRIM 2	ACCENT	SIDING	FIBER CEMENT SIDING
11	SW 7003 Toque White	SW 7045 Intellectual Gray	SW 6082 Cobble Brown	SW 7048 Urbane Bronze	SW 6186 Dried Thyme	Smooth Hardie Plank Lap Siding

DETAILS

WAYNE DALTON GARAGE DOOR

40 Series - Double Car
Rough Sawn Plywood

THERMA TRU ENTRY DOORS

FIBER GLASS ENTRY DOOR
FCM81200
(Color per elevation style)

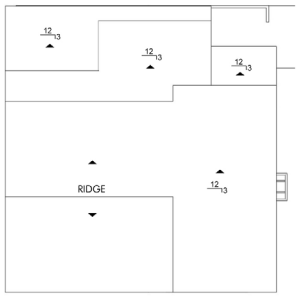
NOTE:
GRADING, REAR YARD, AND SIDE YARD STAIR CONDITIONS VARY PER LOT, SEE CIVIL DRAWINGS



FRONT

MATERIAL LEGEND

1	FLAT ROOFING 1/2" PER FOOT SLOPE MIN.
2	PARAPET
3	STUCCO FINISH
4	STUCCO FINISH TRIM SURROUND ON STUCCO
5	FLAT CONCRETE TILE ROOFING
6	CEMENT FIBER BOARD SIDING
7	WOOD OR CEMENT FIBER BOARD TRIM ON SIDING
8	WOOD OR METAL KICKER & OUTLOOKER
9	WOOD OR METAL RAILING
10	VINYL WINDOW SYSTEM
11	METAL SECTIONAL GARAGE DOOR
12	DECORATIVE DOWNWARD DIRECTED LIGHT FIXTURE
13	DECORATIVE METAL TRELLIS
14	WOOD FASCIA BOARD
15	WOOD RAFTER TAILS



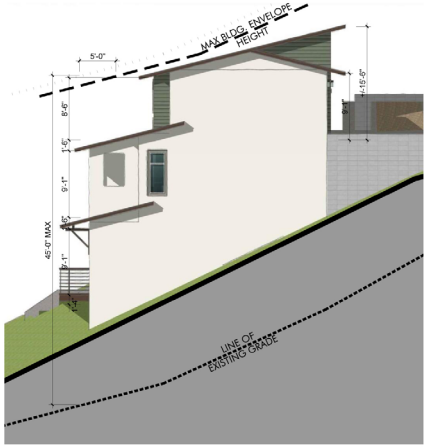
ROOF PLAN



RIGHT



BACK



LEFT

Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 2-28
Downhill Plan 3C – Elevations

3. ENVIRONMENTAL SETTING

OVERVIEW OF ENVIRONMENTAL SETTING

Regional Setting

The Project site is located within the Northeast Los Angeles Community Plan, within the Glassell Park neighborhood, which is in many respects a complex corridor linking Cypress Park, Mt. Washington, Atwater Village, Highland Park, and Eagle Rock. It is primarily a residential and commercial area, with some industrial activity, located generally east of San Fernando Road along an axis formed by Eagle Rock Boulevard between Division Street and York Boulevard. Outlying neighborhoods extend up the northern slopes of Mt. Washington, along the Fletcher Drive corridor between San Fernando Road and Eagle Rock Boulevard, and in the Verdugo Road corridor between Eagle Rock Boulevard and the City of Glendale.

The Project site is located in a hillside area on Haverhill Drive, Haverhill Way, and Brilliant Drive and is bound by existing single-family development to the north, east, and west and undeveloped area to the south/southeast. Elevations on the Project site vary from approximately 680 feet above sea level (asl) to approximately 740 asl. Views of the Project site are shown on Figures 3-1 and 3-2.

Regional and Local Access

Regional access to the Project site is provided via State Route 2 (Glendale Freeway) approximately 1.0 mile to the northwest, State Route 134 (Ventura Freeway) approximately 2.0 miles to the north, and Interstate 5 (San Diego Freeway) approximately 1.6 miles to the southwest. Local access is provided via Division Street and Cazador Street.

Surrounding Uses

The Project site is surrounded to the north, east, and west with single-family development. The area to the south/southeast is undeveloped. Other land uses in the Project area include commercial/retail land uses along Eagle Rock Boulevard approximately 1.0 mile north and west of the Project site and the Glassell Park Recreation Center and Youth Center on Verdugo Road approximately 0.75 mile northwest of the Project site. Views of the areas surrounding the Project site are shown on Figures 3-3 and 3-4. A map of the commercial/institutional land uses in the area is provided in Figure 3-5.

Sensitive Receptors

Sensitive receptors in the vicinity of the Project site include the following:

- Single family homes on Haverhill Drive, directly north of the Project site, with homes as close as 5 feet to the Project site.

- Single family homes on Sundown Drive, directly northwest of the Project site, with homes as close as 20 feet to the Project site.

- Single family homes on Division Street, directly east of the Project site, with homes as close as 20 feet to the Project site.

- Single family homes on Cazador Street and Loveland Drive, directly west of the Project site, with homes as close as 20 feet to the Project site.

RELATED PROJECTS

Section 15130 of the State CEQA Guidelines requires that an EIR consider the significant environmental effects of a proposed project as well as the project's "cumulative impacts." CEQA defines a cumulative impact as an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts (State CEQA Guidelines Section 15355). As stated in State CEQA Guidelines Section 15130(a)(1), the cumulative impacts discussion in an EIR need not discuss impacts that do not result in part from the project evaluated in the EIR. Cumulative impacts may be analyzed by considering a list of past, present, and probable future projects producing related or cumulative impacts (State CEQA Guidelines Section 15130(b)(1)(A)).

All projects that are proposed (i.e., with pending applications), recently approved, under construction, or reasonably foreseeable that could contribute to a cumulative impact on the local environment when considered in conjunction with the proposed project are included in an EIR. These projects can include, if necessary, projects outside of the control of the lead agency. If a concise list of related projects is not available, cumulative impacts may be analyzed using the regional or area-wide growth projections contained in an adopted or certified general plan or related planning document. The analysis includes both related projects and cumulative impacts (which takes into account ambient growth per the traffic study).

In this Draft EIR, cumulative impact analyses are provided for each environmental issue discussed in Section 4, Environmental Impact Analysis, and can be found in each respective subsection (e.g., Air Quality, Transportation/Traffic, etc.).

The list of Related Projects is based on information provided by the Department of City Planning and the Los Angeles Department of Transportation (LADOT) although the buildout years of many of these Related Projects are uncertain and may be well beyond the buildout year of the Project, and notwithstanding that some may never be approved or developed. Table 3-1, Related Projects List, provides the related projects that were considered in each cumulative impact analysis. The locations of the related projects are depicted in Figure 3-6, Related Projects Map.

Table 3-1
Related Projects

No.	Location	Land Use	Size
1	5708 E Marmion Way (Highland Park Transit Village)	Apartment Condominium	60 units 25 units
2	1555 N San Fernando Road (Taylor Yard Village)	Apartment Condominium Retail Senior Apartment	64 units 290 units 25,000 sf 100 units
3	3000 N Verdugo Road (LAUSD EEC & Affordable Housing)	Classroom (seat) Apartment	7 rooms (175) 45 units
4	1600 Campus Road (Occidental College Master Plan)	Students Single-Family Apartment	250 students 5 units 35 units
5	1801 W Blake Avenue (Blake Ave Riverfront)	Residential Retail/Restaurant	142 units 9,658 sf
6	1901 W Blake Avenue	Apartment	49 units
Table: CAJA Environmental Services, 2016.			



View 1



View 2



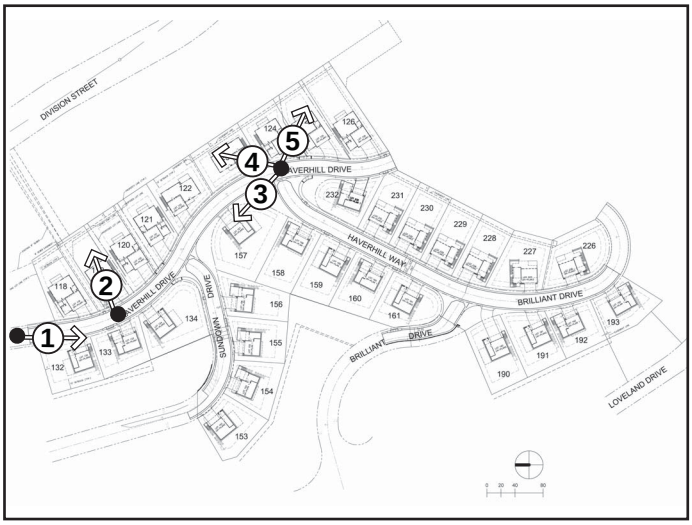
View 3



View 4



View 5



View Location Map

Source: CAJA Environmental Services, LLC, 2016.

CAJA Environmental Services, LLC

Figure 3-1
Views of the Project Site, Views 1-5



View 6



View 7



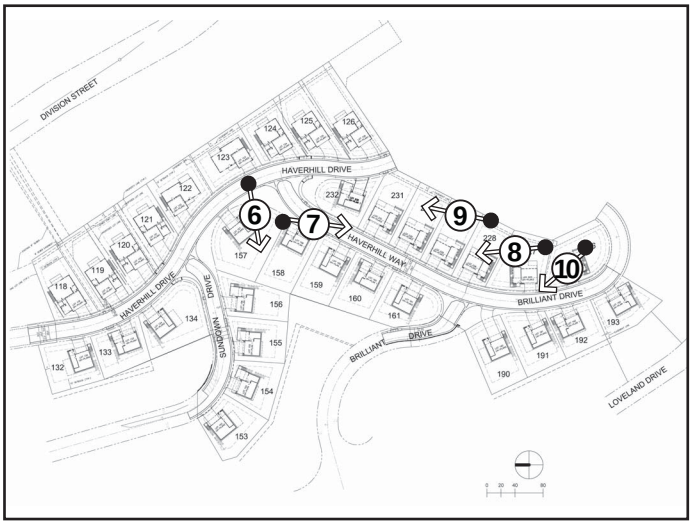
View 8



View 9



View 10



View Location Map

Source: CAJA Environmental Services, LLC, 2016.

CAJA Environmental Services, LLC

Figure 3-2
Views of the Project Site, Views 6-10



View 1



View 2



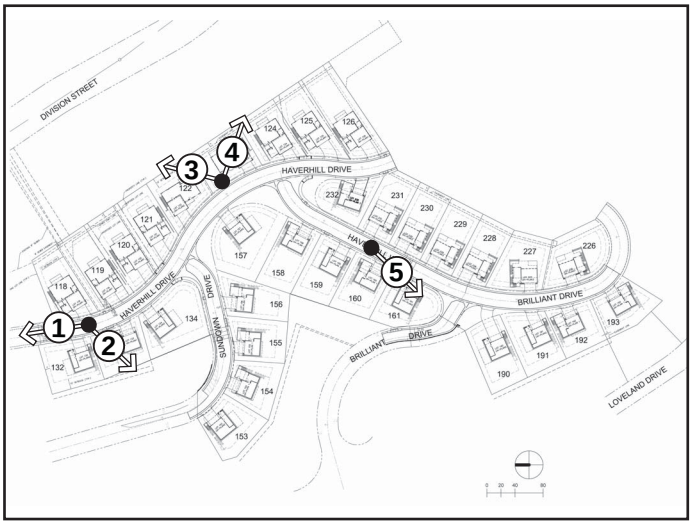
View 3



View 4



View 5



View Location Map

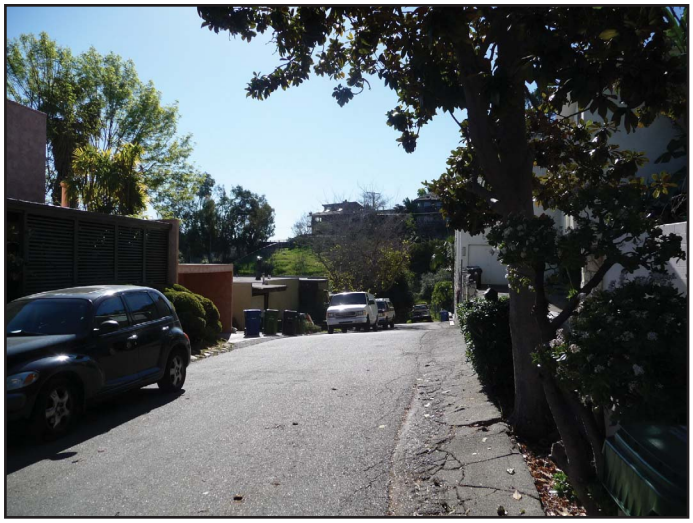
Source: CAJA Environmental Services, LLC, 2016.

CAJA Environmental Services, LLC

Figure 3-3
Views of Surrounding Uses, Views 1-5



View 6



View 7



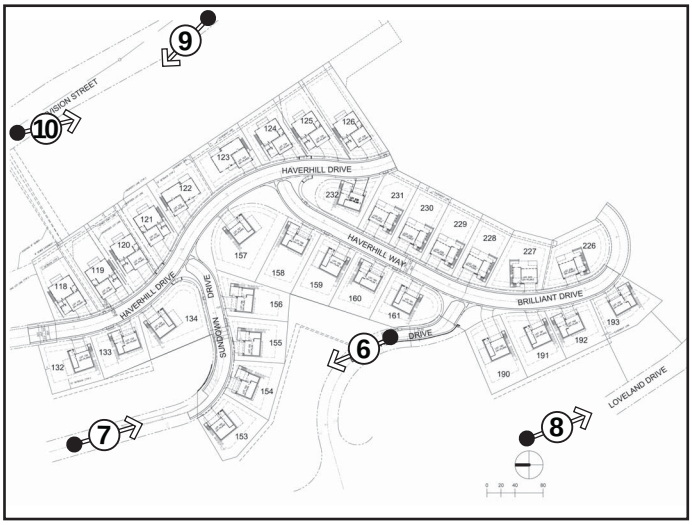
View 8



View 9



View 10

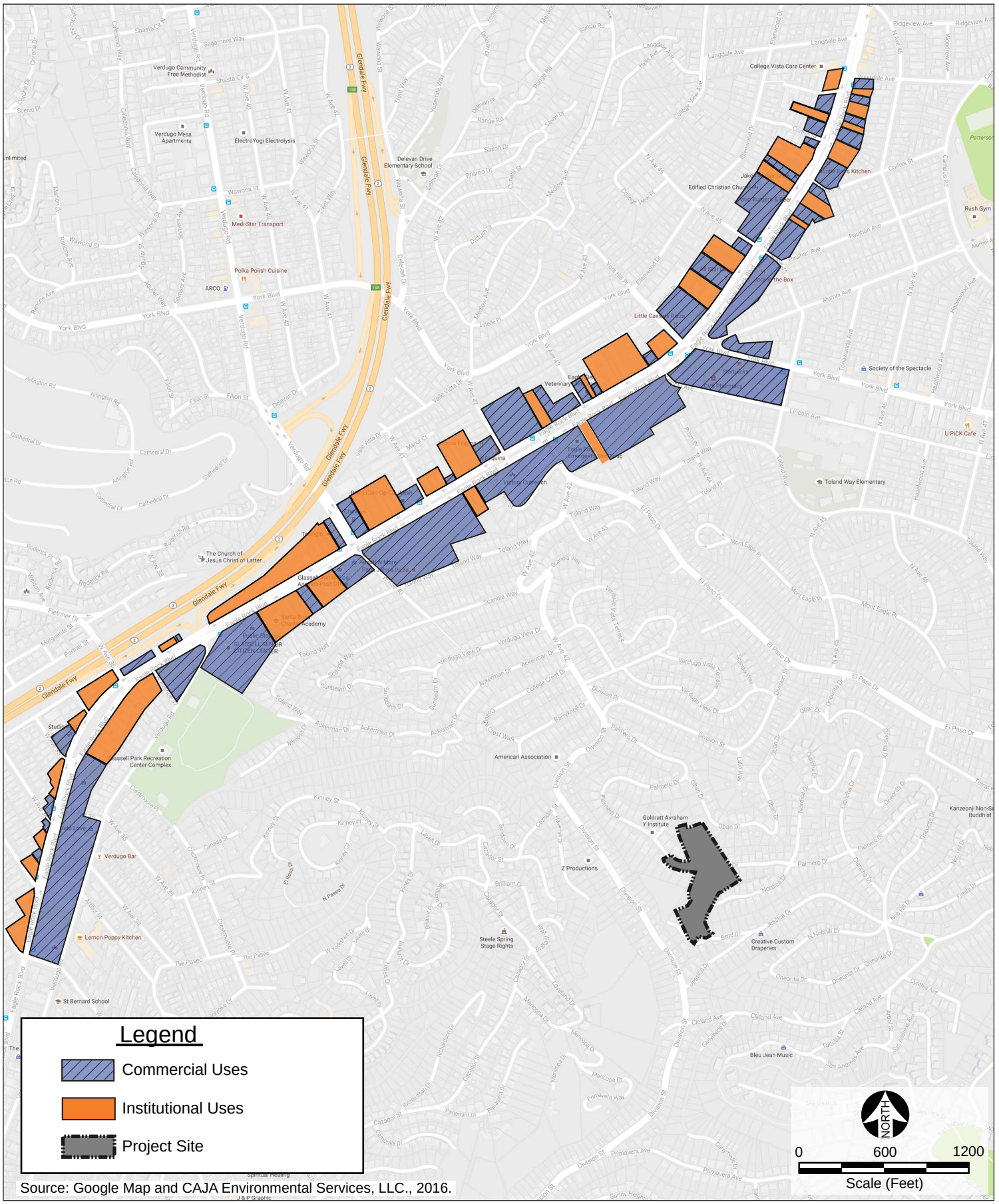


View Location Map

Source: CAJA Environmental Services, LLC, 2016.

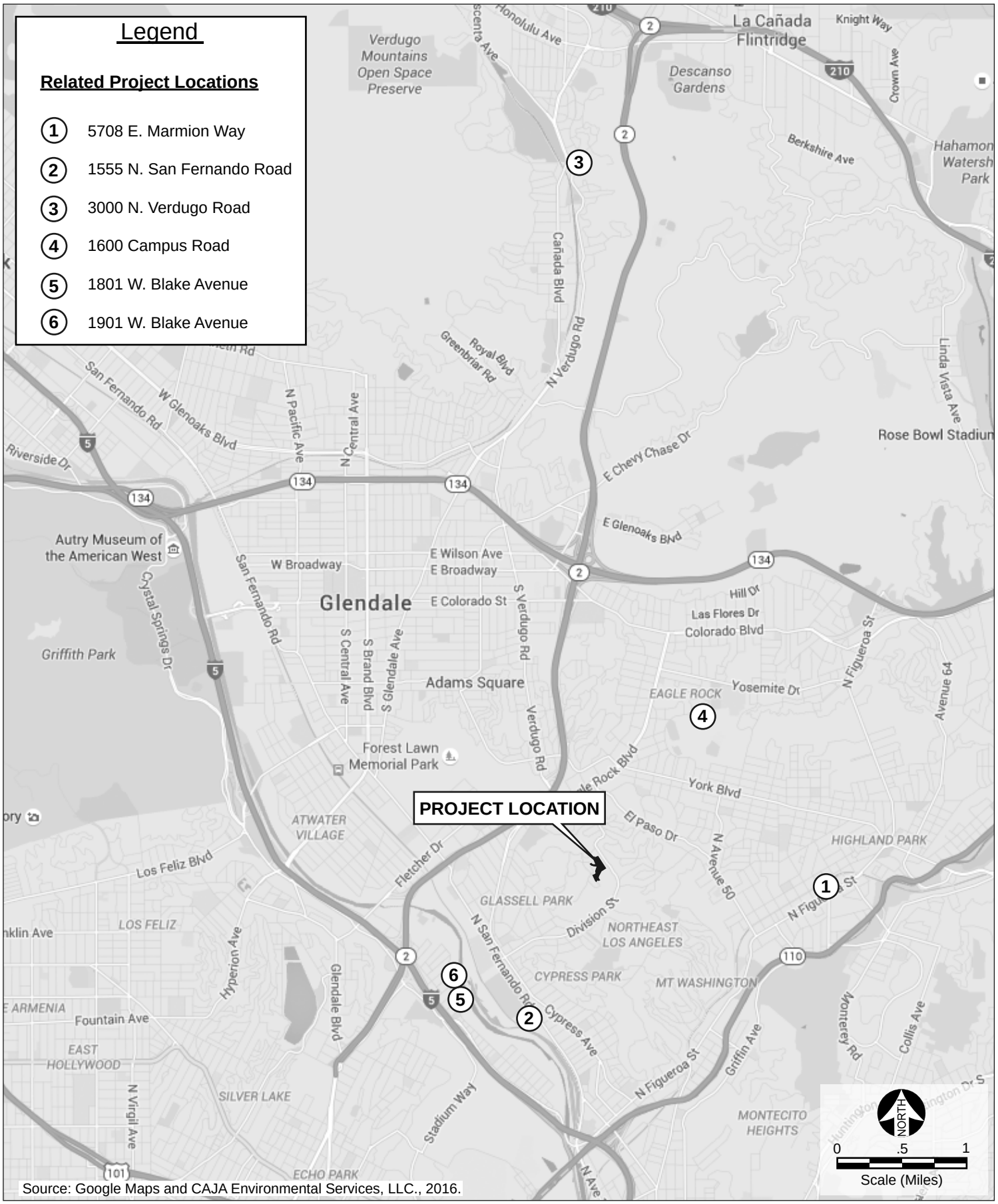
CAJA Environmental Services, LLC

Figure 3-4
Views of Surrounding Uses, Views 6-10



CAJA Environmental Services, LLC

Figure 3-5
Surrounding Commercial/Institutional Uses



Source: Google Maps and CAJA Environmental Services, LLC., 2016.

CAJA Environmental Services, LLC

Figure 3-6
Related Projects Map

4. ENVIRONMENTAL IMPACT ANALYSIS
A. IMPACTS FOUND TO BE LESS THAN SIGNIFICANT

INTRODUCTION

Section 15128 of the CEQA Guidelines states the following:

> *An EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR.*

Based on the information included in the Initial Study (referred to Appendix A) and additional information included below, implementation of the Project would not result in significant impacts related to the environmental impact topics listed below, and therefore, additional analysis of these topics is not included in Section 4 of this EIR. (However, certain aspects of the impact areas identified in this section were determined to be potentially significant and are discussed further in Sections 4.B through 4.K. of this EIR.)

IMPACTS FOUND TO BE LESS THAN SIGNIFICANT

Agriculture and Forestry Resources

The Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. The Extent of Important Farmland Map Coverage maintained by the Division of Land Protection indicates that the Project site is not included in the Important Farmland category.[1] Therefore, the Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, and no impact would occur.

The Project would not conflict with existing zoning for agricultural use, or a Williamson Act Contract. The Project site is not zoned for agricultural use, and the site is not under a Williamson Act Contract.[2] Thus, the Project would not conflict with existing zoning for agricultural use, or a Williamson Act Contract. Therefore, no impacts related to this issue would occur.

The Project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104 [g]).

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[1] *State of California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, Los Angeles County Important Farmland, 1998.*

[2] *Ibid.*

The Project site is not zoned as forest land or timberland. Therefore, no impacts related to this issue would occur.

The Project would not result in the loss of forest land or conversion of forest land to non-forest use. The Project site does not contain any forest land. Therefore, no impacts related to this issue would occur.

The Project would not involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland, to non-agricultural use. The Project site and surrounding area are within an urban environment. No agricultural uses are located on the Project site or within the area. Therefore, no impacts related to this issue would occur.

Cumulative Impacts

Development of the Project in combination with the related projects would not result in the conversion of State-designated agricultural land from agricultural use to a non-agricultural use. The Extent of Important Farmland Map Coverage maintained by the Division of Land Protection indicates that the Project site and the surrounding area are not included in the Important Farmland category.[3] The Project site and related project sites are located in an urban environment and do not include any State-designated agricultural lands. Therefore, no cumulative impact would occur.

Air Quality

The Project would not create objectionable odors affecting a substantial number of people. The Project includes development of typical residential land uses on the Project site and would not generate any odors. Therefore, the Project would not create objectionable odors affecting a substantial number of people.

Project impacts related to other air quality issues and cumulative impacts are discussed in Section 4.C (Air Quality).

Biological Resources

The Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The Project site is not subject to a Habitat Conservation Plan, a Natural Community Conservation Plan, or other such plan. Therefore, the Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, and no impacts related to this issue would occur.

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[3] *Ibid.*

Project impacts related to other biological resources issues and cumulative impacts are discussed in Section 4.D (Biological Resources).

Cultural Resources

The Project would not cause a substantial adverse change in the significance of a historical resource as defined in §15064.5. *State CEQA Guidelines* Section 15064.5 defines an historical resource as: 1) a resource listed in or determined to be eligible by the State Historical Resources Commission for listing in the California Register of Historical Resources; 2) a resource listed in a local register of historical resources or identified as significant in a historical resource survey meeting certain state guidelines; or 3) an object, building, structure, site, area, place, record or manuscript which a lead agency determines to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided that the lead agency's determination is supported by substantial evidence in light of the whole record. A project-related significant adverse effect would occur if a project were to adversely affect a historical resource meeting one of the above definitions. No historic structures are located on the Project site. Thus, the Project would not cause a substantial adverse change in the significance of a historical resource as defined in §15064.5. Therefore, no impacts related to historical resources would occur as a result of the Project.

Project impacts related to other cultural resources issues and cumulative impacts are discussed in Section 4.E (Cultural Resources).

Geology and Soils

The Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42. The Project site is not located within an Alquist-Priolo Earthquake Fault Zone, and no known faults exist on the Project site.[4] Thus, the Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault on the Project site. Therefore, no significant impacts related to this issue would occur.

The Project would not be located on expansive soil, as identified on Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property. According to SASSAN Geosciences, Inc., the

[4] *ZIMAS, City of Los Angeles, February 9, 2015.*

topsoil at the Project site is classified as medium to high expansive.[5] However, the Project Applicant would be required by the City to design and construct the Project in conformance to the most recently adopted Building Code and applicable recommendations made in the Geotechnical Report. Conformance with the City's current Building Code requirements would ensure that no significant impacts related to expansive soil would occur as a result of the Project. Therefore, Project impacts related to expansive soils would be less than significant.

The Project would not be developed on a site with soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. The Project would connect to the City's existing sewer system and would not require the use of septic tanks or alternative wastewater disposal systems. Thus, the Project would not result in any impacts related to soils that are incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. Therefore, no impacts related to this issue would occur.

Project impacts related to other geology and soils issues and cumulative impacts are discussed in Section 4.F (Geology and Soils).

Hazards and Hazardous Materials

The Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The Project, which includes development of 32 single-family residential units, would not require routine transport, use, or disposal of hazardous materials. Thus, the Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, impacts related to this issue would be less than significant.

The Project would not create significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. The Project site has never been developed and as such, no hazardous materials associated with human activity exist at the Project site that could be exposed during the Project's construction period. Additionally, the Project site is not within a methane hazard zone as delineated by the City.[6] Thus, the Project would not create significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, impacts related to this issue would be less than significant.

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[5] *Preliminary Geotechnical Engineering and Engineering Geology Investigation, SASSAN Geosciences, Inc., March 20, 2015 (refer to Appendix A).*

[6] *City of Los Angeles, ZIMAS, February 9, 2015 (refer to Appendix A).*

The Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The Project includes development of 32 multi-family residential units and would not require routine transport, use, or disposal of hazardous materials. Thus, the Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Therefore, impacts related to this issue would be less than significant.

The Project would not 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. The Project site is not included on any list compiled pursuant to Government Code Section 65962.5, which includes sites such as waste facilities subject to corrective action, land designated as hazardous waste property, and sites with leaking underground storage tanks. Thus, the Project would not create a significant hazard to the public or the environment as a result of being listed on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, no impacts related to this issue would occur.

The Project would not be developed on a site 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, and would not result in a safety hazard for people residing or working in the Project area. The Project site is not located within two miles of a public airport. The closest airport is the Bob Hope Airport located approximately 12.7 miles northwest of the Project site. Thus, the Project would not result in a safety hazard associated with an airport for people residing or working in the Project area. Therefore, no impacts related to this issue would occur.

The Project would not be developed on a site located within the vicinity of a private airstrip, and would not result in a safety hazard for people residing or working in the Project area. The Project site is not located within the vicinity of a private airstrip. The closest airport is the Bob Hope Airport located approximately 12.7 miles northwest of the Project site. Thus, the Project would not result in a safety hazard associated with an airport for people residing or working in the Project area. Therefore, no impacts related to this issue would occur.

The Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No aspects of the Project would inhibit access to hospitals, emergency response centers, school locations, communication facilities, highways and bridges, or airports. Further, the Project would comply with all applicable City policies related to disaster preparedness and emergency response. Thus, impacts related to this issue would be less than significant.

The Project would not 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. According to ZIMAS, the Project is located within a Very High Fire Hazard Severity Zone. The Project would be required to be designed and constructed in accordance with the Los

Angeles Fire Code and would be required to incorporate measures, including but not limited the following:

- Ignition-resistant roofing and other building materials
- Fire-Retardant-Treated Wood or noncombustible materials
- Roof coverings, valleys, and gutters
- Attic ventilation
- Eave or cornice vents
- Sprinkler systems
- Landscaping with fire-retardant plants
- Vegetation clearance

Additionally, prior to issuance of an Occupancy Permit, the Project Applicant would be required to coordinate with Los Angeles Fire Department (LAFD) to ensure that the Project incorporates all appropriate fire-prevention measures. Through compliance with the LAFD's requirements, no significant impacts related to wildland fires would occur as a result of the Project.

Cumulative Impacts

As discussed above, development of the Project would not result in the release of hazardous materials into the environment. However, development of the related projects could have the potential to increase the release of hazardous materials into the environment. With respect to the presence of hazardous substances associated with the related projects, each related project would be evaluated for potential threats to public safety. This would occur for each individual related project, in conjunction with development proposals on those properties. As for the Project, any related project located in a Very High Fire Hazard Severity Zone would be designed and constructed in accordance with the Fire Code to ensure the inclusion of appropriate fire prevention measures. Further, each related project would be subject to the same local, regional, state, and federal regulations pertaining to hazards and hazardous materials Therefore, cumulative impacts would be less than significant.

Hydrology and Water Quality

The Project would not violate any water quality standards or waste discharge requirements. The Project includes development of 32 single-family residential homes and would not have any point-source discharges. Therefore, the Project would have a less than significant impact on water quality standards or waste discharge and would not violate any water quality standards or waste discharge requirements.

The Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted). The Project site and the surrounding area consist largely of hillside areas. Based on the geotechnical investigation prepared for the Project, groundwater was not encountered during exploration in borings drilled to 18 feet (refer to Appendix E of this Draft EIR). Additionally, the Project site is underlain by bedrock of the Monterey Formation, which strikes northwesterly in the southern portion the Project site and dips at moderate to steep angles (32 to 61 degrees) to the southwest. In the northern portion of the Project site, bedding generally strikes northwesterly and dips steeply to the northeast. The bedrock at the Project site is overlain with approximately 15 feet of undocumented fill. During a storm event, some stormwater may seep into the soils at the site, but given the depth of soil, bedrock, and hillside terrain, most of the stormwater does not reach groundwater levels at the Project site. As such, the Project site is not a source of groundwater recharge. Under the Project, this condition would remain unaltered. Additionally, all water consumption associated with the Project would be supplied by the Los Angeles Department of Water and Power (LADWP) and not from groundwater beneath the Project site. Finally, the Project site is not located within an aquifer area.[7] Thus, the Project would have no effect on groundwater supplies or recharge, and impacts related to this issue would be less than significant.

The Project would not 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. During the Project's construction phase, the Project developer would be required to implement South Coast Air Quality Management District (SCAQMD) Rule 403 – Fugitive Dust to minimize wind and water-borne erosion at the site. Also, the Project developer would be required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP), in accordance with the National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water Associated with Construction Activity and Land Disturbance Activities. The site-specific SWPPP would be prepared prior to earthwork activities and would be implemented during Project construction. The SWPPP would include Best Management Practices (BMP)s and erosion control measures to prevent pollution in storm water discharge. Typical BMPs that could be used during construction include good-housekeeping practices (e.g., street sweeping, proper waste disposal, vehicle and equipment maintenance, concrete washout area, materials storage, minimization of hazardous materials, proper handling and storage of hazardous materials, etc.) and erosion/sediment control measures (e.g., silt fences, fiber rolls, gravel bags, storm water inlet protection, and soil stabilization measures, etc.). The SWPPP would be subject to review and approval by the City for compliance with the City's Development Best Management Practices Handbook, Part A, Construction Activities. Additionally, all Project construction

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[7] *USGS Groundwater Watch, website: http://groundwaterwatch.usgs.gov/NetMapT6L2.asp?ncd=CCB&sc=06&cc=037, accessed March 15, 2016.*

activities would comply with the City's grading permit regulations, which require the implementation of grading and dust control measures, including a wet weather erosion control plan if construction occurs during rainy season, as well as inspections to ensure that sedimentation and erosion is minimized. Through compliance with these existing regulations, the Project would not result in any significant impacts related to soil erosion and siltation during the construction phase. Additionally, during the Project's operational phase, most of the Project site would be developed with impervious surface, and all stormwater flows would be directed to storm drainage features and would not come into contact with bare soil surfaces. Thus, no significant impacts related to erosion and siltation would occur as a result of Project operation.

The Project would not otherwise substantially degrade water quality. To address water quality during the Project's construction phase, the Project Applicant would be required to prepare and implement a SWPPP, in accordance with the NPDES General Permit for Discharges of Storm Water Associated with Construction Activity and Land Disturbance Activities. The site-specific SWPPP would be prepared prior to earthwork activities and would be implemented during Project construction. The SWPPP would include BMPs and erosion control measures to prevent pollution in storm water discharge. Typical BMPs that could be used during construction include good-housekeeping practices (e.g., street sweeping, proper waste disposal, vehicle and equipment maintenance, concrete washout area, materials storage, minimization of hazardous materials, proper handling and storage of hazardous materials, etc.) and erosion/sediment control measures (e.g., silt fences, fiber rolls, gravel bags, storm water inlet protection, and soil stabilization measures, etc.). The SWPPP would be subject to review and approval by the City for compliance with the City's Development Best Management Practices Handbook, Part A, Construction Activities. Additionally, all Project construction activities would comply with the City's grading permit regulations, which require the implementation of grading and dust control measures, including a wet weather erosion control plan if construction occurs during rainy season, as well as inspections to ensure that sedimentation and erosion is minimized. Therefore, through compliance with NPDES requirements and City grading regulations, Project construction impacts related to water quality would be less than significant.

During the Project's construction phase, in accordance with the City's Low Impact Development (LID) Ordinance, the Project Applicant would be required to incorporate appropriate stormwater pollution control measures into the design plans and submit these plans to the City's Department of Public Works, Bureau of Sanitation, Watershed Protection Division (WPD) for review and approval. Upon satisfaction that all stormwater requirements have been met, WPD staff would stamp the plan approved. Through compliance with the City's LID Ordinance, the Project would meet the City's water quality standards. Therefore, Project impacts related to operational water quality would be less than significant.

The Project would not 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. The Project site

is not located within a 100-year flood hazard area.[8] Thus, the Project would not 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. Therefore, no impacts related to this issue would occur.

The Project would not place within a 100-year flood hazard area structures which would impede or redirect flood flows. The Project site is not located within a 100-year flood hazard area.[9] Thus, the Project would not place within a 100-year flood hazard area structures that would impede or redirect flood flows. Therefore, no impacts related to this issue would occur.

The Project would not 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. The Project site is not located in any area susceptible to floods associated with a levee or dam. Therefore, the Project would not 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, and no impacts related to this issue would occur.

The Project would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow. The Project site is not in an area susceptible to seiches, tsunamis, or mudflows. Therefore, the Project would not expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow, and no impacts related to this issue would occur.

Project impacts related to other hydrology issues and cumulative impacts are discussed in Section 4.H (Hydrology and Water Quality).

Land Use and Planning

The Project would not physically divide an established community. The Project site is located in a hillside area surrounded by existing single-family development to the north, east, and west, and undeveloped area to the south/southeast. Other land uses in the Project area include commercial/retail land uses along Eagle Rock Boulevard approximately 1.0 mile north and west of the Project site and the Glassell Park Recreation Center and Youth Center on Verdugo Road approximately 0.75 mile northwest of the Project site. Given the fact that the Project site is largely surrounded by existing development, the Project would not physically divide an established community. Therefore, no impacts related to this issue would occur.

The Project would not conflict with any applicable habitat conservation plan or natural community conservation plan. The Project site is not subject to any applicable habitat conservation plan or natural community conservation plan. Therefore, the Project would not conflict with any applicable habitat

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8 *Ibid.*

9 *Ibid.*

conservation plan or natural community conservation plan, and no impacts related to this issue would occur.

Project impacts related to other land use and planning issues and cumulative impacts are discussed in Section 4.I (Land Use and Planning).

Mineral Resources

The Project would not 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. There are no known mineral resources on the Project site or in the vicinity. Thus, the Project would not 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. Therefore, no impacts related to issue would occur.

The Project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. The Project site is not identified as a mineral resource recovery site. Thus, the Project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Therefore, no impacts related to issue would occur.

Cumulative Impacts

Development of the Project in conjunction with the related projects would result in the further infilling of uses in an already urban area. No oil extraction or mineral extraction activities are presently conducted on the Project site or any of the related project sites and neither the Project site nor the related project sites are identified as mineral resource recovery sites. As such, no cumulative impact would occur.

Noise

The Project would not be developed on a site that is 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, and the Project would not expose people residing or working in the project area to excessive noise levels. The Project site is not located within an airport land use plan or within two miles of a public airport or public use airport. Therefore, the Project would not expose people residing or working in the Project area to excessive noise levels, and no impact would occur.

The Project would not be developed on a site that is located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels. The Project site is not located in the vicinity of a private airstrip. Therefore, the Project would not expose people residing or working in the Project area to excessive noise levels, and no impact would occur.

Project impacts related to other noise issues and cumulative impacts are discussed in Section 4.J (Noise).

Population and Housing

The Project would not 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). The Project includes development 32 single-family residential homes consistent with the approved tract on a site that is zoned and designated by the City for such development. Based on the 2015 persons-per-household rate (2.74) for the City, the Project would generate approximately 88 residents.[10] The Project does not propose additional housing units (and associated population) beyond what is permitted under the existing base land use designation and zoning. While the Project includes the extension of the existing roadways Haverhill Drive and Brilliant Drive in order to serve the Project, the extended roads would serve only the Project Site and would not promote offsite development or induce substantial population growth in the area. Thus, the Project's residential population would not represent a substantial or significant growth as compared to projected growth. Therefore, no significant impacts related to population and housing would occur as a result of the Project.

The Project would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere. No housing exists on the Project site. Therefore, the Project would not displace any existing housing, necessitating the construction of replacement housing elsewhere.

The Project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. The Project site is vacant, and no people live on the Project site. Therefore, the Project would not displace any residents, necessitating the construction of replacement housing elsewhere, and no impact would occur.

Cumulative Impacts

The related projects would develop approximately 815 residential units. Based on the 2015 persons per household rate (2.74) for the City, the related projects would generate approximately 2,233 residents. Combined with the Project, the total cumulative residential population would be approximately 2,321 residents. While this analysis conservatively assumes that all residents generated by the Project and related projects would be new to the City, it is very likely that at least some of the residents already live in the Project area or City of Los Angeles and therefore do not represent population growth. According to the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) prepared by the Southern California Association of Governments (SCAG), the City of Los Angeles had an estimated population of 3,845,500 in 2012 and the population is expected to increase to 4,609,400 by 2040 (an

[10] *As of January 1, 2015, Department of Finance: http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php.*

increase of 763,900 residents).[11] The cumulative population growth of the Project combined with the related projects would therefore represent approximately 0.3 percent of this estimated growth. As such, cumulative impacts related to population growth would be less than significant.

Public Services

The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered government 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 objective for any of the following public services:

(i) Fire protection

The Project includes development of a 32 single-family residential homes at the Project site, increasing the need for fire protection services at the Project site. During construction, general "good housekeeping" procedures employed by the construction contractor, such as maintaining mechanical equipment and proper storage of flammable materials, would minimize fire hazards. Further, in compliance with Occupational Safety and Health Administration (OSHA) and Fire and Building Code requirements, construction managers and personnel would be trained in emergency response and fire safety operations, which include the monitoring and management of life safety systems and facilities. Additionally, fire suppression equipment (e.g., fire extinguishers) specific to construction would be maintained on-site. Furthermore, Project construction would occur in compliance with all applicable federal, state, and local requirements concerning the handling, disposal, use, storage, and management of hazardous waste. Thus, compliance with regulatory requirements would effectively reduce the potential for Project construction activities to expose people to the risk of fire or explosion related to hazardous materials. Construction activities also have the potential to affect emergency vehicle response times by adding construction traffic to the street network and by potentially necessitating partial lane closures during street improvements and utility installations. However, the Project would implement a Construction Traffic Management Plan (Project Design Feature K-1 in Section 4.K., Transportation/Traffic), which would formalize how construction would be carried out to reduce the effects on the surrounding community. In addition, construction-related traffic generated by the Project would not significantly impact LAFD response times within the Project vicinity as emergency vehicles normally have a variety of options for avoiding traffic, such as using sirens to clear a path of travel or driving in the lanes of opposing traffic. Therefore, the Project's contribution to cumulative impacts on emergency response during construction would not be cumulatively considerable. Overall, construction of the Project would not be expected to tax emergency services to the extent that there would be a need for new or expanded fire facilities.

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[11] *Southern California Association of Governments, 2016 RTP/SCS, Demographics and Growth Forecast Appendix, http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_DemographicsGrowthForecast.pdf, accessed October 4, 2016.*

The LAFD considers fire protection services for a project adequate if a project: (1) is within the maximum response distance for the land uses proposed; (2) complies with emergency access requirements; (3) complies with fire-flow requirements; and (4) complies with fire hydrant placement. Pursuant to LAMC Section 57.09.07, the maximum response distance between a low-density residential neighborhood land use and a LAFD station that houses an engine or truck company is 1.5 miles. If this distance is exceeded, all structures shall be constructed with automatic fire sprinkler systems. However, projects that fall within Very High Fire Hazard Severity Zone (as is the Project) are required to install fire sprinkler systems.

The Project site is served by several fire stations, as shown on Table 4.A-1. As stated previously, the Project is located within a Very High Fire Hazard Severity Zone. Thus, the Project would be required to be designed and constructed in accordance with the Los Angeles Fire Code and would be required to incorporate measures, including but not limited the following:

- Ignition-resistant roofing and other building materials
- Fire-Retardant-Treated Wood or noncombustible materials
- Roof coverings, valleys, and gutters
- Attic ventilation
- Eave or cornice vents
- Sprinkler systems
- Landscaping with fire-retardant plants
- Vegetation clearance

Additionally, prior to issuance of an Occupancy Permit, the Project Applicant would be required to coordinate with LAFD to ensure that the Project incorporates all appropriate fire-prevention measures. All ingress/egress associated with the Project would be designed and constructed in conformance to all applicable City Building and Safety Department and LAFD standards and requirements for design and construction. Hammerheads, which meet the minimum standards of the LAFD for fire department access and turnaround, would be provided at the end of Haverhill Drive and Haverhill Way. Therefore, the Project would not result in any significant impacts related to emergency access. Approximate fire-flow requirement for the Project is 2,000 gallons per minute with a 20 pounds-per-inch residual pressure. Final fire-flow demands, fire hydrant placement, and other fire protection equipment would be determined for the Project during LAFD's plan check process. Through compliance with these requirements, Project impacts related to fire protection services would be less than significant.

Table 4.A-1
Fire Stations Serving the Project Site

No.	Address	Distance from Project Site
1	2230 Pasadena Avenue	4.2 miles
12	5921 North Figueroa Street	2.8 miles
44	1410 Cypress Avenue	2.1 miles
Source: http://lafd.org/fire_stations/station_results/%2A?zipcode=90065, accessed March 17, 2015.		

Cumulative Impacts

Like the Project, each of the related projects would implement good housekeeping practices and comply with all applicable federal, state, and local requirements during construction. In addition, construction-related traffic generated by the Project and the related projects would not significantly impact LAFD response times within the Project vicinity as emergency vehicles normally have a variety of options for avoiding traffic, such as using sirens to clear a path of travel or driving in the lanes of opposing traffic. Therefore, cumulative impacts during construction of the Project and any of the related projects would be less than significant.

The Project, in combination with the related projects, would result in a further infilling of an already urban area, increasing the demand for fire protection services. However, similar to the Project, the related projects are located within an urbanized area and would be reviewed by the LAFD to ensure that sufficient fire safety and hazards measures are implemented to reduce potential impacts to fire protection and emergency medical services. Furthermore, each related project would be required to comply with regulatory requirements related to fire protection and emergency medical services.

Each of the related projects is located within a developed, urbanized area and falls within an acceptable distance from one or more existing fire stations. In addition, each related project would also be subject to the City's routine construction permitting process, which includes a review by LAFD for compliance with building and site design standards related to fire life safety, as well as coordinating with LADWP to ensure that local fire flow infrastructure meets current code standards for the type and intensity of land uses involved. Furthermore, over time, LAFD would continue to monitor population growth and land development throughout the City and identify additional resource needs including staffing, equipment, trucks and engines, ambulances, other special apparatuses, and possibly station expansions or new station construction that may become necessary to achieve the desired level of service. Through the City's regular budgeting efforts, LAFD's resource needs would be identified and monies allocated according to the priorities at the time.

Based on the above, the Project's contribution to cumulative impacts to fire protection and emergency medical services would not be cumulatively considerable. As such, cumulative impacts with regard to fire protection and emergency medical services would be less than significant.

(ii) Police protection?

During construction, fencing, and other security measures, as necessary, would be provided at the Project Site to ensure that valuable materials (e.g., building supplies, metals such as copper wiring, and construction equipment) are not easily stolen. Construction activities also have the potential to affect emergency vehicle response times by adding construction traffic to the street network and by potentially necessitating partial lane closures during street improvements and utility installations. However, the Project would implement a Construction Traffic Management Plan (Project Design Feature K-1 in Section 4.K., Transportation/Traffic), which would formalize how construction would be carried out to reduce the effects on the surrounding community. Appropriate construction traffic control measures (e.g., signs, delineators, etc.) would be implemented to ensure emergency access to the Project Site and traffic flow is maintained on adjacent right-of-ways. In addition, construction-related traffic generated by the Project would not significantly impact LAPD response times within the Project vicinity as emergency vehicles normally have a variety of options for avoiding traffic, such as using sirens to clear a path of travel or driving in the lanes of opposing traffic. Overall, construction of the Project would not be expected to tax emergency services to the extent that there would be a need for new or expanded police facilities.

The Project includes development of 32 single-family homes at the Project site, increasing the need for police protection services at the Project site. However, in accordance with the City's requirements, the Project developer would be required to refer to "Design Out Crime Guidelines: Crime Prevention Through Environmental Design," published by the LAPD and contact the Community Relations Division, located at 100 W. 1st Street, #250, Los Angeles, CA 90012; (213) 486-6000. The Project would include standard security measures such as adequate security lighting, controlled residential access, and secure parking facilities. These measures for the Project shall be approved by the LAPD prior to the issuance of building permits. Through compliance with the mandatory requirements of the LAPD, Project impacts related to police protection services would be less than significant.

Cumulative Impacts

In general, impacts to LAPD services and facilities during the construction of each related project would be addressed as part of each related project's development review process conducted by the City. Further, the closest related project (Related Project No. 2) is approximately 1.3 miles from the Project Site and is not expected to combine with Project construction so as to result in a cumulative impact with respect to police protection services during construction. In addition, construction-related traffic generated by the Project and the related projects would not significantly impact LAPD response times within the Project vicinity as emergency vehicles normally have a variety of options for avoiding traffic, such as using sirens to clear a path of travel or driving in the lanes of opposing traffic. Therefore, the Project's contribution to cumulative impacts on emergency response during construction would not be cumulatively considerable. The Project and the related projects are located within a highly urbanized area and it is assumed each of the related projects identified would likewise be developed within an acceptable distance from one or more existing police stations. Similar to the Project, each related project would be

subject to the City of Los Angeles' routine construction permitting process, which includes a review by the LAPD to ensure that sufficient security measures are implemented to reduce potential impacts to police protection services. Like the Project, it is expected that such review would result in the inclusion of standard security measures into the related projects such as adequate security lighting, controlled residential access, and secure parking facilities. The LAPD would continue to monitor population growth and land development throughout the City and identify additional resource needs including staffing, equipment, vehicles, and possibly station expansions or new station construction that may become necessary to achieve the desired level of service. Through the City's regular budgeting efforts, the LAPD's resource needs would be identified and monies allocated according to the priorities at the time.

Based on the above, the Project's contribution to cumulative impacts to police protection services would not be cumulatively considerable and, as such, cumulative impacts on police protection services would be less than significant.

(iii) Schools?

Los Angeles Unified School District's (LAUSD) schools that serve the Project site and area are shown on Table 4.A-2. As shown on Table 4.A-3, the Project would generate a total of approximately 8 students, including 4 elementary students, 2 middle school students, and 2 high school students. Based on the remaining capacity shown on Table 4.A-2, the schools serving the Project site would have adequate capacity to serve the Project's student generation. However, according to LAUSD, Toland Way Elementary and Eagle Rock High School are projected to become overcrowded in the future.[12] Pursuant to the California Government Code Section 65995(h), mandatory payment of the school fees established by the LAUSD in accordance with existing rules and regulations regarding the calculation and payment of such fees would, by law, provide full and complete mitigation for any potential direct and indirect impacts to schools as a result of the Project. Therefore, Project impacts to school services would be less than significant.

[12] *LAUSD, Rena Perez, February 18, 2015. Correspondence included in Appendix I of this Draft EIR.*

Table 4.A-2
LAUSD School's Serving the Project Area Student Capacity and Enrollment

School Type (Grade)	School Name	Capacity (students)	Actual Enrollment (students)	(-)Under / (+)Over Capacity (students)
Elementary School	Toland Way	381	367	-14
Middle School	Irving Magnet	904	616	-288
High School	Eagle Rock High School	2,665	2,589	-76
High School	Franklin Senior High	2,080	1,527	-553

Source: LAUSD, Rena Perez, Director, February 18, 2015 (refer to Appendix I).

Table 4.A-3
Estimated Project Student Generation

Use Type	Amount of Development	School Type	Student Generation Factor [a]	Total Students Generated
Proposed Residential	32 du	Elementary School (K-5)	0.1266/du	4
		Middle School (6-8)	0.0692/du	2
		High School (9-12)	0.0659/du	2
			Project Total	**8**

du = dwelling unit *Number of students has been rounded to the nearest whole number.*

[a] *Los Angeles Unified School District, Student Generation Rate Calculation, February 25, 2008.*

Cumulative Impacts

With respect to cumulative impacts, all of the schools serving the Project are under capacity, as shown in Table 4.A-2. However, as described above, Toland Way Elementary and Eagle Rock High School are projected to become overcrowded in the future. Like the Project, all related projects would be required to pay a school fee to the LAUSD to reduce cumulative impacts that they may have on school services. With the full payment of all applicable school fees, the Project coupled with expected cumulative growth would reduce potential cumulative impacts to schools and impacts would be less than significant.

(iv) Parks?

The L.A. CEQA Thresholds Guide requires an analysis of a project's impact on recreation and parks services and/or facilities when a project results in a net increase of 50 or more residential units. Projects that include fewer than 50 residential units would not normally have a significant impact on recreation

and parks. The Project proposes 32 single-family residential homes, and as such, would be expected to result in no impact with respect to recreation and park facilities. Moreover, the Project would pay the recently adopted Park and Recreation fees, which would be used to create additional park facilities in the Project vicinity. In addition, it is expected that all required open space would be provided on site, and as such, a less than significant impact would occur.

Cumulative Impacts

Development of the Project in conjunction with the residential related projects would result in an increase in permanent residents residing in the Project area. However, each of the residential related projects would be expected to dedicate land for parks or comply with payment of Quimby or Park and Recreation fees. Therefore, with payment of the applicable park fees on a project-by-project basis, the cumulative impacts related to parks and recreational facilities would be less than significant.

(v) Other public facilities?

Libraries

The libraries that serve the Project area include those shown on Table 4.A-4. On February 8, 2007, the Board of the Library Commissioners approved a new Branch Facilities Plan, which includes criteria for developing new libraries and recommends new size standards for the provision of Los Angeles Public Library (LAPL) facilities, including the following:

- A 12,500 square-foot facility for a community with less than 45,000 population.
- A 14,500 square-foot facility for a community with more than 45,000 population and up to a 20,000 square-foot for a Regional Branch.
- An additional Branch Library should be developed for a population equal to or in excess of 90,000 persons.

The LAPL uses the most recent Census data to determine whether a branch should be constructed in a given area. The LAPL has no planned improvements to add capacity or expand the existing libraries listed in Table 4.A-4, or plans for the development of any other new libraries in this geographic area.[13] In addition, the library service population areas overlap so there is no discrete population analysis for library service.

As discussed previously, the Project would introduce approximately 88 residents to the Project site. It should be noted that some or all of the 88 residents could already live in the Project area or City with an

[13] *Los Angeles Public Library, Thomas Jung, Management Analyst II, March 11, 2015. Refer to Appendix I.*

existing demand for library services that would not be increased with implementation of the Project. As discussed previously under "Population and Housing," the Project does not propose additional housing units (and associated population) beyond what is permitted under the existing base land use designation and zoning for the Project site. Thus, the Project's residential population would not represent a substantial or significant growth as compared to projected growth and would not create an unanticipated demand for library services. In addition, the Project would not cause the need for new or altered libraries. Therefore, Project impacts related to library services would be less than significant.

Table 4.A-4
Libraries Serving the Project Area

Library	Size (sf)	Collection Size/ Circulation	Staffing Levels
Arroyo Seco Regional Branch Library	14,000	47,546 volumes 154,419 circulation	10 full-time employees
Atwater Village Branch Library	5,900	36,340 volumes 99,545 circulation	6.5 full-time employees
Cypress Parch Branch Library	10,750	30,571 volumes 84,871 circulation	7 full-time employees
Lincoln Heights Branch Library	12,912	41,549 volumes 127,624 circulation	7 full-time employees

sf = square feet
Source: Los Angeles Public Library, Thomas Jung, Management Analyst II, March 11, 2015. (Refer to Appendix I.)

Cumulative Impacts

Development of the Project in combination with the residential related projects would result in an increase in approximately 2,321 permanent residents residing in the Project area. It is likely that at least some of the new residents already live in the Project area or the City with an existing demand for library services. The increase in demand for library facilities as a result of these residents would be spread among the libraries that are within two miles of the related projects. The LAPL has confirmed that there are no planned improvements to add capacity through expansion to any identified branch or build any new libraries in the relevant geographic area because LAPL does not foresee the need based on census tract information. Further, related projects, through the generation of revenue into the City's General Fund, would help the LAPL achieve progress toward its goal to ensure adequate library facilities and service throughout the City, including new libraries or expansion of existing libraries. Overall, the total number of residents added by the Project in combination with the residential related projects would not represent a substantial or significant growth and would not create an unanticipated demand for library services, such that a new or altered library facility would be required. As such, cumulative impacts with respect to libraries would be less than significant.

Recreation

The Project would not 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. As discussed previously under "Public Services - (iv) (Parks)," the Project would result in a less than significant impact with respect to parks and recreational facilities.

The Project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. The Project does not include the development of any recreational facilities. Further, as discussed previously under "Public Services - (iv) (Parks)," the Project would result in a less than significant impact with respect to parks and recreational facilities.

Cumulative Impacts

Development of the Project in conjunction with the residential related projects would result in an increase in permanent residents residing in the Project area. However, each of the residential related projects would be expected to dedicate land for parks or comply with payment of Quimby or Park and Recreation fees. Therefore, with payment of the applicable park fees on a project-by-project basis, the cumulative impacts related to parks and recreational facilities would be less than significant.

Transportation/Traffic

The Project would not 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. The Project includes development of 32 single-family residential units, with heights consistent with the existing homes in the Project area. Further, the Project site is not located near any airports. Thus, the Project would not 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. Therefore, no impacts related to this issue would occur.

The Project would not result in inadequate emergency access. All ingress/egress associated with the Project would be designed and constructed in conformance to all applicable City Building and Safety Department and City Fire Department standards and requirements for design and construction. Therefore, the Project would not result in any significant impacts related to emergency access.

The Project would not conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks). The Project site is zoned and designated for single-family residential land uses. The Project includes development of the Project with single-family homes, consistent with this existing zoning and land use designation. The Project would not affect any existing or planned alternative transportation infrastructure or plans or programs for development of such infrastructure. Thus, the Project would not conflict with adopted policies, plans, or programs supporting alternative transportation, and no impacts related to this issue would occur.

Project impacts related to other transportation/traffic issues are discussed in Section 4.K (Transportation/Traffic).

Utilities and Service Systems

The Project would not exceed wastewater treatment requirements of the applicable regional water quality control board. The Project site is located within the service area of the Hyperion Treatment Plant (the "HTP"), which has been designed to treat 450 million gallons per day (mgd) to full secondary treatment. Full secondary treatment prevents virtually all particles suspended in effluent from being discharged into the Pacific Ocean and is consistent with the Los Angeles Regional Water Quality Control Board's (the "LARWQCB") discharge policies for the Santa Monica Bay. The HTP currently treats an average daily flow of approximately 362 mgd. Thus, there is approximately 88 mgd available capacity.

The Project would generate approximately 7,360 gallons of wastewater per day (or 0.00736 mgd) (refer to Table 4.A-5). With a remaining daily capacity of 88 mgd, the HTP would have adequate capacity to serve the Project. The sewer infrastructure in the vicinity of the Project site includes an existing 8-inch line on Division Street. The sewage from the existing 8-inch line discharges into a series of 8-inch pipes along Division Street before discharging into an 18-inch sewer line on San Fernando Road. Ultimately, the sewage discharges into 24-inch and 27-inch pipes on San Fernando Road.[14] The standard procedure is that further detailed gauging and evaluation will be needed as part of the normal building permit process to identify a specific sewer connection point. If the public sewer has insufficient capacity, then the Applicant shall be required to build sewer lines or upgrade existing lines to a point in the sewer system with sufficient capacity. A final approval for sewer capacity and connection permit will be made at that time. Therefore, Project impacts related to wastewater treatment and infrastructure would be less than significant.

Table 4.A-5
Estimated Wastewater Generation

Residential Land Use	Size	Wastewater Generation Rate[1]	Total (gallons/day)
Single-Family	32 du	230 gpd/du	7,360

[1] *Source: City of Los Angeles Bureau of Sanitation, Sewer Generation Rates Table, March 20, 2002.*

The Project would not 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. The LADWP owns and operates the Los Angeles Aqueduct Filtration Plant (the "LAAFP") located in the Sylmar community of the City. The LAAFP treats City water prior to

[14] *Correspondence from Ali Poosti, Division Manager, Wastewater Engineering Services Division, Bureau of Sanitation, March 4, 2015. Correspondence included in Appendix I of this Draft EIR.*

distribution throughout LADWP's Central Water Service Area. The designated treatment capacity of the LAAFP is 600 mgd, with an average plant flow of 550 mgd during the summer months and 450 mgd in the non-summer months. Thus, the facility has between approximately 50 to 150 mgd of remaining capacity depending on the season.

As shown on Table 4.A-6, the Project would consume approximately 8,672 gallons of water per day (or 0.00867 mgd). With the remaining capacity of approximately 50 to 150 mgd, the LAAFP would have adequate capacity to serve the Project. Therefore, Project impacts related to water treatment would be less than significant.

The LADWP Water Service Organization (WSO) should be able to provide the domestic needs of the Project from the existing water system. As part of the normal construction/building permit process, the Project Applicant shall confirm with the LADWP WSO that the capacity of the existing water infrastructure can supply the domestic needs of the Project during the construction and operation phases. If the water infrastructure has insufficient capacity, the Project Applicant shall be required to build water lines or upgrade existing lines to a point in the system with sufficient capacity. Therefore, Project impacts related to water infrastructure would be less than significant.

Table 4.A-6
Estimated Water Consumption

Residential Land Use	Size	Water Consumption Rate[1]	Total (gallons/day)
Single-Family	32 du	271 gpd/du	8,672

[1] *Source: City of Los Angeles Bureau of Sanitation, Sewer Generation Rates Table, March 20, 2002. Water consumption rates are assumed to be 118 percent of the wastewater generation rates.*

The Project would not 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. As discussed previously under "Hydrology and Water Quality," the Project would not exceed the capacity of the existing or planning drainage system. Therefore, Project impacts related to stormdrain capacity would be less than significant.

The Project would have significant water supplies available to serve the project from existing entitlements and resources, and new or expanded entitlements are not needed. As shown on Table 4.A-6, the Project would consume approximately 8,672 gallons of water per day. According to the Los Angeles Department of Water and Power (LADWP), if a project that is consistent with the City's General Plan, the projected water demand associated with that project is considered to be accounted for in the most recently adopted Urban Water Management Plan (UWMP), which is prepared by the LADWP to ensure that existing and projected water demand within its service area can be accommodated.[15] As discussed

[15] *LADWP, 2011 UWMP, page 249.*

previously under "Population and Housing," the Project's proposed land uses (single-family residential homes) are allowed under the current zoning and land use designation for the Project site. As such, the Project's incremental demand is included in the UWMP, and thus the Project would not require new or additional water supply or entitlements. Therefore, Project impacts related to water supply would be less than significant.

The Project would not 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. As discussed previously with a remaining daily capacity of 88 mgd, the HTP would have adequate capacity to serve the Project. Therefore, Project impacts related to wastewater treatment would be less than significant.

The Project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. Forty three percent of the waste generated in the City is disposed of at the Sunshine Canyon City/County Landfill (the "Sunshine Canyon Landfill"), with 20 percent to Chiquita Canyon Landfill, and the remaining amounts sent to over a dozen other landfills, recycling, refuse-to-energy, or resource recovery facilities.[16] According to CalRecycle (California Department of Resources Recycling and Recovery), the Sunshine Canyon Landfill is estimated to close in 2037. It has approximately 96.8 million cubic yards (cy) of remaining capacity out of a total capacity of 140.9 million cy, and a maximum permitted daily intake of 12,100 tons per day (tpd).[17] Sunshine Canyon Landfill accepts approximately 7,800 tpd during the week and 3,000 tpd on Saturday (due to reduced hours of operation).[18] Therefore, the Sunshine Canyon Landfill has a remaining daily capacity intake of approximately 4,300 tpd during each weekday and 9,100 tpd on Saturday. As only 43 percent of the City's solid waste is disposed in the Sunshine Canyon Landfill, total daily capacity is actually much higher.

The Project is estimated to generate an increase of approximately 391 pounds per day (or 0.20 tons/day or 71.4 tons per year) of solid waste during operation, conservatively assuming no diversion of waste.[19] With

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[16] *CalRecycle, http://www.calrecycle.ca.gov/SWFacilities/Directory/19-AA-2000/Detail, accessed on June 12, 2015.*

[17] *State of California Department of Resources Recycling and Recovery, Solid Waste Facility Listing/Details Page, Facility/Site Summary Details: Sunshine Canyon City/County Landfill (19-AA-2000), website: http://www.calrecycle.ca.gov/SWFacilities/Directory/19-AA-2000/Detail, June 12, 2015.*

[18] *Sunshine Canyon Landfill Newsletter, Fall 2013, website: http://www.sunshinecanyonlandfill.com/home/newsletter/fall_2013_newsletter.pdf, June 12, 2015.*

[19] *Solid waste generation assumes 12.23 pound per unit per day. Generation rate source: CalRecycle Estimated Solid Waste Generation Rates: http:www.calrecycle.ca.gov/wastechar/wastegenrates/.*

a remaining daily capacity of 4,300 tpd, the existing landfill capacity at Sunshine Canyon would be adequate to accommodate the Project's solid waste generation. Therefore, Project impacts related to solid waste would be less than significant.

The Project would comply with federal, state, and local statutes and regulations related to solid waste. The Project would provide recycling containers and associated storage areas on-site in accordance with City Ordinance No. 171,687. Additionally, the Project's construction contractor would deliver all construction and demolition waste generated by the Project to a Certified Waste Hauler. Thus, the Project would promote source reduction and recycling, consistent with AB 939 and the City's Solid Waste Integrated Resources Plan, General Plan Framework Element, RENEW LA Plan, and Green LA Plan. Furthermore, although not factored into the analysis above in order to provide for a conservative assessment, the City's Exclusive Franchise System is expected to be implemented prior to operation of the Project. With the franchise system in place, it is anticipated that operational waste from within the City would likely be diverted at a rate greater than the City's current diversion rate of 76 percent. Therefore, the Project would not conflict with solid waste policies and objectives in the City of Los Angeles Source Reduction and Recycling Element or its updates, City of Los Angeles Solid Waste Management Policy Plan, the City of Los Angeles General Plan Framework Element or the Curbside Recycling Program, including consideration of the land use-specific waste diversion goals contained in Volume 4 of the City of Los Angeles Source Reduction and Recycling Element. The Project would be consistent with and would further City policies that reduce landfill waste streams. Such policies and programs serve to the implement the strategies outlined in the 2014 County Integrated Waste Management Plan Annual Report (2014 Annual Report) to adequately meet countywide disposal needs through 2029 without capacity shortages. Therefore, the Project also would not conflict with solid waste policies and objectives in the County Integrated Waste Management Plan.

Energy Conservation

In accordance with Appendix F of the State CEQA Guidelines, this discussion addresses the energy implications of the Project. This section represents a summary of the Project's anticipated energy needs, impacts, and conservation measures.

Construction

The Project would utilize construction contractors who demonstrate compliance with applicable California Air Resources Board (CARB) regulations governing the accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment. CARB has adopted an Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants. This measure prohibits diesel-fueled commercial vehicles greater than 10,000 pounds from idling for more than five minutes at any given time. CARB has also approved the Truck and Bus regulation (CARB Rules Division 3, Chapter 1, Section

2025, subsection (h)[20]) to reduce NO_X, PM_{10}, and $PM_{2.5}$ emissions from existing diesel vehicles operating in California; this regulation will be phased in with full implementation by 2023. In addition to limiting exhaust from idling trucks, CARB recently promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower. The regulation aims to reduce emissions by requiring the installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier, and less energy-efficient engines with newer emission-controlled models. Implementation began January 1, 2014 and the compliance schedule requires that best available control technology turnovers or retrofits be fully implemented by 2023 for large and medium equipment fleets and by 2028 for small fleets. Compliance with the above anti-idling and emissions regulations would result in efficient use of construction-related energy and the minimization or elimination of wasteful and unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption, as would use of haul trucks with larger capacities.

During Project construction, energy would be consumed in three general forms: (1) petroleum-based fuels used to power off-road construction vehicles and equipment on the Project Site, construction worker travel to and from the Project Site, as well as delivery and haul truck trips (e.g., hauling of construction debris to off-site reuse and disposal facilities); (2) electricity associated with the conveyance of water that would be used during Project construction for dust control (supply and conveyance), and electricity associated with providing temporary power for lighting and electronic equipment inside temporary construction trailers and within the proposed structures; and (3) energy used in the production of construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass. As shown in Table 4.A-7, a total of approximately 11,392 gallons of diesel fuel, 15,780 gallons of gasoline, and 9,120 kWh of electricity would be consumed during Project construction.

The petroleum-based fuel use summary represents a conservative estimate of energy that would be consumed throughout the Project construction period based on maximum intensity construction assumptions. While construction activities would consume petroleum-based fuels, consumption of such resources would be temporary and would cease upon the completion of construction. In addition, construction activities would be subject to compliance with applicable regulatory requirements designed to reduce emissions, but would also reduce the consumption of energy resources. Specifically, regulatory requirements would require idling of all diesel-fueled commercial vehicles weighing over 10,000 pounds during construction to be limited to five minutes at any location. Compliance with this measure would reduce the Project's reliance on petroleum-based fuels during construction activities, and the Project's consumption of petroleum-based fuels would not have an adverse impact on available supplies. In addition, with regard to trips for hauling construction debris, the City of Los Angeles has adopted several plans and regulations to promote the reduction, reuse, recycling, and conversion of solid waste going to

[20] *California Air Resources Board, Final Regulation Order, Amendments to the Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants from In-Use On-Road Diesel-Fueled Vehicles, http://www.arb.ca.gov/msprog/onrdiesel/documents/tbfinalreg.pdf.*

disposal systems. The Project's compliance with these regulations would reduce the number of trips and fuel required to transport construction debris, which would reduce the wasteful, inefficient, and unnecessary consumption of energy, and provide for reduced transportation-related energy usage compared to similar projects in other jurisdictions.

Table 4.A-7
Summary of Energy Use During Construction

Fuel Type	Quantity
Diesel	11,392 gallons
Gasoline	15,780 gallons
Electricity	9,120 kWhr
See calculations in Appendix J of this Draft EIR._	

As described above, electricity would be consumed during the conveyance of the water used during construction activities that require the use of water to control fugitive dust. Approximately 9,120 kWh of electricity would be consumed during Project construction. Furthermore, electricity would be used to provide temporary power for lighting electronic equipment inside temporary construction trailers and within the proposed structures. This electricity would be supplied to the Project Site by LADWP and would be obtained from the existing electrical lines that connect to the Project Site. Similar to the use of petroleum-based fuels, electricity consumed during Project construction would be temporary and would cease upon the completion of construction, as well as vary depending on site-specific operations and the amount of construction occurring at any given time. Overall, construction activities associated with the Project would require limited electricity generation that would not be expected to have an adverse impact on available electricity supplies.

Construction of the Project's electrical infrastructure would occur entirely within the Project Site with the possible need for off-site connections to facilities adjacent to the Project Site. As such, construction of the Project's electrical infrastructure is not anticipated to adversely affect the electrical infrastructure serving the surrounding uses, utility system capacity, or existing electrical infrastructure. The Project's on-site electrical system would consist of underground electrical lines, conduits, banks, and transformers, as needed. Where feasible, the new service installations and connections would be scheduled and implemented in a manner that would not result in electrical service interruptions to other properties. Compliance with LADWP's guidelines and requirements would ensure that the Project Applicant fulfills its responsibilities relative to infrastructure installation, coordinates any electrical infrastructure removals or relocations with LADWP, and limits any impacts associated with grading, construction, and development within LADWP easements.

While it is difficult to measure the energy used in the production of construction materials such as asphalt, steel, and concrete, it is reasonable to assume that the production of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest of minimizing the cost of doing business. In addition, the Project would feature a sustainable design to comply with

CALGreen, which would also result in the use of sustainable materials and recycled content that would reduce energy consumption during Project construction. Thus, as compared to a similar project that utilizes more conventional materials, the Project would result in reduced indirect energy usage related to construction material production.

Therefore, the Project's construction activities would not result in the wasteful, inefficient, or unnecessary use of energy resources, create energy utility system capacity problems, create problems with the provision of energy services, or result in a significant impact associated with the construction of new or expanded energy facilities. Furthermore, Project construction would not violate state or federal energy standards or consume a substantially greater amount of energy than other similar projects. As such, impacts would be less than significant.

Operation

Electricity

As shown in Table 4.A-8, Estimated Electricity Demand, the Project would demand approximately 180,048 kilowatt-hours (kw-h) of electricity per year (yr). The overall LADWP capacity Citywide for the year of operation (2018) is 23,667 gigawatt-hours (gw-h), with residential uses consisting of 8,381 gw-h and commercial uses consisting of 12,764 gw-h.[21] Thus, the Project is within the anticipated demand of the LADWP system. Therefore, the LADWP's current and planned electricity supplies would be sufficient to support the Project's electricity consumption. The Project would not require the acquisition of additional electricity supplies beyond those that exist or are anticipated by the LADWP. In addition, the Project would comply with Title 24 of the California Code of Regulations (CCR) (CalGreen) requiring building energy efficiency standards, and would also be built in compliance with the LA Green Building Code. As such, the Project's impacts with respect to electricity would be less than significant.

Table 4.A-8
Estimated Electricity Demand

Land Use	Size	Electricity Rates	Total (kw-h/yr)
Residential	32 du	5,626.50 kw-h / DU	180,048
		Total	**180,048**

kw-h = kilowatt-hour; yr = year
Source: SCAQMD Air Quality Handbook, 1993, Table A9-11-A Electricity Usage Rate

[21] *LADWP, 2012 IRP, Table A-1, page A-5: https://www.ladwp.com/ladwp/faces/wcnav_externalId/a-p-doc?_adf.ctrl-state=114zqcwuq9_4&_afrLoop=254545868688795.*

Natural Gas

As shown in Table 4.A-9, Estimated Natural Gas Demand, the Project would demand approximately 128,368 cubic feet (cf) of natural gas per month (mo), or approximately 4,279 cf per day. The Southern California Gas Company (SCG) estimates the core peak day demand in 2018 to be 2,957 million cf/day.[22] The Project's 0.0043 million cf/day, therefore, represents a negligible portion of the estimated peak day demand for 2018. Thus, there is adequate natural gas supply and capacity to serve the Project, and impacts would be less than significant.

Table 4.A-9
Estimated Natural Gas Demand

Land Use	Size	Natural Gas Rates	Total (cf/mo)
Residential	32 du	4,011.5 cf / DU	128,368
		Total	**128,368**

cf = cubic feet; mo = month
Source: SCAQMD Air Quality Handbook, 1993, Appendix 9, Table A9-12-A, Natural Gas Usage Rate

The use of energy provided by alternative (i.e., renewable) resources, off-site and on-site, to meet the Project's operational demands is constrained by the energy portfolio mix managed by the Los Angeles Department of Water and Power (LADWP), which is the service provider for the Project Site, and limitations on the availability or feasibility of on-site energy generation. LADWP is required to procure at least 33 percent of their energy portfolio from renewable resources by 2020. The current sources procured by LADWP include biomass/biowaste, hydro, solar, geothermal, and wind. These sources account for 23 percent of DWP's overall energy mix in 2013, the most recent year for which data is available.[23] This represents the available off-site renewable sources of energy that would meet the Project demand. LADWP has a somewhat higher percentage of energy from renewable sources than the statewide average of 15 percent.[24] Thus, compared to a similar project in another jurisdiction whose energy supplies are comprised of fewer renewable sources, the Project would consume less non-renewable energy.

In regard to the availability and feasibility of alternative modes of energy generation, there are no substantial local sources of alternative energy in proximity to the Project Site to which the Project could connect. Finally, solar and wind power represent variable-energy, or intermittent, resources that are

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[22] *"Core" refers to residential and small commercial natural gas customers.*

[23] *LADWP, 2014 Power Integrated Resource Plan, Appendix D, December 2014.*

[24] *California Energy Commission, www.energy.ca.gov/sb1305/power_content_label.html, accessed April 14, 2016*

generally used to augment, but not replace, natural gas-fired energy power generation, since reliability of energy availability and transmission is necessary to meet demand, which is constant. Wind-powered energy is not viable on the Project Site due to the lack of sufficient wind in the Los Angeles basin. The California Energy Commission (CEC) studied the State's high wind resource potential.[25] Based on a map of California's wind resource potential, the Project Site is not identified as an area with wind resource potential. Wind resource areas with winds above 12 mph within Los Angeles County are located in relatively remote areas in the northwestern portion of the County. Additionally, there are no viable sites within the Project Site for placement and operation of a wind turbine. The CEC has identified areas within the State with high potential for viable solar, wind, and geothermal energy production. The CEC rated California's solar potential by county using insolation values available to typical photovoltaic system configurations, as provided by the National Renewable Energy Laboratory. Although Los Angeles as a County has a relatively high photovoltaic potential of 3,912,346 megawatt-hours (MWh)/day, inland counties such as Inyo (10,047,177 MWh/day), Riverside (7,811,694 MWh/day), and San Bernardino (25,338,276 MWh/day) are more suitable for large-scale solar power generation.[26] In addition, most of the high potential areas of greater than 6 KWh/sqm/day in Los Angeles County are concentrated in the northeastern corner of the county around Lancaster, approximately 45 miles away from the Project Site.

The Project shall implement all applicable mandatory measures within the LA Green Building Code that would have the effect of reducing the Project's energy use. The Project shall comply with City Ordinance No. 179,820 (Green Building Ordinance), which establishes a requirement to incorporate green building practices into projects that meet certain threshold criteria. The Project shall comply with the lighting power requirements in the California Energy Code, California Code of Regulations (CCR), Title 24, Part 6.

Overall, the Project would be designed and constructed in accordance with State and local green building standards that would serve to reduce the energy demand of the Project. In addition, the Project's energy demand would be within the existing and planned electricity and natural gas capacities of LADWP and SoCalGas, respectively. Furthermore, construction and operational trips, which use petroleum-based fuel, would be minimized due to compliance with existing regulatory requirements. Therefore, the Project would not violate state or federal energy standards or consume a substantial amount of energy in either construction or operation as compared to other similar projects. As such, development of the Project would not cause wasteful, inefficient, and unnecessary consumption of energy and would be consistent with the intent of Appendix F of the CEQA Guidelines. Impacts would be less than significant.

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[25] *California Energy Commission. California Wind Resource Potential, http://www.energy.ca.gov/maps/renewable/Wind_Potential.pdf.*

[26] *California Energy Commission, California Solar Resources, April 2005, http://www.energy.ca.gov/2005publications/CEC-500-2005-072/CEC-500-2005-072-D.PDF.*

Cumulative Impacts

Water

As shown in Table 4.A-10, implementation of the Project in combination with the related projects would generate a demand for approximately 241,276 gallons of water per day. This estimate does not take into consideration the removal of any existing land uses at the sites of the related projects and also does not consider the effectiveness of any water conservation measures that would be required of new development by the City. The LADWP (through its UWMP) anticipates its projected water supplies will meet demand through the year 2035. In terms of the City's overall water supply condition, all related project and other cumulative development that is consistent with the City's General Plan has been taken into account in the planned growth of the water system. In addition, with a remaining capacity of approximately 50 to 150 mgd, the LAAFP would have adequate capacity to serve the Project and the related projects and other cumulative development. Finally, based on the distance of the related projects from the Project Site, none of the related projects would tie into the same local water lines as the Project. Therefore, cumulative impacts related to water supply, treatment, and infrastructure would be less than significant.

Table 4.A-10
Cumulative Water Consumption

Land Use	Size	Water Consumption Rate[1]	Total (gallons/day)
Apartment	60 du	271 gpd/du	16,260
Condominium	25 du	271 gpd/du	6,775
Apartment	64 du	271 gpd/du	17,344
Condominium	290 du	271 gpd/du	78,590
Retail	25,000 sf	113.3 gallons/1,000 sf	2,833
Senior Apartment	100 du	271 gpd/du	27,100
Classroom (seat)	7 room (175)	11.3 gallons/student	1,978
Apartment	45 du	271 gpd/du	12,195
Students	250 students	11.3 gallons/student	2,825
Single-Family	5 du	271 gpd/du	1,355
Apartment	35 du	271 gpd/du	9,485
Residential	142 du	271 gpd/du	38,482
Retail/Restaurant	9,658 sf	424.8 gallons/1,000 sf	4,103
Apartment	49 du	271 gpd/du	13,279
		Subtotal Related Projects	232,604
		Subtotal Proposed Project	8,672
		Cumulative Total	241,276

[1] *Source: City of Los Angeles Bureau of Sanitation, Sewer Generation Rates Table, March 20, 2002. Water consumption rates are assumed to be 118 percent of the wastewater generation rates.*

Wastewater

As shown in Table 4.A-11, implementation of the Project in combination with the related projects would generate approximately 204,867 gallons per day of wastewater. The related projects as well as other cumulative growth in HTP service boundaries would rely on the wastewater treatment services provided by the HTP. With a remaining daily capacity of 88 mgd, the HTP would have adequate capacity to serve the Project and the related projects and cumulative growth. Based on the distance of the related projects from the Project Site, none of the related projects would tie into the same local sewer lines as the Project. Therefore, cumulative impacts related to wastewater treatment and infrastructure would be less than significant.

Table 4.A-11
Cumulative Wastewater Generation

Land Use	Size	Wastewater Generation Rate[1]	Total (gallons/day)
Apartment	60 du	230 gpd/du	13,800
Condominium	25 du	230 gpd/du	5,750
Apartment	64 du	230 gpd/du	14,720
Condominium	290 du	230 gpd/du	66,700
Retail	25,000 sf	96 gallons/1,000 sf	2,400
Senior Apartment	100 du	230 gpd/du	23,000
Classroom (seat)	7 room (175)	9.6 gallons/student	1,680
Apartment	45 du	230 gpd/du	10,350
Students	250 students	9.6 gallons/student	2,500
Single-Family	5 du	230 gpd/du	1,150
Apartment	35 du	230 gpd/du	8,050
Residential	142 du	230 gpd/du	32,660
Retail/Restaurant	9,658 sf	360 gallons/1,000 sf	3,477
Apartment	49 du	230 gpd/du	11,270
		Subtotal Related Projects	197,507
		Subtotal Proposed Project	7,360
		Cumulative Total	204,867

[1] *Source: City of Los Angeles Bureau of Sanitation, Sewer Generation Rates Table, March 20, 2002.*

Solid Waste

Operation of the Project in conjunction with forecasted growth within the County of Los Angeles (inclusive of the related projects) would generate municipal solid waste and result in a cumulative increase in the demand for waste disposal capacity at Class III landfills. The countywide demand for landfill capacity is continually evaluated by the County through preparation of the County Integrated Waste Management Plan Annual Reports. Each Annual Report assesses future landfill disposal needs over a 15-year planning horizon. As such, the 2014 Annual Report projects waste generation and available landfill capacity through 2029. Per the 2014 Annual Report, the forecasted 2018 (the year that the Project will commence operation) waste generation volume for the County is approximately 24

million tons. The Annual Report assumed a 66 percent diversion rate, resulting in a disposal of approximately 8 million tons in Class III Landfills and transformation facilities. Given the recent approval of the City's Exclusive Franchise System, which the City expects to start implementing in 2017, waste diversion from City sources will likely be higher than the assumed 66 percent as stated previously. Moreover, the estimated Project generation net increase of approximately tons of waste per year would represent only a negligible fraction (approximately 0.008 percent) of the cumulative waste generation in 2017. Thus, the Project's contribution to the County's estimated cumulative waste stream in the Project buildout year would not be cumulatively considerable.

Furthermore, as stated above, while existing infrastructure alone cannot sufficiently address the County's projected solid waste disposal needs in 2017, the 2014 Annual Report determined that future disposal needs can be adequately met through 2029. Jurisdictions in the County of Los Angeles continue to implement and enhance the waste reduction, recycling, special waste, and public education programs identified in their respective planning directives. These efforts, together with countywide and regional programs implemented by the County and the cities, acting in concert or independently, have achieved significant, measurable results, as documented in the 2014 Annual Report. Based on this trend, and because solid waste disposal is an essential public service that must be provided without interruption in order to protect public health and safety as well as the environment, concerted actions would continue to be taken by jurisdictions towards expanding and enhancing waste reduction and recycling programs, and implementing prudent solid waste management strategies in response to the strategies identified in the Annual Report. With respect to regulatory consistency, it is anticipated that, similar to the Project, the related projects would not conflict with and instead would promote source reduction and recycling, consistent with AB 939, Los Angeles County Integrated Waste Management Plan, and the City's Solid Waste Integrated Resources Plan, City's General Plan Framework Element, RENEW LA Plan, and Green LA Plan. Thus, overall, cumulative impacts with regard to solid waste would be less than significant and no mitigation measures are required.

Electricity

As shown in Table 4.A-12, implementation of the Project combined with the related projects would consume approximately 5,782,820 kw-h/yr of electricity (or 5.78 gw-h.yr). As discussed above, the overall LADWP capacity Citywide for the year of Project operation (2018) is 23,667 gw-h, with residential uses consisting of 8,381 gw-h and commercial uses consisting of 12,764 gw-h. Thus, the Project and the related projects are well within the anticipated demand of the LADWP system. Therefore, the LADWP's current and planned electricity supplies would be sufficient to support the cumulative electricity consumption, and impacts would be less than significant.

Table 4.A-12
Cumulative Electricity Consumption

Land Use	Size	Electricity Consumption Rate[1]	Total (kw-h/yr)
Apartment	60 du	5,626.50 kw-h / DU	337,590
Condominium	25 du	5,626.50 kw-h / DU	140,663
Apartment	64 du	5,626.50 kw-h / DU	360,096
Condominium	290 du	5,626.50 kw-h / DU	1,631,685
Retail	25,000 sf	13.55 kw-h / sf	338,750
Senior Apartment	100 du	5,626.50 kw-h / DU	562,650
Classroom (seat)	7 room (175)[2]	12.95 kw-h / sf	90,650
Apartment	45 du	5,626.50 kw-h / DU	253,193
Students	250 students[3]	12.95 kw-h / sf	129,500
Single-Family	5 du	5,626.50 kw-h / DU	28,133
Apartment	35 du	5,626.50 kw-h / DU	196,928
Residential	142 du	5,626.50 kw-h / DU	798,963
Retail/Restaurant	9,658 sf	47.45 kw-h / sf	458,272
Apartment	49 du	5,626.50 kw-h / DU	275,699
		Subtotal Related Projects	5,602,772
		Subtotal Proposed Project	180,048
		Cumulative Total	5,782,820

[1] *Source: SCAQMD Air Quality Handbook, 1993, Table A9-11-A Electricity Usage Rate*
[2] *Assumes 1,000 square feet per classroom, so 7,000 square feet total.*
[3] *Assumes 25 students per classroom, for a total of 10 classrooms. Assumes 1,000 square feet per classroom, for a total of 10,000 square feet.*

Natural Gas

As shown in Table 4.A-13, implementation of the Project combined with the related projects would consume approximately 3,547,551 cf of natural gas per month, or approximately 118,252 cf per day. The Southern California Gas Company (SCG) estimates the core peak day demand in 2018 to be 2,957 million cf/day. The cumulative 0.12 million cf/day therefor represents a negligible portion of the estimated peak day demand for 2018. Thus, there is adequate natural gas supply and capacity to serve the Project, and the related projects and cumulative impacts would be less than significant.

Table 4.A-13
Cumulative Natural Gas Consumption

Land Use	Size	Natural Gas Consumption Rate[1]	Total (cf/mo)
Apartment	60 du	4,011.5 cf / DU	240,690
Condominium	25 du	4,011.5 cf / DU	100,288
Apartment	64 du	4,011.5 cf / DU	256,736
Condominium	290 du	4,011.5 cf / DU	1,163,335
Retail	25,000 sf	2.9 cf / sf	72,500
Senior Apartment	100 du	4,011.5 cf / DU	401,150
Classroom (seat)	7 room (175)[2]	2.9 cf / sf	20,300
Apartment	45 du	4,011.5 cf / DU	180,518
Students	250 students[3]	2.9 cf / sf	29,000
Single-Family	5 du	4,011.5 cf / DU	20,058
Apartment	35 du	4,011.5 cf / DU	140,403
Residential	142 du	4,011.5 cf / DU	569,633
Retail/Restaurant	9,658 sf	2.9 cf / sf	28,008
Apartment	49 du	4,011.5 cf / DU	196,564
		Subtotal Related Projects	3,419,183
		Subtotal Proposed Project	128,368
		Cumulative Total	3,547,551

[1] *Source: SCAQMD Air Quality Handbook, 1993, Appendix 9, Table A9-12-A, Natural Gas Usage Rate*
[2] *Assumes 1,000 square feet per classroom, so 7,000 square feet total.*
[3] *Assumes 25 students per classroom, for a total of 10 classrooms. Assumes 1,000 square feet per classroom, for a total of 10,000 square feet.*

4. ENVIRONMENTAL IMPACT ANALYSIS
B. AESTHETICS

This section evaluates the potential impacts of the Project on aesthetics, views and visual character, shade and shadow, and light and glare in the Project area. Aesthetics generally refers to visual resources and the quality of what can be seen, or overall visual perception of the environment, and may include such characteristics as building height and mass, development density and design, building condition (i.e., blight), ambient lighting and illumination, landscaping, and open space. Views refer to visual access and obstruction of prominent visual features, including both specific visual landmarks and panoramic vistas. Lighting issues address the effects of nighttime illumination and daytime glare on adjacent land uses.

For purposes of this analysis, representative photographs of the Project Site and surrounding area were taken by CAJA in February 2016 and are available as Figures in Section 3, Environmental Setting, of this Draft EIR.

ENVIRONMENTAL SETTING

Existing Visual Character

The Project Site consists of 32 undeveloped, subdivided single-family lots located in a hillside area located between Haverhill Drive, Haverhill Way, and Brilliant Drive. The Project Site is bounded by existing single-family development to the north, east, and west, and an undeveloped area to the south and southeast. Other land uses in the Project area include commercial/retail land uses along Eagle Rock Boulevard, approximately one mile north and west of the Project Site, and the Glassell Park Recreation Center and Youth Center on Verdugo Road, approximately ¾-mile northwest of the Project Site.

Figures 3-1 through 3-4 (in Section 3, Environmental Setting) show views of the existing conditions of the Project Site, and views of its surroundings.

Scenic Views and Vistas

A view refers to direct and unobstructed line-of-sight to an on- or off-site aesthetic resource, which may take the form of panoramic viewpoints from particular vantages. The available viewshed or visible scenery within a given field of view is defined by physical elements that occupy a viewer's line-of-sight from a particular location. Existing views may be obstructed or blocked by modification of the environment (e.g., grading, landscaping, building construction, etc.). Conversely, modifications to the existing environment may create or enhance view opportunities.

For purposes of this analysis, only public views are being considered in accordance with the *L.A. CEQA Thresholds Guide*. The City formally recognized the value of access to valued visual resources from public vantages through planning regulations such as Scenic Highway designations and overlay plans that designate and preserve valued publicly available views. Public views are those which can be seen from vantage points which are publicly accessible, such as streets, freeways, public parks, and vista points.

These views are generally available to a greater number of persons than are private views. Private views, in contrast, are those which are only available from vantage points located on private property. Unless specifically protected by an ordinance or other regulation, private views are not protected. Therefore, impairment of private views is not considered to be a significant impact.

The predominant view in the Project area is of the San Gabriel Mountains to the north and east of the Project Site, although this view is obstructed from many locations due to topography, vegetation, and existing development. Ground level views from streets in the Project area (Haverhill Drive, Sundown Drive, Brilliant Drive, Division Street, and Cazador Street) are generally limited to those of the existing single-family development surrounding the Project Site, although intermittent views of the San Gabriel Mountains are available, depending on viewing elevation. Wider vistas of the San Gabriel Mountains are also available throughout the greater Project vicinity. In addition, views of the existing walnut woodland can be viewed from limited public locations in the Project vicinity.

Scenic Highways

The closest State-designated scenic highway to the Project Site is SR-2 north of the I-210 freeway through the Angeles National Forest. There are no State of California State-designated scenic highways or scenic parkways located adjacent to the Project Site.[1] According to the General Plan, the closest City-designated scenic highway to the Project is Eagle Rock Boulevard, to the north of the Project Site.[2]

Shade and Shadow

The issue of shade and shadow pertains to the blockage of direct sunlight by Project buildings, which may affect adjacent properties. The users or occupants of certain land uses, such as residences, parks, churches, schools, outdoor restaurants, and pedestrian areas are termed "shadow-sensitive" for purposes of analyzing shade/shadow impacts.

Shadow lengths are dependent on the height and size of the building from which they are cast and the angle of the sun. The angle of the sun varies with respect to the rotation of the earth (i.e., time of day) and elliptical orbit (i.e., change in seasons). The longest shadows are cast during the winter months and the shortest shadows are cast during the summer months.

Winter and Summer Solstice

"Solstice" is defined as either of the two points on the ecliptic (i.e., the path of the earth around the sun) that lie midway between the equinoxes (separated from them by an angular distance of 90°). At the solstices, the sun's apparent position on the celestial sphere reaches its greatest distance above or below

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1 *State of California, Department of Transportation, California Scenic Highway Program, website: http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm, accessed January 20, 2015.*

2 *City of Los Angeles, Department of City Planning, Map E: Transportation Element of the General Plan, Scenic Highways in the City of Los Angeles, June 1998, website: http://cityplanning.lacity.org/cwd/gnlpln/transelt/TEMaps/E_Scnc.gif, accessed January 20, 2015.*

the celestial equator. Measuring shadow lengths for the winter and summer solstices represents the extremes of the shadow patterns that occur throughout the year. Shadows cast on the summer solstice are the shortest shadows during the year, becoming progressively longer until winter solstice, when the shadows are the longest they are all year. Shadows are shown for winter solstice, cast from 9:00 AM to 3:00 PM (winter) and 9:00 AM to 5:00 PM (summer).

Light and Glare

The Project Site and surrounding area are developed with low-density, single-family residential land uses and roadway and utility infrastructure, all of which produce light and glare (e.g., indoor/outdoor lighting, windows, light-colored surfaces, vehicles passing on surrounding streets, etc.) typical of other such suburban uses in the City.

Sensitive Receptors

The closest sensitive uses with respect to shade/shadow and light/glare are the single-family residences located adjacent to the Project Site. All of these residential uses currently experience existing light and glare impacts from traveling vehicles, as well as from neighboring properties.

Regulatory Setting

Northeast Los Angeles Community Plan

The Project Site is located in the Northeast Los Angeles Community Plan Area. The Northeast Los Angeles Community Plan is the official land use component to guide future development within the Northeast Los Angeles Community Plan Area. This plan promotes an arrangement of land use, streets, and services intended to enhance the economic, social, and physical health, safety and welfare, and convenience of the people who live, work and invest in the community. The Northeast Los Angeles Community Plan includes an Urban Design Chapter (Chapter V), which includes design policies for individual projects, including the Community Design and Landscaping Guidelines.

Mount Washington/Glassell Park Specific Plan

The Project Site is also located within the boundaries of the Mount Washington/Glassell Park Specific Plan, which establishes standards for development within the Project area, related to floor area, height, yards, and landscaping.

Los Angeles Municipal Code

LAMC Section 93.0117 states that no exterior light source may cause more than two footcandles of lighting intensity or generate direct glare onto exterior glazed windows or glass doors; elevated habitable porch, deck, or balcony; or any ground surface intended for uses such as recreation, barbecue, or lawn areas on any other property containing a residential unit or units. The LAMC also sets forth land use regulations to govern urban design (Chapters I and IV), including regulations on height, landscape,

signage, graffiti removal and recovery, and other design standards. Conformity to the LAMC is further discussed in Section 4.I, Land Use and Planning.

ENVIRONMENTAL IMPACTS

Methodology:

(1) Visual Character

The analysis of aesthetics considers the visual character and resources of an area, and whether the Project, including temporary construction effects, would substantially degrade the visual character of the area. The analysis considers: (1) the visibility of the Project Site from surrounding off-site locations; (2) the massing, height, and general scale of the Project; and (3) the expected appearance of the Project with respect to the scale and visual character of adjacent and proximate uses. The analysis also compares the Project to standards in existing, applicable City guidance documents, plans, and policies summarized above. Projects are considered consistent with regulatory plans if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals.

In addition, aesthetic and land use values expressed in City guidance documents, plans, and policies may overlap with the land use analysis. Where policies relate to land use as well aesthetic values, the comparison of the Project to these policies is provided in Section IV.I., Land Use, of this Draft EIR.

(2) Views

The identification of available views within the Project area was accomplished through field surveys, photographic documentation, and topographic analysis. The L.A. City CEQA Thresholds Guide provides that the analysis of project impacts to visual resources should address views from public places such as designated scenic highways, corridors, parkways, roadways, bike paths, and trails. To determine whether a potential view impact would occur, the following process was used to weigh several considerations:

- Step 1: Define the view resources that could be affected by Project development.
- Step 2: Identify the potential obstruction of view resources as a result of development of the Project Site.
- Step 3: Evaluate whether a potential obstruction would substantially alter the view. The "substantiality" of an alteration in views is somewhat subjective and dependent on many factors. In this case, an obstruction in the view of a particular view resource is considered substantial if it exhibits all of the following traits: (1) the area viewed contains a view resource; (2) the obstruction of the resource covers more than an incidental/small portion of the resource; and (3) the obstruction would occur from a public vantage point.
- Step 4: Consider whether the Project includes design features that offset the potential alteration or loss of views of a particular view resource.

- Step 5: Consider whether the view blockage is permanent, as viewed from a scenic vantage point; or whether the blockage would be of limited duration, such as when viewed from a moving vehicle or temporary blockage associated with construction activities.

(3) **Shade and Shadow**

The analysis compares the Project to the following shading screening criteria contained in the L.A. CEQA Thresholds Guide:

- Would the project include light-blocking structures in excess of 60 feet in height above the ground elevation that would be located within a distance of three times the height of the proposed structure to a shadow-sensitive use on the north, northwest, or northeast?

(4) **Light and Glare**

The following analysis compares the Project's potential light and glare conditions to existing ambient light levels at the defined sensitive receptor locations. The level of change is then evaluated in accordance with the City's thresholds, LAMC regulations, and other factors contained in professional guidelines to determine whether the Project would result in potentially adverse environmental effects.

Thresholds of Significance

Appendix G of the CEQA Guidelines

In accordance with Appendix G to the CEQA Guidelines, a project could have a potentially significant aesthetic impact if it were to cause one or more of the following conditions:

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

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

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

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

City of Los Angeles CEQA Thresholds Guide

To determine whether a proposed project would have a significant impact to the aesthetic character of the project area, the *L.A. CEQA Thresholds Guide* provides the following thresholds guidance for determining whether the Project would result in a significant impact.

Visual Character

The determination of significance for general aesthetic impacts shall be made on a case-by-case basis, considering the following factors:

a) The amount or relative proportion of existing features or elements that substantially contribute to the valued visual character or image of a neighborhood, community, or localized area, which would be removed, altered, or demolished;

b) The amount of natural open space to be graded or developed;

c) The degree to which proposed structures in natural open space areas would be effectively integrated into the aesthetics of the site, through appropriate design, etc.;

d) The degree of contrast between proposed features and existing features that represent the area's valued aesthetic image;

e) The degree to which a proposed zone change would result in buildings that would detract from the existing style or image of the area due to density, height, bulk, setbacks, signage, or other physical elements;

f) The degree to which the Project would contribute to the area's aesthetic value; and

g) Applicable guidelines and regulations.

Obstruction of Views

The determination of significance for the obstruction of views shall be made on a case-by-case basis, considering the following factors:

a) The nature and quality of recognized or valued views (such as natural topography, settings, man-made or natural features of visual interest, and resources such as mountains or the ocean);

b) Whether the project affects views from a designated scenic highway, corridor, or parkway;

c) The extent of obstruction (e.g., total blockage, partial interruption, or minor diminishment); and

d) The extent to which the project affects recognized views available from a length of a public roadway, bike path, or trail, as opposed to a single, fixed vantage point.

Shade/Shadow

a) More than three hours between 9:00 AM and 3:00 PM Pacific Standard Time (PST) between late October and early April; or

b) For more than four hours between 9:00 AM and 5:00 PM PST between early April and late October.

Light and Glare

Appendix G of the CEQA Guidelines provides a screening question that addresses impacts with regard to light and glare. This question is as follows:

Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The *L.A. CEQA Thresholds Guide* incorporates the screening questions contained in Appendix G. In accordance with the City's thresholds, the determination of significance with respect to light shall be made on a case-by-case basis, considering the following factors:

a) The change in ambient illumination levels as a result of Project sources; and

b) The extent to which project lighting would spill off the Project Site and affect adjacent light-sensitive areas.

Project Impacts

(1) Visual Character

Construction Impacts

Construction activities at the Project Site would be mostly visible from the surrounding uses, and are estimated to occur over a maximum of approximately 17 months. Construction of the Project would involve the following six phases: (1) site improvements (e.g., clearing and grubbing); (2) grading; (3) street improvements (Phase 1); (4) construction; (5) street improvements (Phase 2); and (6) architectural coatings. Construction activity would vary on a weekly basis, depending largely on the number of workers and construction trucks needed for the activities during each time period. Temporary fencing would be installed around the Project Site during construction, which would partially shield views of construction activities and equipment. Though Project construction activities would be viewable from adjacent public and private vantage points, changes to the appearance of the Project Site would be temporary in nature. Temporary construction changes are necessary for the development of the Site and would not rise to the level of a change that would substantially degrade the existing visual character. Therefore, impacts to visual character during construction would be less than significant.

Operational Impacts

The currently undeveloped Project Site is located in a hilly area of northeast Los Angeles and is surrounded to the north, east, and west with low-density, single-family residential development. Additional undeveloped land is located to the south of the Project Site. The existing visual character of the Project Site is defined by the walnut woodland community currently located on-site. The visual

character of the Project area is hillside low-density residential development mixed with some undeveloped portions of land. The Project would extend the existing hillside community from Sundown Drive to Haverhill Drive, Brilliant Drive to Haverhill Way, and Haverhill Way to Haverhill Drive, thereby completing 32 parcels previously approved within the subdivision/tract map no. 8943. The Project includes development of the 32 subdivided lots with one single-family home per lot, which would be consistent with the visual character of the surrounding development.

The existing Glassell Park community is an amalgam of classic historic styles and new contemporary designs, including custom homes and builder homes of the past. Current single-family development in the Project area consists of an eclectic mix of styles, colors, and materials. The Project considers both the modern and contemporary trends apparent throughout the existing neighborhood and proposes elevation styles reminiscent of three distinct architectural themes: (1) Irving Gill's California modern; (2) contemporary Californian; and (3) traditional. The Irving Gill California modern style favors flat roofs without eaves, casement windows with transoms, white or near-white exterior walls, cubic or rectangular massing, and ground level arches at the entry in the manner of classic California missions. This style utilizes simplistic details and clean lines throughout.

The Contemporary style homes are similar in massing to the Irving Gill California modern style homes, but provide for deeper recesses and asymmetrical yet balanced placement of windows and doors. The contemporary homes feature more complex details such as metal railings and awnings and casement windows combined with fixed glass panes. It is also the most materialistic of all styles proposed as part of the Project and is expressive through multiple materials and colors including ceramic tile, concrete block veneer, wood, and stucco finish.

The traditional style homes differentiate themselves from the Contemporary and Irving Gill California modern flat roof schemes and utilize large pitched roofs that mimic the slope of the hillside. This also serves to reduce the overall massing of the homes as they appear to slope down with the hill. This style utilizes stucco and wood look cement fiber siding maintaining a traditional appearance but with the longevity of durable materials. It is further characterized by casement and sliding windows with grids, transom glass at the entry, and extended eave overhangs with large modern kicker and outlooker braces.

Consistent with the eclectic mix in the area, the Project would be developed in one of the three architectural themes described above, and includes five different floor plans, three different elevation styles, and 12 different materials schemes, resulting in 32 distinct homes. (See Table 4.B-1, which provides the Project's floor plan matrix.) The different floor plans would include some homes being built uphill and other homes being built downhill. The Project homes would include varying materials such as porcelain tile siding, Coronado concrete veneer, fiber cement siding, boral roofing, metal railing, privacy glass garage doors, fiberglass entry doors, and wooden railing. Figures 4.B-1 through 4.B-11 provide conceptual site perspectives for the different lots, and Figures 4.B-12 through 4.B-14 provide conceptual color boards for the different floor plans. In addition, the Project plans and elevations are shown in Figures 2-6 through 2-28 in Section 2, Project Description.

Table 4.B-1
Floor Plan Matrix

Lot No.	Floor Plan	Reverse	Elevation Style	Material Scheme
118	DP1	Reverse	C	1
119	DP1		B	6
120	DP1	Reverse	A	2
121	DP1		B	7
122	DP2		A	3
123	DP2	Reverse	A	2
124	DP1	Reverse	C	4
125	DP1	Reverse	B	9
126	DP1	Reverse	A	5
132	UP2		B	10
133	UP1		A	5
134	UP2	Reverse	A	4
153	UP2	Reverse	A	1
154	UP1	Reverse	B	10
155	UP1	Reverse	A	2
156	UP1	Reverse	B	9
157	UP2	Reverse	B	6
158	UP1		A	1
159	UP2		A	2
160	UP1		B	7
161	UP2		B	8
190	UP2		A	5
191	UP2		B	6
192	UP1		B	8
193	UP1	Reverse	A	1
226	DP3		B	10
227	DP3	Reverse	A	4
228	DP3		C	12
229	DP3		C	11
230	DP3		B	9
231	DP3		A	4
232	UP1		B	10

Source: KTGY Group, Inc., 2015.

While the Project would develop uses of the same size and scale that are already occurring in the immediate Project area, the Project would require the grading and development of a currently undeveloped Site. As discussed in Section 4.D., Biological Resources, the Project would require the removal of 129 walnut trees, which would alter the visual character of the Project Site. The Project homes would be integrated into the Project area through the careful placement of the homes on the hillside with different uphill and downhill floor plans (see Figure 2-6, Conceptual Site Perspective) and the undeveloped area to the south of the Project Site would remain. In addition, the Project would be constructed in accordance with all requirements of the Los Angeles Municipal Code and the Mount Washington/Glassell Park Specific Plan, and would develop 32 homes on already subdivided single-family lots. Finally, replacement trees would be planted in accordance with Mitigation Measures D-2

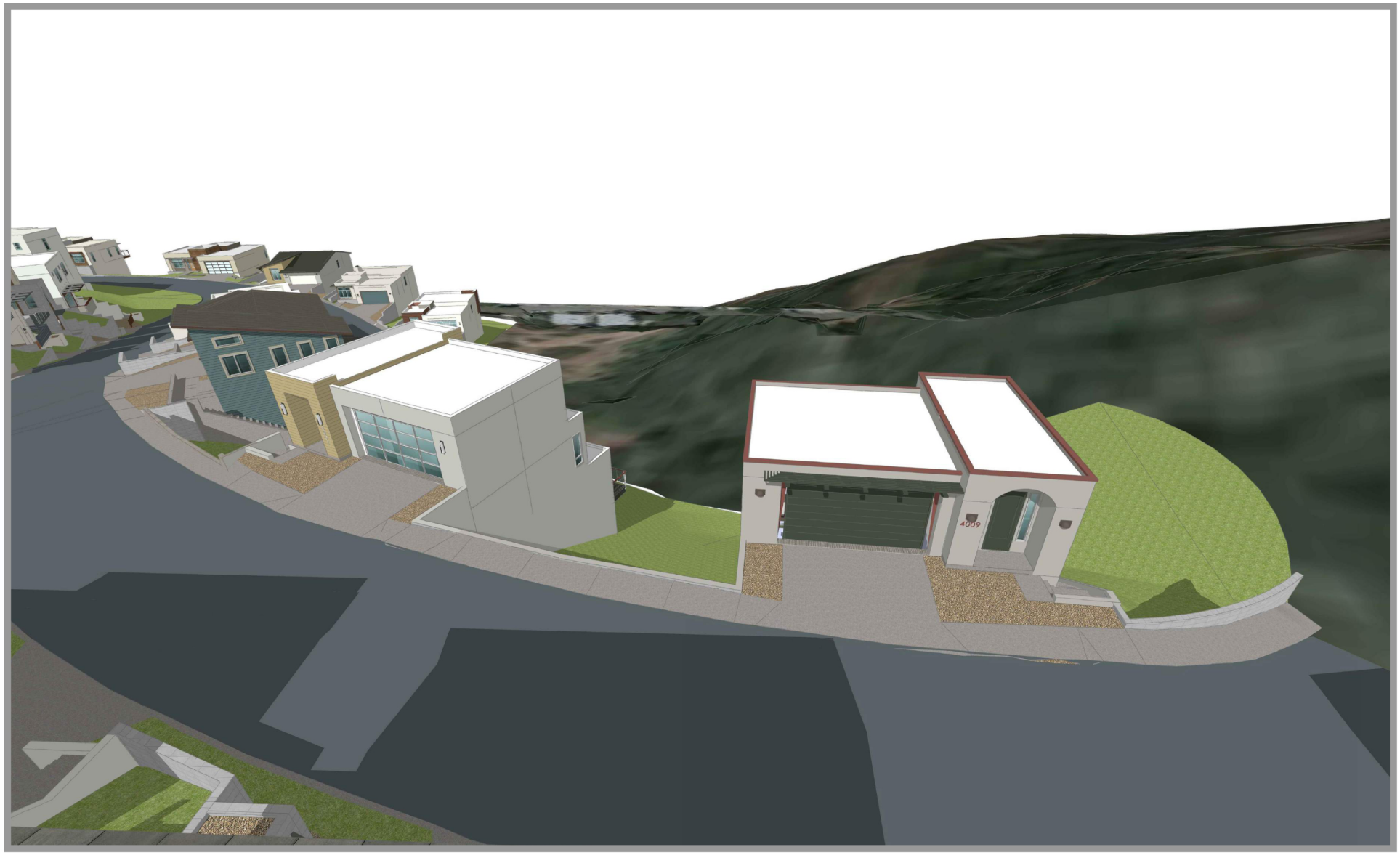
through D-4 (in Section 4.D., Biological Resources). With implementation of these measures, impacts related to visual character would be reduced to less than significant. However, as the replacement trees would not be as mature as the ones removed, it is conservatively considered that there would be a significant impact until the replacement trees have grown to sufficient maturity.



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 4.B-1
Conceptual Site Perspective, Lots 193 – 190



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

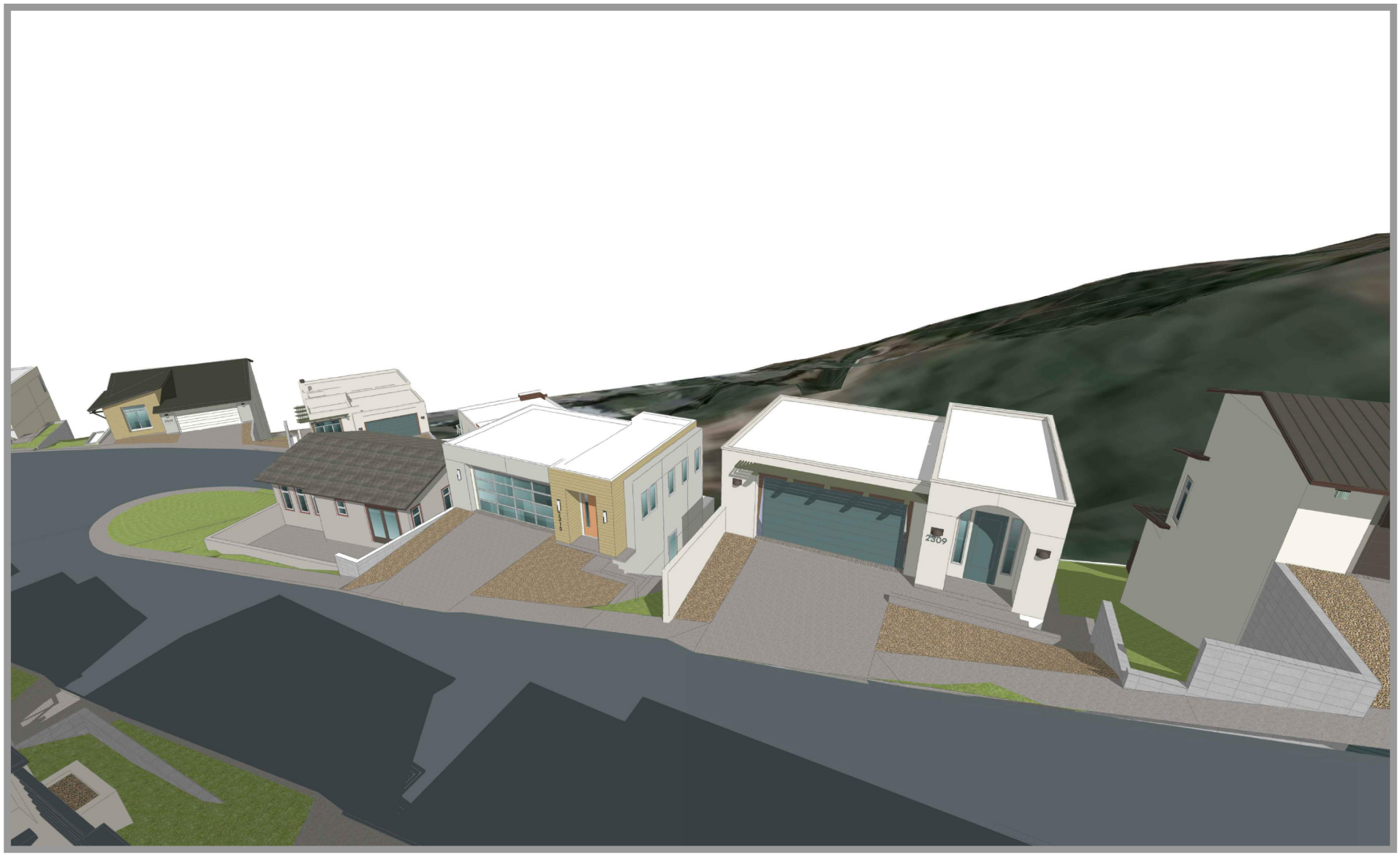
Figure 4.B-2
Conceptual Site Perspective, Lots 226 – 227



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 4.B-3
Conceptual Site Perspective, Lots 228 – 229



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 4.B-4
Conceptual Site Perspective, Lots 230 – 230



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 4.B-5
Conceptual Site Perspective, Lots 123 – 126 – 232



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 4.B-6
Conceptual Site Perspective, Lots 158 – 161



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

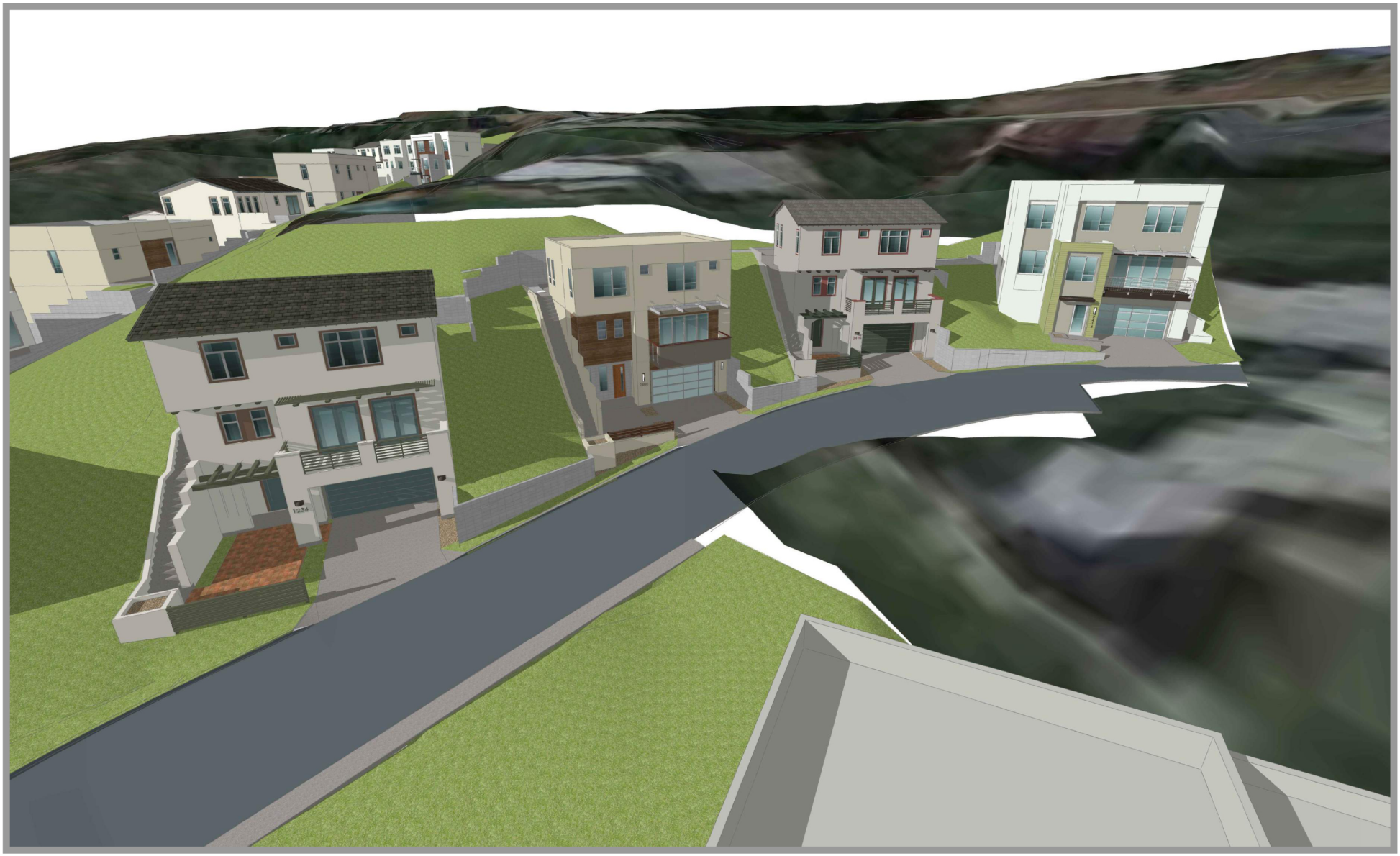
Figure 4.B-7
Conceptual Site Perspective, Lots 121 – 123



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 4.B-8
Conceptual Site Perspective, Lots 157 – 153



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 4.B-9
Conceptual Site Perspective, Lots 153 – 156



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

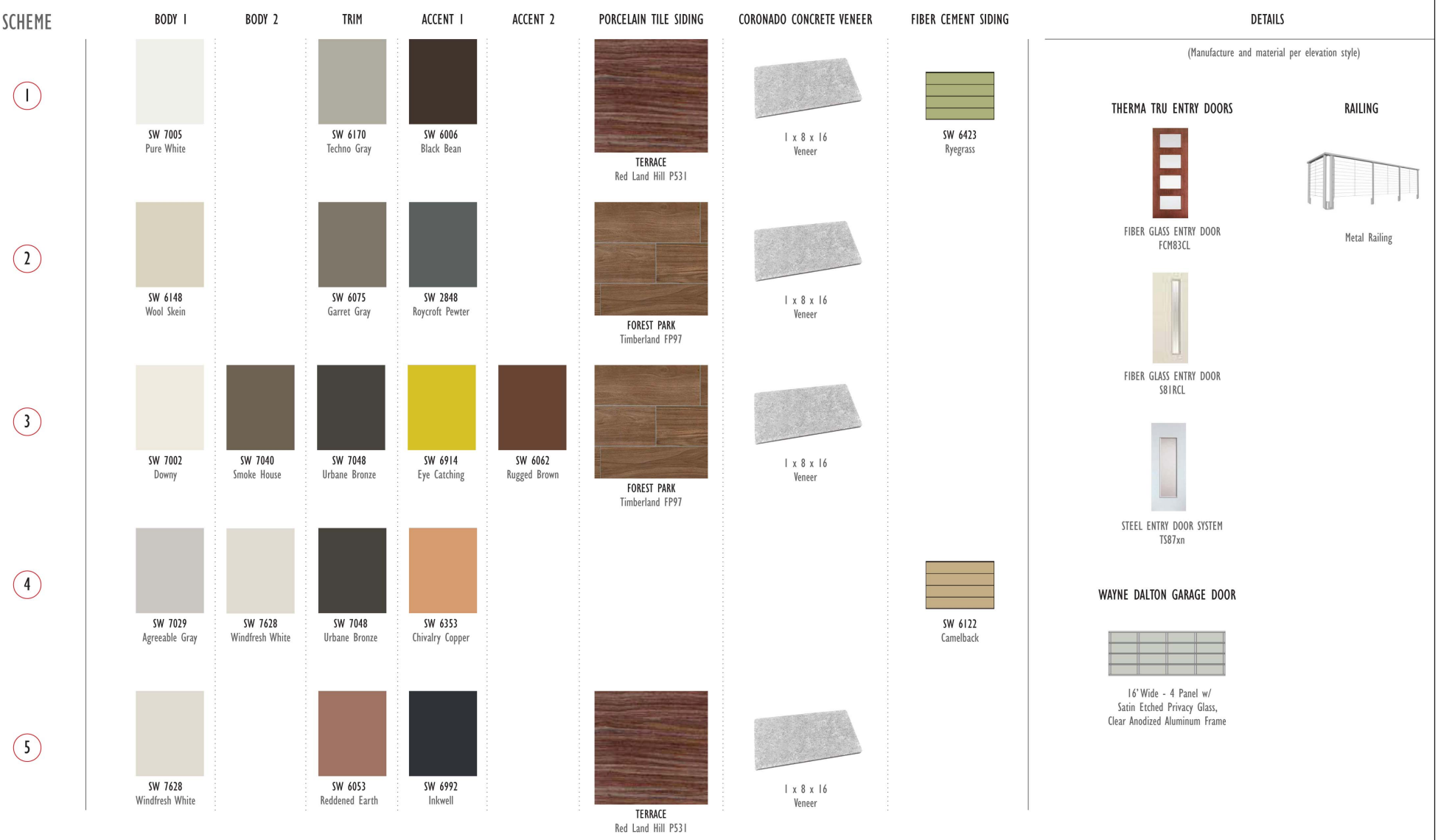
Figure 4.B-10
Conceptual Site Perspective, Lots 118 – 121



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

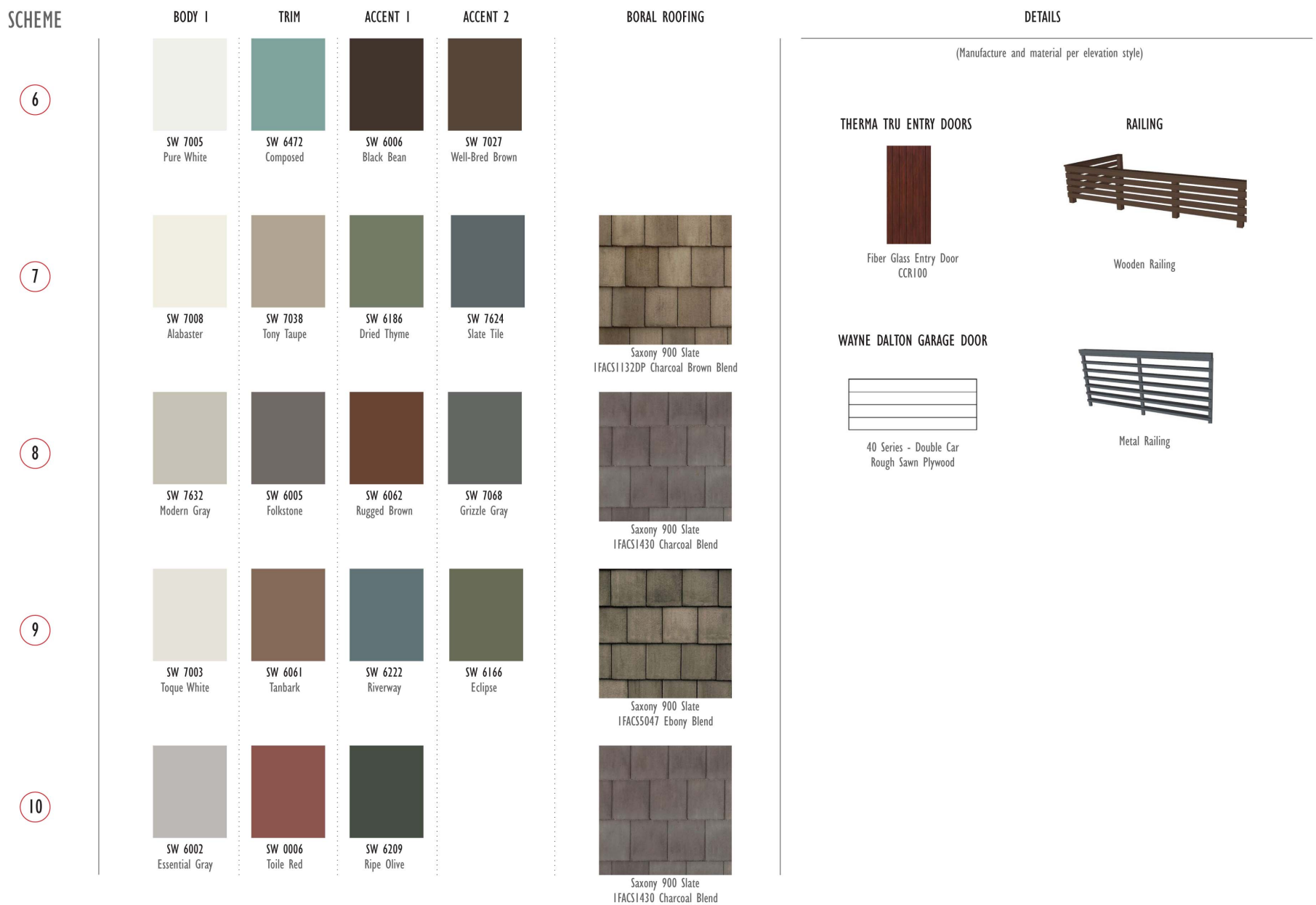
Figure 4.B-11
Conceptual Site Perspective, Lots 132 – 134



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

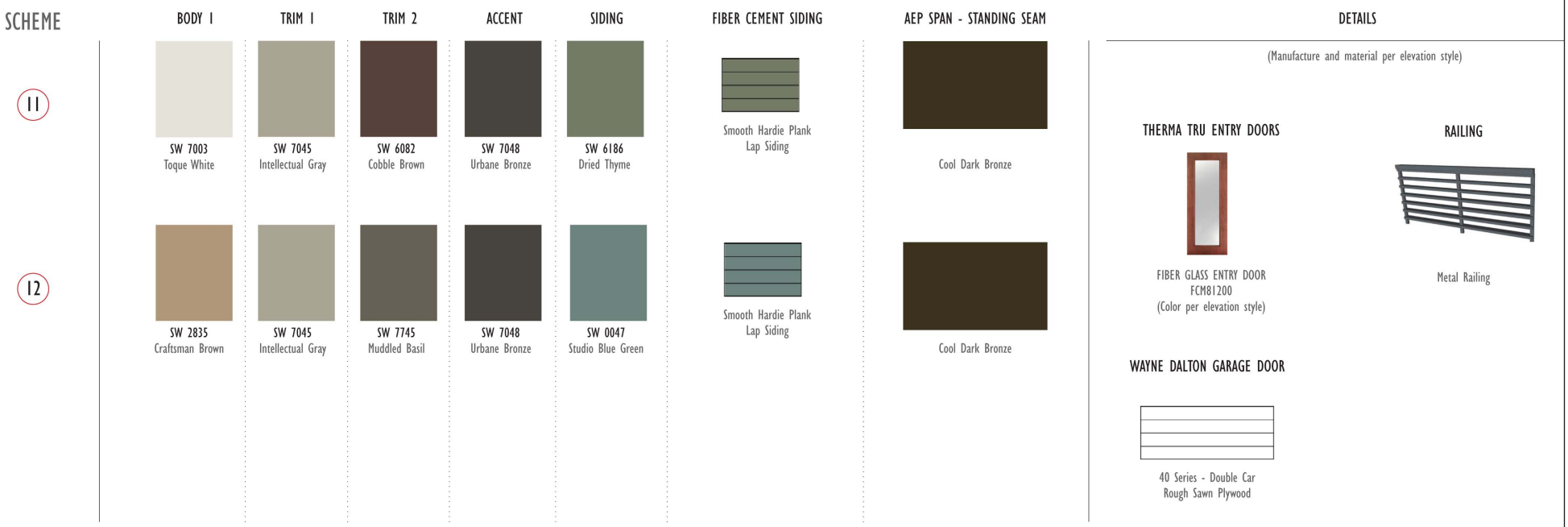
Figure 4.B-12
Conceptual Color Board – Plan A



Source: KTGY Group, Inc. Architecture+Planning, 2015.

CAJA Environmental Services, LLC

Figure 4.B-13
Conceptual Color Board – Plan B



PLEASE NOTE: THESE SELECTIONS ARE CONCEPTUAL ONLY. FINAL COLOR AND MATERIAL MANUFACTURERS MAY VARY.

Source: KTGY Group, Inc. Architecture+Planning, 2015.

(2) Views

Scenic Vistas

As discussed above, there are no State-designated scenic highways or scenic parkways, or City-designated scenic highways adjacent or in the vicinity of the Project Site. Therefore, as the Project Site is not located within a State- or locally-designated scenic highway, corridor, or parkway, the Project would not substantially alter a recognized scenic vista.

Valued Public Views

As discussed above, the predominant view in the Project area is of the San Gabriel Mountains to the north and east of the Project Site, although this view is obstructed from many locations due to topography, vegetation, and existing development. Ground level views from streets in the Project area (Haverhill Drive, Sundown Drive, Brilliant Drive, Division Street, and Cazador Street) are generally limited to those of the existing single-family development surrounding the Project Site, although intermittent views of the San Gabriel Mountains are available, depending on viewing elevation. Wider vistas of the San Gabriel Mountains are also available from a regional perspective. The Project would not create an additional obstruction of views of the San Gabriel Mountains from the streets surrounding the Project Site, and therefore, impacts related to views of these mountains would be less than significant.

As discussed at the beginning of this section, private views (those available from vantage points on private property) are not protected. Nevertheless, the following discussion of private views has been provided for informational purposes. Views of the San Gabriel Mountains to the north and east of the Project Site that may currently be available from some homes on Brilliant Drive and Sundown Drive may be partially obstructed by development of the Project. However, it is likely that these views are already at least partially obstructed by existing development, vegetation, and topography.

In addition, limited public views of the existing walnut woodland located on the Project Site are available in the Project area. As discussed in Section 4.D., Biological Resources, the Project proposes the removal of 129 walnut trees from the Project Site. While these existing trees are only viewable from limited public locations, the removal of these trees would conservatively be considered a significant impact. Implementation of Mitigation Measures D-2 through D-4 (in Section 4.D., Biological Resources) would require the planting of replacement trees. With implementation of these measures, impacts related to views of the walnut woodland would be reduced to less than significant; however, as the replacement trees would not be as mature as the ones removed, it is conservatively considered that there would be a significant impact until the replacement trees have grown to sufficient maturity.

(3) Shade and Shadow

The maximum height of any residence constructed as part of the Project is 45 feet, maximum building envelope height, from the existing grade. Therefore, as the Project is less than 60 feet in maximum height, impacts with respect to shade and shadow would be less than significant.

(4) Light and Glare

The Project Site and surrounding area are developed with low-density, single-family residential land uses and roadway and utility infrastructure, all of which produce light and glare (e.g., indoor/outdoor lighting, windows, light-colored surfaces, vehicles passing on surrounding streets, etc.) typical of other such suburban uses in the City. The Project would introduce some new lighting to the area, primarily due to illumination emanating through the windows of the proposed homes, as well as lighting on the exterior of the homes, and vehicles traveling on the Project streets. However, this lighting would be consistent with the existing lighting already in the area, and the Project would not introduce a new source of light that would substantially alter the character of off-site areas surrounding the Project Site. The Project would also include Project Design Feature B-1, which would ensure that no direct beam illumination can be seen outside of the Project boundary. In addition, in order to minimize glare, the Project would be required to use non-reflective materials such as non-reflective glass, pursuant to LAMC Section 93.0117. Moreover, LAMC Section 93.0117(b) would prohibit the Project's light sources from causing more than 2 foot-candles of lighting intensity or generate direct glare onto exterior glazed windows or glass doors on any property containing residential units; elevated habitable porch, deck, or balcony on any property containing residential units; or any ground surface intended for uses such as recreation, barbecue or lawn areas or any other property containing a residential unit. As such, Project impacts with respect to light and glare would be less than significant.

CUMULATIVE IMPACTS

Cumulative Visual Character Impacts

Cumulative aesthetic impacts could occur if other related projects in the vicinity of the Project Site would result in the degradation of the visual character of the Project area in conjunction with the impacts of the Project. As previously stated in Section 3, Environmental Setting, there are six related projects. The closest related project (Related Project No. 2) is approximately 1.3 miles from the Project Site. The Project is conservatively considered to result in a significant visual character impact until the replacement trees planted pursuant to Mitigation Measures D-2 through D-4 have grown to sufficient maturity. However, none of the related projects are located in close enough proximity to the Project Site to potentially result in cumulative visual character impacts as these related projects are not in the same viewshed. In addition, like the Project, each of the related projects within the Northeast Los Angeles Community Plan Area would be expected to conform to the applicable design guidelines and standards contained within these plans. As such, the Project would not contribute to a cumulative visual character of the area, and no cumulatively significant impact would occur.

Cumulative View Impacts

As described above, none of the related projects are in close enough proximity to the Project Site to combine to result in cumulative impacts with respect to views. Further, the Project Site is not located within a State- or locally-designated scenic highway, corridor, or parkway, and as such, there would be no impact to a recognized scenic vista.

As discussed above, the predominant view in the Project area is of the San Gabriel Mountains to the north and east of the Project Site, although this view is obstructed from many locations due to topography, vegetation, and existing development. Neither the Project nor any of the related projects would create an additional obstruction of views of the San Gabriel Mountains from the streets surrounding the Project Site. The Project is conservatively considered to result in a significant view impact until the replacement trees planted pursuant to Mitigation Measures D-2 through D-4 have grown to sufficient maturity. However, none of the related projects are located in close enough proximity to the Project Site to potentially result in cumulative view impacts as these related projects are not in the same viewshed. As such, cumulative impacts related to scenic vistas and views would be less than significant.

Cumulative Shade and Shadow Impacts

With respect to shade and shadow impacts, none of the related projects are in close enough proximity to the Project Site to result in cumulative shade and shadow impacts (the closest related project is Related Project No. 2, which is approximately 1.3 miles from the Project Site). As such, cumulative impacts related to shade and shadow would be less than significant.

Cumulative Light and Glare Impacts

With respect to impacts from light and glare, the Project, in combination with the related projects and other development in the area, would increase nighttime lighting and daytime glare. However, none of the related projects are in close enough proximity to the Project Site to result in cumulative light and glare impacts. Similar to the Project, the related projects would be expected to comply with Code-required lighting measures and to incorporate mitigation measures that would reduce light and glare impacts. As such, the Project would not contribute to a substantial increase in light or glare and no significant cumulative impact would occur.

MITIGATION MEASURES/REGULATORY COMPLIANCE MEASURES/PROJECT DESIGN FEATURES

Mitigation Measures

See Mitigation Measures D-2 through D-4, in Section 4.D., Biological Resources.

Regulatory Compliance Measures

None required.

Project Design Features

B-1 Outdoor lighting shall be designed and installed with hooding and shielding, such that no direct beam illumination shall be seen from adjacent residential properties or the public right-of-way.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project's impacts with respect to visual character and views are conservatively considered to be significant and unavoidable, but impacts with respect to shade/shadow and lighting/glare would be less than significant.

Cumulative impacts would also be less than significant.

4. ENVIRONMENTAL IMPACT ANALYSIS

C. AIR QUALITY

INTRODUCTION

The information and analysis in this section is based primarily on the following technical modeling (refer to Appendix B):

- *Air Quality and Greenhouse Gas Technical Modeling, DKA Planning, 2016.*

Both short-term impacts occurring during construction (e.g., site grading, haul truck trips) and long-term effects related to the ongoing operation of the Project are discussed in this section. This analysis focuses on two levels of impacts: pollutant emissions and pollutant concentrations. "Emissions" refer to the quantity of pollutants released into the air. "Concentrations" refer to the amount of pollutant material per volumetric unit of air, as measured in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$).

ENVIRONMENTAL SETTING

Pollutants and Effects

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards for outdoor concentrations. The federal and state standards have been set at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), particulate matter ten microns or less in diameter (PM_{10}), and lead (Pb). These pollutants are discussed below.

- Carbon Monoxide (CO) is a colorless and odorless gas formed by the incomplete combustion of fossil fuels. It is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, automobile exhaust accounts for the majority of emissions. CO is a non-reactive air pollutant that dissipates relatively quickly, so ambient concentrations generally follow the spatial and temporal distributions of vehicular traffic. Concentrations are influenced by local meteorological conditions, primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February.[1] The highest concentrations occur during the colder months of the year when inversion conditions are more frequent. CO is a health

[1] *Inversion is an atmospheric condition in which a layer of warm air traps cooler air near the surface of the earth, preventing the normal rising of surface air.*

concern because it competes with oxygen, often replacing it in the blood and reducing the blood's ability to transport oxygen to vital organs. Excess CO exposure can lead to dizziness, fatigue, and impair central nervous system functions.

- Ozone (O_3) is a colorless gas that is formed in the atmosphere when reactive organic gases (ROG) and nitrogen oxides (NO_X) react in the presence of ultraviolet sunlight. O_3 is not a primary pollutant; rather, it is a secondary pollutant formed by complex interactions of two pollutants directly emitted into the atmosphere. The primary sources of ROG and NO_X, the components of O_3, are automobile exhaust and industrial sources. Meteorology and terrain play major roles in O_3 formation. Ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. The greatest source of smog-producing gases is the automobile. Short-term exposure (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes.

- Nitrogen Dioxide (NO_2) like O_3, is not directly emitted into the atmosphere but is formed by an atmospheric chemical reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as NO_X and are major contributors to O_3 formation. NO_2 also contributes to the formation of PM_{10}. High concentrations of NO_2 can cause breathing difficulties and result in a brownish-red cast to the atmosphere with reduced visibility. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase of bronchitis in children (2-3 years old) has been observed at concentrations below 0.3 ppm.

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

- Particulate Matter (PM) consists of small liquid and solid particles floating in the air, including smoke, soot, dust, salts, acids, and metals and can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. Fine particulate matter, or $PM_{2.5}$, is roughly 1/28 the diameter of a human hair and results from fuel combustion (e.g. motor vehicles, power generation, industrial facilities), residential fireplaces, and wood stoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as SO_2, NO_X, and VOC. Inhalable particulate matter, or PM_{10}, is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

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

- Lead (Pb) in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturers of batteries, paint, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95 percent. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities have become lead-emission sources of greater concern.

  Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth.

- Toxic Air Contaminants (TAC) are airborne pollutants that may increase a person's risk of developing cancer or other serious health effects. TACs include over 700 chemical compounds that are identified by State and federal agencies based on a review of available scientific evidence. In California, TACs are identified through a two-step process established in 1983 that includes risk identification and risk management.

Regulatory Setting

Federal

The United States Environmental Protection Agency (the "USEPA") is responsible for enforcing the Federal Clean Air Act (CAA), the legislation that governs air quality in the United States. The USEPA is also responsible for establishing the National Ambient Air Quality Standards (NAAQS). NAAQS are required under the 1977 CAA and subsequent amendments. The USEPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain types of locomotives. USEPA has jurisdiction over emission sources outside state waters (e.g., beyond the outer continental shelf) and establishes emission standards, including those for vehicles sold in states other than

California, where automobiles must meet stricter emission standards set by the California Air Resources Board (CARB).

As required by the CAA, NAAQS have been established for seven major air pollutants: CO, NO_2, O_3, $PM_{2.5}$, PM_{10}, SO_2, and Pb. The CAA requires the USEPA to designate areas as attainment, non-attainment, or maintenance for each criteria pollutant based on whether the NAAQS have been achieved. The federal standards are summarized on Table 4.C-1. The USEPA has classified the South Coast Air Basin as non-attainment for O_3 and $PM_{2.5}$ and attainment (maintenance) for $PM_{10,}$ CO, and NO_2.

State

In addition to being subject to the requirements of CAA, air quality in California is also governed by more stringent regulations under the California Clean Air Act (CCAA). CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for administering the CCAA and establishing the California Ambient Air Quality Standards (CAAQS). The CCAA, as amended in 1992, requires all air districts in the State to achieve and maintain the CAAQS, which are generally more stringent than the federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

CARB has broad authority to regulate mobile air pollution sources, such as motor vehicles. It is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB established passenger vehicle fuel specifications, which became effective in March 1996. CARB oversees the functions of local air pollution control districts and air quality management districts, which, in turn, administer air quality activities at the regional and county levels. The state standards are summarized on Table 4.C-1.

The CCAA requires CARB to designate areas within California as either attainment or non-attainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as non-attainment for a pollutant if air quality data shows that a State standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a State standard and are not used as a basis for designating areas as non-attainment.

Table 4.C-1
State and National Ambient Air Quality Standards and Attainment Status for the South Coast Air Basin

Pollutant	Averaging Period	California		Federal	
		Standards	Attainment Status	Standards	Attainment Status
Ozone (O_3)	1-hour	0.09 ppm (180 µg/m^3)	Non-attainment	--	--
	8-hour	0.070 ppm (137 µg/m^3)	N/A[1]	0.075 ppm (147 µg/m^3)	Non-attainment
Respirable Particulate Matter (PM_{10})	24-hour	50 µg/m^3	Non-attainment	150 µg/m^3	Attainment
	Annual Arithmetic Mean	20 µg/m^3	Non-attainment	--	--
Fine Particulate Matter ($PM_{2.5}$)	24-hour	--	--	35 µg/m^3	Non-attainment
	Annual Arithmetic Mean	12 µg/m^3	Non-attainment	15 µg/m^3	Non-attainment
Carbon Monoxide (CO)	8-hour	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Maintenance
	1-hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Maintenance
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	Attainment	53 ppb (100 µg/m^3)	Unclassified/ Attainment
	1-hour	0.18 ppm (338 µg/m^3)	Attainment	100 ppb (188 µg/m^3)	Unclassified/ Attainment
Sulfur Dioxide (SO_2)	24-hour	0.04 ppm (105 µg/m^3)	Attainment	--	Attainment
	1-hour	0.25 ppm (655 µg/m^3)	Attainment	75 ppb (196 µg/m^3)	Attainment
Lead (Pb)	30-day average	1.5 µg/m^3	Attainment	--	--
	Calendar Quarter	--	--	0.15 µg/m^3	Attainment

[1]*N/A = CARB has not determined 8-hour O_3 attainment status*
Source: CARB, Ambient Air Quality Standards, and attainment status, accessed August 18, 2015 (www.arb.ca.gov/desig/adm/adm.htm).

Local

South Coast Air Quality Management District

The 1977 Lewis Air Quality Management Act merged four air pollution control districts to create the SCAQMD to coordinate air quality planning efforts throughout Southern California. It is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain State and federal ambient air quality standards. Programs include air quality rules and regulations that regulate stationary sources, area sources, point sources, and certain mobile source

emissions. The SCAQMD is also responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases.

The SCAQMD monitors air quality over its jurisdiction of 10,743 square miles, including the South Coast Air Basin, which covers an area of 6,745 square miles and is bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino and San Jacinto mountains to the north and east; and the San Diego County line to the south. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The SCAQMD also regulates the Riverside County portion of the Salton Sea Air Basin and Mojave Desert Air Basin.

All areas designated as non-attainment under the CCAA are required to prepare plans showing how they will meet the air quality standards. The SCAQMD prepares the Air Quality Management Plan (AQMP) to address CAA and CCAA requirements by identifying policies and control measures. The Southern California Association of Governments (SCAG) assists by preparing the transportation portion of the AQMP. On December 7, 2012, the SCAQMD adopted its 2012 AQMP, which is now the legally enforceable plan for meeting the 24-hour $PM_{2.5}$ strategy standard.

As part of the SCAQMD's environmental justice initiatives adopted in late 1997, the SCAQMD adopted the Multiple Air Toxics Exposure Study IV (MATES IV) in May 2015. The study concluded that the average of the modeled air toxics concentrations measured at each of the monitoring stations in the Basin equates to a background cancer risk of approximately 897 in 1 million primarily due to diesel exhaust particulate matter (DPM). Using the MATES IV methodology, about 94 percent of the cancer risk is attributed to emissions associated with mobile sources, and about 6 percent of the risk is attributed to toxics emitted from stationary sources, which include industries, and businesses such as dry cleaners and chrome plating operations. The MATES IV study found lower ambient concentrations of most of the measured air toxics, as compared to the levels measured in the previous MATES III study finalized in September 2008. The potential cancer risk for a given substance is expressed as the incremental number of potential excess cancer cases per million people over a 70-year lifetime exposure at a constant annual average pollutant concentration. The risks are usually presented in chances per million. For example, if the cancer risks were estimated to be 100 per million, this would predict an additional 100 excess cases of cancer in a population of 1 million people over a 70-year lifetime.

In its role as the local air quality regulatory agency, the SCAQMD also provides guidance on how environmental analyses should be prepared. This includes recommended thresholds of significance for evaluating air quality impacts.

City of Los Angeles

The Project is located in the Northeast Los Angeles Community Plan Area. Air quality policies are governed by the City's General Plan, which includes an Air Quality Element. Adopted on November 24, 1992, the Element includes six key goals that relate directly or indirectly to air quality:

1. Good air quality in an environment of continued population growth and healthy economic structure.

2. Less reliance on single-occupant vehicles with fewer commute and non-work trips.

3. Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand management techniques.

4. Minimize impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality.

5. Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels and the implementation of conservation measures including passive measures such as site orientation and tree planting.

6. Citizen awareness of the linkages between personal behavior and air pollution and participation in efforts to reduce air pollution.

ENVIRONMENTAL IMPACTS

Threshold of Significance

Appendix G of the CEQA Guidelines

In accordance with Appendix G of the *CEQA Guidelines*, a project could have a significant air quality impact if the project would cause any of the following to occur:

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

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

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

(d) Expose sensitive receptors to substantial pollutant concentrations; or

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

As discussed in Section 4.A (Impacts Found to be Less Than Significant), no impacts related to issue "e" would occur as a result of the Project. Thus, no further discussion of this issue is required.

City of Los Angeles CEQA Thresholds Guide/SCAQMD Significance Criteria

For air quality, the City has not adopted specific citywide significance thresholds, but instead relies on regional significance thresholds identified by the SCAQMD in its CEQA *Air Quality Handbook* (SCAQMD CEQA Handbook), as revised in November 1993 and approved by the SCAQMD's Board of Directors.

Construction Emissions

Based on guidance from the SCAQMD, the Project would have a significant impact if the following would occur:

- Daily regional construction emissions exceed SCAQMD construction emissions thresholds for VOC, NO_x, CO, SO_x, $PM_{2.5}$, or PM_{10}, as presented in Table 4.C-2;
- Daily localized construction emissions exceed SCAQMD construction emissions thresholds for NO_x, CO, $PM_{2.5}$, or PM_{10}, as presented in Table 4.C-2;
- The Project would generate TAC emissions that generate a health risk that exceeds ten persons in one million; and/or
- The Project would create an odor nuisance.

As discussed in Section 4.A (Impacts Found to be Less Than Significant), no impacts related to odors would occur as a result of the Project. Thus, no further discussion of this issue is required.

Table 4.C-2
SCAQMD Construction Emissions Thresholds

Criteria Pollutant	Regional Emissions (Pounds Per Day)	Localized Emissions (Pounds Per Day) /a/
Volatile Organic Compounds (VOC)	75	--
Nitrogen Oxides (NO_X)	100	108
Carbon Monoxide (CO)	550	1,048
Sulfur Oxides (SO_X)	150	--
Fine Particulates ($PM_{2.5}$)	55	5
Particulates (PM_{10})	150	8

/a/ Localized thresholds based on 25-meter receptor distance and a two-acre per day grading schedule in the Central LA receptor area.
SOURCE: SCAQMD Local Significance Thresholds guidance.

Operational Emissions

Based on SCAQMD guidance, the Project would have a significant impact if the following would occur:

- Daily operational emissions exceed SCAQMD operational thresholds for VOC, NO_X, CO, SO_X, $PM_{2.5}$, or PM_{10}, as presented in Table 4.C-3;
- Project-related traffic causes CO concentrations at study intersections to violate the CAAQS for either the one- or eight-hour period. The CAAQS for the one- and eight-hour periods are 20 ppm and 9.0 ppm, respectively;
- The Project would generate significant emissions of TACs;
- The Project would create an odor nuisance; and/or
- The Project would not be consistent with the AQMP.

Table 4.C-3
SCAQMD Daily Operational Emissions Thresholds

Criteria Pollutant	Pounds Per Day
Volatile Organic Compounds (VOC)	55
Nitrogen Oxides (NO_X)	55
Carbon Monoxide (CO)	550
Sulfur Oxides (SO_X)	150
Fine Particulates ($PM_{2.5}$)	55
Particulates (PM_{10})	150
SOURCE: SCAQMD, 2012.	

Project Impacts

Construction – Regional Emissions

Construction-related emissions were estimated using SCAQMD's CalEEMod 2013.2.2 model using assumptions from the Project's developer, including the Project's construction schedule of 17 months. Key assumptions include export of 13,251 cubic yards of soils during the grading phase; a construction schedule that includes site improvements (e.g., clearing and grubbing) (one month), grading phase (four months), street improvements (Phase 1) (three months), construction phase (11 months), a paving phase (one month), street improvements (Phase 2) (three months), and architectural coatings phase (one month).

As shown on Table 4.C-4, the construction of any phase of the Project would produce VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ emissions that do not exceed the SCAQMD's regional thresholds.

Construction – Localized Emissions

In terms of local air quality, the Project would produce emissions that do not exceed the SCAQMD's recommended localized standards of significance for NO_2 and CO during the construction phase. However, construction activities could produce PM_{10} and $PM_{2.5}$ emissions that exceed localized thresholds

recommended by the SCAQMD, primarily from vehicle exhaust and fugitive dust emissions from off-road construction vehicles during the site improvements and grading phases (refer to Table 4.C-4).

Table 4.C-4
Estimated Daily Construction Emissions – Unmitigated

Construction Phase	Pounds Per Day					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Site Improvements						
On-Site Emissions	5	48	33	<1	8	6
Off-Site Emissions	<1	<1	2	<1	<1	<1
Total Emissions	5	48	35	<1	9	6
Rough Grading						
On-Site Emissions	8	85	53	<1	10	7
Off-Site Emissions	<1	4	5	<1	1	<1
Total Emissions	8	89	58	<1	11	7
Street Improvements – Phase 1						
On-Site Emissions	7	58	37	<1	4	3
Off-Site Emissions	<1	<1	1	<1	<1	<1
Total Emissions	7	58	38	<1	4	3
Building Construction						
On-Site Emissions	7	55	36	<1	4	3
Off-Site Emissions	<1	1	5	<1	1	<1
Total Emissions	7	56	41	<1	4	4
Architectural Coatings						
On-Site Emissions	7	2	2	<1	<1	<1
Off-Site Emissions	<1	<1	<1	<1	<1	<1
Total Emissions	7	2	2	<1	<1	<1
Street Improvements – Phase 2						
On-Site Emissions	6	52	36	<1	3	3
Off-Site Emissions	<1	<1	1	<1	<1	<1
Total Emissions	6	52	37	<1	3	3
Paving						
On-Site Emissions	1	14	12	<1	1	1
Off-Site Emissions	<1	<1	2	<1	<1	<1
Total Emissions	1	15	14	<1	1	1
Maximum Regional Total	8	89	58	<1	11	7
Regional Significance Threshold	75	100	550	150	150	55
Exceed Threshold?	No	No	No	No	No	No
Maximum Localized Total	8	85	53	<1	10	7
Localized Significance Threshold	--	108	1,048	--	8	5
Exceed Threshold?	No	No	No	No	Yes	Yes

Source: DKA Planning, 2016. Refer to Appendix B. Based on CalEEMod 2013.2.2 model runs. LST analyses based on 2 acre site with 25 meter distances to receptors in Central LA source receptor area. Totals may not add up due to rounding of values.

However, daily emissions from construction would be higher should two or more phases overlap on the same day. For example, construction activities could overlap during the following periods based on construction plans by the developer:

- Rough grading and Phase 1 of street improvements from 3/1/17 to 5/1/17
- Building construction and rough grading from 5/1/17 to 5/31/17
- Building construction and architectural coatings from 1/1/18 to 3/31/18
- Phase 2 of street improvements, paving, building construction, and architectural coatings from 3/1/18 to 3/31/18

As shown in Table 4.C-5, concurrent phases of construction could produce slightly higher daily emissions under a worst-case scenario. Specifically, emissions of NO_x could exceed the SCAQMD's threshold for this regional ozone precursor at three potential times during Project construction. Localized emissions of NO_x, PM_{10}, and $PM_{2.5}$ could also exceed localized SCAQMD thresholds. Therefore, Project impacts related to regional and localized construction emissions would be potentially significant.

Table 4.C-5
Estimated Daily Construction Emissions (Worst Case Scenario) – Unmitigated

	Pounds Per Day					
Construction Period	**VOC**	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
March 1, 2017 to May 1, 2017						
On-Site Emissions	15	143	90	<1	14	10
Off-Site Emissions	<1	4	5	<1	1	<1
Total Emissions	15	147	95	<1	15	10
May 1, 2017 to May 31, 2017						
On-Site Emissions	15	140	89	<1	14	10
Off-Site Emissions	<1	4	6	<1	1	<1
Total Emissions	15	144	95	<1	15	10
January 1, 2018 to March 31, 2018						
On-Site Emissions	14	122	84	<1	8	7
Off-Site Emissions	<1	<1	3	<1	<1	<1
Total Emissions	14	122	87	<1	8	7
Maximum Regional Total	15	147	95	<1	15	10
Regional Significance Threshold	75	100	550	150	150	55
Exceed Threshold?	No	Yes	No	No	No	No
Maximum Localized Total	15	143	90	<1	14	10
Localized Significance Threshold	--	108	1,048	--	8	5
Exceed Threshold?	No	Yes	No	No	Yes	Yes

Source: DKA Planning, 2015. Refer to Appendix B. Based on CalEEMod 2013.2.2 model runs. Localized significance thresholds (LST) analyses based on 2 acre site with 25 meter distances to receptors in Central LA source receptor area. Totals may not add up due to rounding of values.

Construction – Sensitive Receptors

Sensitive receptors in the vicinity of the Project site include the following:

- Single family homes on Haverhill Drive, directly north of the Project site, with homes as close as 5 feet to the Project site.

- Single family homes on Sundown Drive, directly northwest of the Project site, with homes as close as 20 feet to the Project site.

- Single family homes on Division Street, directly east of the Project site, with homes as close as 20 feet to the Project site.

- Single family homes on Cazador Street and Loveland Drive, directly west of the Project site, with homes as close as 20 feet to the Project site.

As shown on Table 4.C-4, the Project's construction activities would generate localized construction emissions of PM_{10} and $PM_{2.5}$ in excess of SCAQMD's significance thresholds. The sensitive receptors identified above could be exposed to these emissions. Therefore, Project impacts related to exposing sensitive receptors to pollutant emissions in excess of SCAQMD's significance thresholds would be potentially significant.

Operation – Regional and Localized Emissions

The Project would produce long-term air quality emissions in the region, primarily from motor vehicles associated with the Project. The Project could add up to 278 net vehicle trips to and from the Project site on a peak weekday at the start of operations in 2017. However, as shown on Table 4.C-6, operational emissions would not exceed SCAQMD's regional significance thresholds for VOC, NO_X, CO, PM_{10} and $PM_{2.5}$ emissions. Therefore, Project impacts related to operational emissions would be less than significant.

Table 4.C-6
Estimated Daily Project Operational Emissions

Emissions Source	Pounds Per Day					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Area Source	1	<1	3	<1	<1	<1
Energy Source	<1	<1	<1	<1	<1	<1
Mobile Source	1	3	13	<1	2	1
Regional Total	**3**	**4**	**16**	**<1**	**2**	**1**
Regional Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Localized Total	**1**	**<1**	**3**	**<1**	**<1**	**<1**
Localized Threshold	--	*108*	*1,048*	--	*2*	*2*
Exceed Threshold?	**N/A**	**No**	**No**	**N/A**	**No**	**No**

Source: DKA Planning, 2016.

Consistency with the AQMP

The AQMP works with SCAG to forecast population growth for the region and develops a long-term attainment plan to accommodate the air pollution impacts of such growth.[2] Because population growth drives the demand for jobs and housing that contribute to regional air pollution, projects that are consistent with regional population forecasts built into the AQMP are considered to have less than significant impacts on regional air quality. The 2012 AQMP uses growth forecasts from SCAG's final adopted 2012 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) that are derived from evaluated 2010 Census data and existing demographic and economic assumptions from the Housing and Community Development Department (HCD) and Department of Finance (DOF). Consistency with jobs and housing projections are also considered as secondary barometers for growth.

The Project includes the development of 32 single-family residential homes on a site that is zoned and designated by the City for such development. Based on the 2015 persons-per-household rate (2.74) for the City, the Project would generate approximately 88 residents.[3] The Project does not propose additional housing units (and associated population) beyond what is permitted under the existing base land use designation and zoning. Thus, the Project's residential population would not represent a substantial or significant growth as compared to regional population growth projections used by SCAG in their 2012 RTP/SCS to identify future air quality emissions that must be mitigated through the 2012 AQMP. As such, the Project would not jeopardize the region's attainment of air quality standards.

Further, pursuant to the SCAQMD's CEQA Air Quality Handbook, the project as mitigated would not result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new air quality violations, or delay attainment of air quality standards. As a result, the Project is consistent with the SCAQMD's 2012 AQMP, and would have a less than significant effect with respect to inconsistency with the AQMP.

Sensitive Receptors

As shown on Table 4.C-6, the Project's operational activities would not generate any localized pollutant emissions in excess of SCAQMD's significance thresholds. As such, the Project would not expose any sensitive receptors in the vicinity of the Project site to substantial pollutant concentrations. Therefore, no significant impacts related to on-site operational emissions would occur.

With regard to off-site impacts from the Project, long-term operations would generate increases in vehicle traffic throughout the area. However, these increases would not result in exceedances of CO air quality standards at roadways in the area. This is due to three key factors. First, CO hotspots are extremely rare

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[2] *South Coast Air Quality Management District, 2012 Air Quality Management Plan, page 3-31.*

[3] *As of January 1, 2015, Department of Finance: http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php.*

and only occur in the presence of unusual atmospheric conditions and extremely cold conditions, neither of which applies to this Project area. Second, auto-related emissions of CO continue to decline because of advances in fuel combustion technology in the vehicle fleet. Finally, the Project would not contribute to the levels of congestion that would be needed to produce the amount of emissions needed to trigger a potential CO hotspot.

The SCAQMD recommends an evaluation of potential localized CO impacts when a project increases the volume-to-capacity (V/C) ratio at any intersection rated with Level of Service (LOS) D or worse by two percent or more. As detailed in Section 4.K, Transportation/Traffic, of this Draft EIR, Project traffic volumes would not meet these criteria at any intersections under Existing with Project or Future with Project conditions. Thus, the Project would not cause any new or exacerbate any existing CO hotspots, and, as a result, impacts related to localized mobile-source CO emissions would be less than significant.

Finally, the Project would not result in any substantial emissions of TACs during the construction or operations phase. During the construction phase, the primary air quality impacts would be associated with the combustion of diesel fuels, which produce exhaust-related particulate matter that is considered a toxic air contaminant by CARB based on chronic exposure to these emissions.[4] However, construction activities would not produce chronic, long-term exposure to diesel particulate matter. During long-term project operations, the Project does not include typical sources of acutely and chronically hazardous TACs such as industrial manufacturing processes and automotive repair facilities. As a result, the Project would not create substantial concentrations of TACs. In addition, the SCAQMD recommends that health risk assessments be conducted for substantial sources of diesel particulate emissions (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.[5] The Project would not generate a substantial number of truck trips. Based on the limited activity of TAC sources, the Project would not warrant the need for a health risk assessment associated with on-site activities. Therefore, Project impacts related to TACs would be less than significant.

CUMULATIVE IMPACTS

SCAQMD recommends that any construction-related emissions and operational emissions from individual development projects that exceed the project-specific mass daily emissions thresholds identified above also be considered cumulatively considerable.[6] Individual projects that generate

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[4] *California Office of Environmental Health Hazard Assessment. Health Effects of Diesel Exhaust. www. http://oehha.ca.gov/public_info/facts/dieselfacts.html.*

[5] *SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions, December 2002.*

[6] *White Paper on Regulatory Options for Addressing Cumulative Impacts from Air Pollution Emissions, SCAQMD Board Meeting, September 5, 2003, Agenda No. 29, Appendix D, p. D-3.*

emissions not in excess of SCAQMD's significance thresholds would not contribute considerably to any potential cumulative impact. SCAQMD neither recommends quantified analyses of the emissions generated by a set of cumulative development projects nor provides thresholds of significance to be used to assess the impacts associated with these emissions.

Construction Impacts

As discussed previously and as shown on Table 4.C-4, the Project would generate localized construction emissions of PM_{10} and $PM_{2.5}$ in excess of SCAQMD's significance thresholds. Concurrent construction phases could further result in NO_x emissions that exceed SCAQMD's regional and localized thresholds of significance. However, with implementation of Mitigation Measures C-1 through C-3 and Regulatory Compliance Measure C-4 identified later in this section, the Project's generation of these emissions would fall below the significance thresholds, and no significant impacts related to localized construction emissions would occur (refer to Table 4.C-7). As shown in Table 4.C-5, regional and localized NO_x emissions would exceed the SCAQMD's threshold, if concurrent work on rough grading, street improvements, and construction of model homes were to occur in mid-2017 and mid-2018. As such, the Project could contribute to potential cumulatively considerable construction air quality impacts.

Operational Impacts

As discussed previously and as shown on Table 4.C-6, the Project would not generate regional or localized operational in excess of SCAQMD's significance thresholds. The Project would not result in any significant Project-specific operational pollutant emissions impacts. As such, the Project would not contribute to any potential cumulatively considerable operational air quality impacts.

Sensitive Receptors

SCAQMD does recommend consideration of impacts associated cumulative emissions on shared sensitive receptors. There are several existing or reasonably foreseeable sensitive receptors near the Project site, including the following:

- Single family homes on Haverhill Drive, directly north of the Project site, with homes as close as 5 feet to the Project site.
- Single family homes on Sundown Drive, directly northwest of the Project site, with homes as close as 20 feet to the Project site.
- Single family homes on Division Street, directly east of the Project site, with homes as close as 20 feet to the Project site.
- Single family homes on Cazador Street and Loveland Drive, directly west of the Project site, with homes as close as 20 feet to the Project site.

While no proposed projects were identified that could produce construction sites within the vicinity of the Project site, any other related projects would be subject to the application of LST thresholds and SCAQMD Rule 403 that governs fugitive dust emissions that would help ensure that each related project does not produce localized hotspots of CO, $PM_{2.5}$, PM_{10}, and NO_2. Any projects that would exceed LST thresholds would perform dispersion modeling to confirm whether health-based air quality standards would be violated and mitigate any significant localized emissions accordingly. Receptors that are located further away would not be threatened with exceedances of health-based standards, and emissions significantly disperse as a function of atmospheric stability, mixing heights, and other variables, with distance a critical factor. The SCAQMD's LST thresholds recognize the influence of a receptor's proximity, setting LST mass emissions thresholds for PM_{10} that generally double with every doubling of distance. Therefore, cumulative impacts associated with construction related projects on local sensitive receptors would be less than significant.

MITIGATION MEASURES/REGULATORY COMPLIANCE MEASURES/PROJECT DESIGN FEATURES

Mitigation Measures

Because the Project would generate pollutant emissions in excess of SCAQMD's significance thresholds during the Project's construction phase, the following mitigation measures are required:

C-1 All off-road construction equipment greater than 50 hp shall meet U.S. EPA Tier 3 emission standards, where available, to reduce NO_x, PM_{10}, and $PM_{2.5}$ emissions at the Project site. In addition, all construction equipment shall be outfitted with Best Available Control Technology devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a CARB Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

C-2 Require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export). If the Lead Agency determines that 2010 model year or newer diesel trucks cannot be obtained and verifies this with the SCAQMD, the Lead Agency shall require trucks that meet U.S. EPA 2007 model year NO_x emissions requirements.

C-3 At the time of mobilization of each applicable unit of equipment, a copy of each unit's certified tier specification, Best Available Control Technology (BACT) documentation, and CARB or SCAQMD operating permit shall be available on-site.

Regulatory Compliance Measure

C-4 Construction activities shall comply with SCAQMD Rule 403, including the following measures:

- Apply water to disturbed areas of the site three times a day.
- Require the use of a gravel apron or other equivalent methods to reduce mud and dirt trackout onto truck exit routes.

- Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM generation.
- Limit soil disturbance to the amounts analyzed in the Final EIR.
- All materials transported off-site shall be securely covered or shall provide at least six inches of freeboard
- Apply non-toxic soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for ten days or more).
- Traffic speeds on all unpaved roads shall be reduced to 5 mph or less

Project Design Features

None provided.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Construction

Localized Emissions

As shown on Table 4.C-7, implementation of Mitigation Measures C-1 through C-3 and Regulatory Compliance Measure C-4 would reduce the Project's localized construction emissions to below SCAQMD's significance thresholds, and Project impacts related to localized construction emissions would be less than significant.

Regional Emissions

As shown on Table 4.C-7, regional construction emissions would remain below SCAQMD's significance thresholds. In particular, emissions of NO_x would not exceed the SCAQMD's threshold of 100 lb/day, even if rough grading, street improvements, and construction of model homes were to occur concurrently in mid-2017.

Sensitive Receptors

As shown on Table 4.C-7, implementation of Mitigation Measures C-1 through C-3 and Regulatory Compliance Measure C-4 would reduce the Project's localized construction emissions to below SCAQMD's significance thresholds, and Project impacts related to sensitive receptors would be less than significant. Table 4.C-8 confirms that even with any overlap of construction phases, project emissions would not exceed SCAQMD's thresholds of significance for localized and regional emissions.

Operational Emissions

Impacts related to operational emissions would be less than significant.

Cumulative Impacts

Cumulative impacts would be less than significant.

Table 4.C-7
Estimated Daily Construction Emissions – Mitigated

Construction Phase	Pounds Per Day					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Site Improvements						
On-Site Emissions	2	25	31	<1	4	3
Off-Site Emissions	<1	<1	2	<1	<1	<1
Total Emissions	2	25	33	<1	4	3
Rough Grading						
On-Site Emissions	1	4	46	<1	2	1
Off-Site Emissions	<1	4	5	<1	<1	<1
Total Emissions	1	8	51	<1	2	1
Street Improvements – Phase 1						
On-Site Emissions	3	35	38	<1	2	2
Off-Site Emissions	<1	<1	1	<1	<1	<1
Total Emissions	3	35	39	<1	2	2
Building Construction						
On-Site Emissions	3	32	35	<1	2	2
Off-Site Emissions	<1	1	5	<1	1	<1
Total Emissions	3	33	40	<1	2	2
Architectural Coatings						
On-Site Emissions	7	1	2	<1	<1	<1
Off-Site Emissions	<1	<1	2	<1	<1	<1
Total Emissions	7	1	4	<1	<1	<1
Street Improvements – Phase 2						
On-Site Emissions	2	33	38	<1	2	2
Off-Site Emissions	<1	<1	1	<1	<1	<1
Total Emissions	2	33	39	<1	2	2
Paving						
On-Site Emissions	<1	9	13	<1	1	1
Off-Site Emissions	<1	<1	2	<1	<1	<1
Total Emissions	<1	9	15	<1	1	1
Maximum Regional Total	7	35	51	<1	4	3
Regional Significance Threshold	75	100	550	150	150	55
Exceed Threshold?	No	No	No	No	No	No
Maximum Localized Total	7	35	46	<1	4	3
Localized Significance Threshold	--	108	1,048	--	8	5
Exceed Threshold?	No	No	No	No	No	No

Source: DKA Planning, 2016. Refer to Appendix A. Based on CalEEMod 2013.2.2 model runs. LST analyses based on 2 acre site with 25 meter distances to receptors in Central LA source receptor area.

Table 4.C-8
Estimated Daily Construction Emissions (Worst Case Scenario) – Mitigated

Construction Period	Pounds Per Day					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
March 1, 2017 to May 1, 2017						
On-Site Emissions	4	39	84	<1	4	3
Off-Site Emissions	<1	4	6	<1	<1	<1
Total Emissions	4	43	90	<1	4	3
May 1, 2017 to May 31, 2017						
On-Site Emissions	4	36	81	<1	4	2
Off-Site Emissions	<1	5	10	<1	1	<1
Total Emissions	4	41	91	<1	5	2
January 1, 2018 to March 31, 2018						
On-Site Emissions	9	43	53	<1	3	3
Off-Site Emissions	<1	<1	2	<1	1	<1
Total Emissions	9	43	55	<1	4	3
Maximum Regional Total	9	43	91	<1	5	3
Regional Significance Threshold	75	100	550	150	150	55
Exceed Threshold?	No	No	No	No	No	No
Maximum Localized Total	9	43	81	<1	4	3
Localized Significance Threshold	--	108	1,048	--	8	5
Exceed Threshold?	No	No	No	No	No	No

Source: DKA Planning, 2016. Refer to Appendix B. Based on CalEEMod 2013.2.2 model runs. LST analyses based on 2 acre site with 25 meter distances to receptors in Central LA source receptor area. Totals may not add up due to rounding of values.

4. ENVIRONMENTAL IMPACT ANALYSIS

D. BIOLOGICAL RESOURCES

INTRODUCTION

The information and analysis in this section is primarily based on the following reports (refer to Appendix C):

- *Biological Resources Assessment for the Haverhill-Glassell Park Project, Rincon Consultants, August 12, 2016.*
- *Nesting Bird Survey for the Haverhill-Glassell Park Project, Rincon Consultants, April 27, 2014.*
- *Update to Rare Plant Survey Report for the Haverhill-Glassell Park Project, Rincon Consultants, June 5, 2015.*
- *City of Los Angeles Protected Tree Report, Carlberg Associates, August 9, 2016.*
- *Walnut Woodland Habitat Quality Analysis for the Haverhill-Glassell Park Project, Rincon Consultants, August 12, 2016.*
- *Fuel Modification Memorandum, Rincon Consultants, August 12, 2016.*

ENVIRONMENTAL SETTING

Federal

Federal Endangered Species Act

Pursuant to Section 7 of the Federal Endangered Species Act (the "FESA"), any federal agency undertaking a federal action (including issuance of Section 404 permits) that may affect a species listed or proposed as threatened or endangered under the FESA must consult with U.S. Fish and Wildlife Service (USFWS). In addition, any federal agency undertaking a federal action that may result in adverse modification of critical habitat for a federally listed species must consult with USFWS.

Various actions, including the "take" (e.g., harm, harass, pursue, injure, kill) of an animal species listed as threatened or endangered are regulated by the FESA. Destruction or adverse modification of habitat, either directly or indirectly, also constitutes a "take." Section 7 and Section 10 of the FESA provide procedures for permitting takes that are incidental to, and not the purpose of, the carrying out of otherwise lawful activity (such as construction activity) in coordination with USFWS review. The USFWS may provide comments and recommendations outside their regulatory authority even if it is determined that a project will not adversely affect an endangered species.

The USFWS also regulates the "take" of migratory birds under the Migratory Bird Treaty Act, which provides that it is unlawful to "pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not." The USFWS maintains a list of migratory birds that are protected under the Act.

The FESA defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species which is likely to become an endangered species in the foreseeable future throughout all or significant portions of its range." The Sacramento, California USFWS Field Office describes a Federal Species of Concern (FSC) as "a sensitive species that has not been listed, proposed for listing, or placed in candidate status (USFWS 2015)." The FSC receives no legal protection and use of the term does not necessarily mean the species will eventually be proposed for listing as a threatened or endangered species. The federal listing statuses are as follows:

- **FE** Federally listed as Endangered
- **FT** Federally listed as Threatened
- **FPT** Federally Proposed as Threatened
- **FPE** Federally Proposed as Endangered
- **FPD** Federally Proposed for delisting
- **FC** Federal Candidate Species
- **FSC** Federal Species of Concern

Clean Water Act

Pursuant to Section 404 of the Clean Water Act (CWA), the U.S. Army Corps of Engineers (the "USACE") regulates the discharge of dredged and/or fill material into waters of the United States. Although not expressly defined, it is assumed that the USACE Manual (Environmental Laboratory 1987) for delineating wetlands should be used in determining the presence of wetland indicators in vernal pools. With the exception of wetlands created for the purpose of providing wetlands habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions.

As stated by the USACE: "(a) The term *waters of the United States* means: (1) all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (2) all interstate waters including interstate wetlands; and (3) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters."

The USACE generally takes jurisdiction within rivers and streams to the "ordinary high water mark," determined by erosion, the deposition of vegetation or debris, and changes in vegetation or soil

characteristics. However, if there is no federal nexus to navigable waters, these waters are considered "isolated" and thus, not subject to their jurisdiction.

Migratory Bird Treaty and Bald and Golden Eagle Protection Acts

Migratory birds including resident raptors and passerines are protected under the federal Migratory Bird Treaty Act (the "MBTA"). The MBTA of 1918 implemented the 1916 convention between the U.S. and Great Britain for the protection of birds migrating between the U.S. and Canada. Similar conventions between the United States and Mexico (1936), Japan (1972) and the Union of Soviet Socialist Republics (1976) further expanded the scope of international protection of migratory birds. Each new treaty has been incorporated into the MBTA as an amendment and the provisions of the new treaty are implemented domestically. These four treaties and their enabling legislation, the MBTA, established Federal responsibilities for the protection of nearly all species of birds, their eggs and nests.

The MBTA made it illegal for people to "take" migratory birds, their eggs, feathers or nests. Take is defined in the MBTA to include by any means or in any manner, any attempt at hunting, pursuing, wounding, killing, possessing or transporting any migratory bird, nest, egg, or part thereof. The Bald and Golden Eagle Protection Act affords additional protection to all bald and golden eagles.

State

California Endangered Species Act

The California Endangered Species Act (the "CESA") is similar to the FESA in that it contains a process for listing of species regulating potential impacts to listed species. Section 2081 of the CESA authorizes the California Department of Fish and Wildlife (CDFW) to enter into a memorandum of agreement for take of listed species for scientific, educational, or management purposes.

The CESA defines an endangered species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." The state defines a threatened species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts. Any animal determined by the [California Fish and Wildlife] commission as rare on or before January 1, 1985 is a threatened species." A candidate species is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Commission has formally noticed as being under review by the CDFW for addition to either the list of endangered species or the list of threatened species, or a species for which the Commission has published a notice of proposed regulation to add the species to either list." Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the

discretion of the Commission. Unlike FESA, CESA does not include listing provisions for invertebrate species. The State listing statuses are as follows:

- **SE** State listed as Endangered
- **ST** State listed as Threatened
- **SR** State listed as Rare (plants only)
- **CSC** California Species of Special Concern
- **CWL** California Watch List
- **SFP** State Fully Protected
- **SP** State Protected
- **SCE** State Candidate for Endangered
- **SCT** State Candidate for Threatened
- **Special Animal** CNDDB Special Animal

The State of California also maintains the California Natural Diversity Database (the "CNDDB"), which is a computerized inventory of information on the location of California's rare, threatened, endangered, and otherwise sensitive plants, animals, and natural communities published by the CDFW. Updates to the CNDDB are issued twice annually. Valuable information regarding the species' occurrences, population numbers, observers, occurrence dates, and potential threats to the organism(s) are included for each occurrence record.

The California Native Plant Society (the "CNPS") is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in California. The CNPS separates plants of interest into five categories. The CNPS has compiled an inventory comprised of the information focusing on the geographic distribution and qualitative characterization of Rare, Threatened, or Endangered vascular plant species of California. The list serves as the candidate list for listing as Threatened and Endangered by the CDFW. The five categories within the CNPS are as follows:

- **CRPR 1A** Presumed extinct in California
- **CRPR 1B** Rare, threatened, or endangered in California and elsewhere
- **CRPR 2** Rare, threatened, or endangered in California, but more common elsewhere

- **CRPR 3** Plants about which more information is needed (review list)
- **CRPR 4** Species of limited distribution in California (i.e., naturally rare in the wild), but whose existence does not appear to be susceptible to threat

Additionally, the CNPS assigns a "Threat Rank" as an extension to the above categories that designates the level of endangerment by a 1 to 3 ranking, with 1 being the most endangered and 3 being the least endangered.

Native Plant Protection Act

The Native Plant Protection Act (the "NPPA") enacted a process by which plants are listed as rare or endangered. The NPPA regulates collection, transport, and commerce in plants that are listed. The CESA follows the NPPA and covers both plants and wildlife determined to be threatened with extinction or endangered. Plants listed as rare under the NPPA are designated as threated under the CESA.

Porter-Cologne Water Quality Control Act

The Regional Water Quality Control Board (the "RWQCB") regulates activities pursuant to Section 401 of the federal CWA and the California Porter-Cologne Water Quality Control Act of 1969 (California Water Code). The RWQCB regulates activities pursuant to Section 401(a)(1) of the federal CWA as well as the Porter-Cologne Act (Water Code section 13260). Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit to conduct any activity including but not limited to the construction or operation of facilities that may result in any discharge into navigable waters. The certification shall originate from the State in which the discharge originates or will originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable water at the point where the discharge originates or will originate. Any such discharge will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the CWA. The Porter Cologne Act requires "any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements [WDRs])." Discharge of fill material into "waters" of the State that do not fall under the jurisdiction of the USACE pursuant to Section 404 of the CWA may require authorization through application for WDRs or through waiver of WDRs.

Local

Los Angeles Municipal Code (LAMC)

Section 17.02 of the LAMC defines a protected tree as any of the following Southern California native tree species that measures four inches or more in cumulative diameter, four and one half feet above the ground level at the base of the tree:

(a) Oak tree including Valley Oak (*Quercus lobata*) and California Live Oak (*Quercus agrifolia*), or any other tree of the oak genus indigenous to California but excluding the Scrub Oak (*Quercus dumosa*)

(b) Southern California Black Walnut (*Juglans californica var. californica*)

(c) Western Sycamore (*Platanus racemosa*)

(d) California Bay (*Umbellularia californica*)

This definition shall not include any tree grown or held for sale by a licensed nursery, or trees planted or grown as a part of a tree planting program.

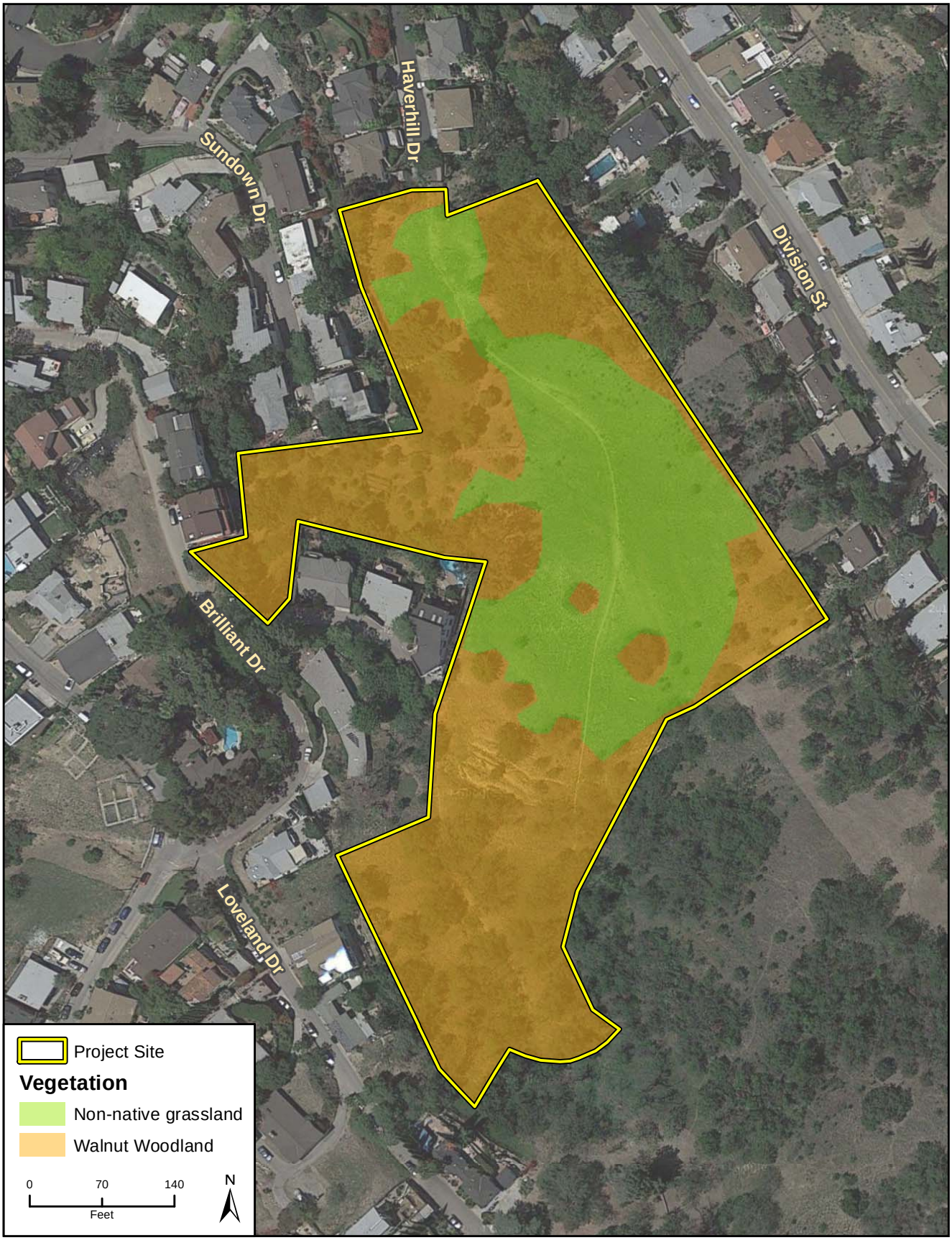
Mt. Washington-Glassell Park Specific Plan

The Project site is located within the boundaries of the Mt. Washington-Glassell Park Specific Plan and as such, development of the Project site is subject to the policies and requirements of the Specific Plan. The Mt. Washington-Glassell Park Specific Plan defines a "significant tree" as any tree that measures 12 inches or more in diameter at four and one-half feet above the average natural grade at the base of the tree and/or is more than 35 feet in height.

Existing Project Site Conditions

Topography and Soils

At an elevation range of approximately 675-775 feet above mean sea level (amsl), the topography of the Project area is characterized by a steep downward slope east toward Division Street, with a slight erosional feature that cuts down from Brilliant Way near the southern site boundary. Based on the most recent Natural Resources Conservation Service (NRCS) soil survey for Los Angeles County, California, Southeastern Part, the Project site is mapped as Urban land-Lithic Xerorthents-Hambright-Castaic (s1042) a hydrologic group D soil, which has high runoff potential, very low infiltration rates, and consists chiefly of clay soils.



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CAJA Environmental Services, LLC

Figure 4.D-1
Vegetation Community/Land Cover Types
within the Project Survey Area

General Vegetation

A survey of the Project site noted that the site primarily consists of California walnut woodland, which is described as an open canopied woodland community dominated by California walnut (*Juglans californica*) (Figure 4.D-1). The understory consists primarily of non-native annual grasses and forbs. California walnut woodlands are typically found on relatively moist fine-textured soils of valley slopes and bottoms, as well as in rocky outcrops. On drier, rockier sites this habitat is often surrounded by coastal sage scrub; on more mesic sites it intergrades with coast live oak communities (Holland 1986). Within the Project site, this habitat type is specifically dominated by southern California black walnut (*Juglans californica* var. *californica*) intermixed with several coast live oaks (*Quercus agrifolia*) and various ornamental trees. The understory and adjacent vegetation is relatively open, consisting of castor bean (*Ricinus communis*), mallow (*Malva* sp.), black mustard (*Brassica nigra*) and annual non-native grasses. The understory vegetation appears to undergo regular maintenance (i.e. trimming/mowing).

The California walnut woodland is considered a sensitive terrestrial natural community and is located within the Project site. No special-status plant species were detected during the field reconnaissance or rare plant surveys conducted at the site. Although elements of suitable habitat for some species are present, each species is limited to specific biotypes or soil types (e.g., volcanic, alkaline, and/or clay soils; salt marshes; upland scrub; etc.), which do not occur on site.

General Wildlife

The Project site and surrounding area provide habitat for wildlife species that commonly occur in suburban areas of the City. Avian species observed/detected on or adjacent to the Project site during a survey of the site include red-tailed hawk (*Buteo jamaicensis*), lesser goldfinch (*Spinus psaltria*), western scrub-jay (*Aphelocoma californica*), common raven (*Corvus corax*), bushtit (*Psaltriparus minimus*), and California towhee (*Melozone crissalis*). Three mammalian species, California ground squirrel (*Otospermophilus beecheyi*), cottontail rabbit (*Sylvilagus* sp.), and coyote (*Canis latrans*) were also either observed or detected (via presence of scat) on the project site during the survey. No amphibian or reptile species were observed during the assessment; however, common reptilian species such as western fence lizard (*Sceloporus occidentalis*) are expected to occur.

Given the high degree of urbanization within the Project site and lack of suitable habitat for each species, no special-status wildlife species were observed or are expected to occur. The site contains marginal habitat for special status bat species (e.g. hoary bat and western yellow bat); however, none were detected during the focused surveys conducted at the site.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, a project could have a significant impact on biological resources if the project would do the following:

(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 regulation, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

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

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

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

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

(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.

As discussed in Section 4.A (Impacts Found to be Less Than Signficant), the Project would not result in any significant impacts related to item "f." Therefore, no further analysis of this issue is required.

Methodology

To determine the potential for special-status species, sensitive plant communities, and jurisdictional waters/wetland to occur at the Project site, Rincon Consultants conducted a review of relevant literature followed by field reconnaissance surveys, a focused bat survey, and a rare plant survey. The potential presence of special-status species is based on a literature review and a field survey designed to assess habitat suitability and presence of target species.

Literature Review

The literature review included database research on special status resources occurrences within a 5-mile radius of the Project site. Sources included the CDFW California Natural Diversity Data Base (CNDDB), Biogeographic Information and Observation System (BIOS – http://www.bios.dfg.ca.gov), and USFWS Critical Habitat Portal (http://criticalhabitat.fws.gov). Other resources included the California Native Plant Society's (CNPS) online *Inventory of Rare and Endangered Plants of California* (CNPS 2014), CDFW's *Special Animals List* (September 2014), and CDFW's *Special Vascular Plants, Bryophytes, and Lichens List* (April 2014). Aerial photographs, topographic maps, soil survey maps, geologic maps, and climatic data in the area were also examined.

Field Reconnaissance Survey

A biological resource reconnaissance-level site visit was conducted to assess the habitat suitability for potential special-status species, map the existing vegetation, map any sensiitve biological resources currently onsite, note the presence of jurisdictional waters or wetlands, document any wildlife connectivity/movement features, and record all observations of plant and wildlife species. Rincon Biologist Jillian Moore conducted the first site visit on October 23, 2014, between the hours of 1300 and 1400. Rincon Biologist Lindsay Griffin conducted a supplemental survey on December 8, 2014, between the hours of 1400 and 1500.

Rincon Biologists Jennifer Kendrick and Robin Murray conducted a supplemental survey on May 27, 2016. The survey consisted of an updated assessment to confirm absence of potential waters or wetlands under the jurisdiction and oversight of Federal, State, and local authorities and an analysis of walnut woodland habitat quality. Weather conditions during the survey included an average temperature of 78 degrees Farenheit, with winds between one and three miles per hour and no cloud cover.

All plant species observed within the survey area were documented. The survey included a directed search for special-status plants that would have been apparent during the time of the survey. Limitations to the compilation of a comprehensive floral checklist were imposed by seasonal factors, such as blooming period and emergence of some of the annual species.

Wildlife species observed directly or detected from calls, tracks, scat, nests, or other sign were documented. The detection of wildlife species was limited by seasonal and temporal factors. The survey was conducted in the early fall; therefore, potentially occurring spring or winter migrants may not have been observed. As the survey was performed during the day, identification of nocturnal animals was limited to sign if present on-site.

Focused Bat Survey

Rincon Biologists Leslie Yen and Lauren Kodama conducted a focused bat survey that included a day-time habitat assessment and an evening bat emergence and acoustic survey on March 13, 2015, between

the hours of 1600 and 2000. The daytime habitat assessment included a visual inspection of foliage, crevices, hollows, and peeling bark of trees suitable for roosting bats (e.g. medium sized walnut trees and palm trees bordering the site) within the project boundary. The survey focused on hoary bat (*Lasiurus cinerus*) and western yellow bat (*Lasiurus xanthinus*), two species with low potential to occur onsite. Ten (10) x 42 binoculars were used during the inspections. If observed, bats and/or bat sign were recorded, including roosting bat(s), urine staining, and individual scat or guano accumulations stuck to trees and bark or piled below a roosting location.

The evening bat emergence and acoustic surveys were conducted on the ground. During this observation period the biologists looked northwest and south at vegetation for emerging bats. In addition to recording all visual observations of bats, a Pettersson D240x acoustical detector and auto recording device were used to detect inaudible ultrasonic calls of bats active within the area. To increase the airspace of the detector the detector microphone was placed on an extension pole of 20 vertical feet in the air. Acoustic recordings were subsequently downloaded to a computer and analyzed in Sonobat 3.2.1.

No bats were observed during either portion of the survey and no accumulations of guano were found on site. No bats were detected by the acoustical detectors.

Rare Plant Survey

Rincon Biologist, Daniel Rosie conducted a rare plant survey on March 17, 2015, between the hours of 1615 and 1800.The rare plant survey focused on special-status species that had low potential to occur on site, based on previous site surveys conducted in October and December 2014. These species include round-leaved filaree *(California macrophylla)*, many-stemmed dudleya *(Dudleya multicaulis)*, and mesa horkelia *(Horkelia cuneata* var. *puberula)*. No rare plants were observed on the Project site.

A second rare plant survey was conducted at the Project site by Rincon in June 2015. No special-status plant species were detected during the field reconnaissance or rare plant surveys conducted at the Project site. Although elements of suitable habitat for some species are present (e.g. round-leaved filaree, many-stemmed dudleya, and mesa horkelia), each species is limited to specific biotypes or soil types (e.g., volcanic, alkaline, and/or clay soils; salt marshes; upland scrub; etc.), which do not occur on Project site.

Special-Status Species

A review of the Conservation Element for the City of Los Angeles General Plan did not identify any habitat for any threatened or rare species as listed in Title 14 of the California Code of Regulations. Based on a query of CNDDB RareFind 5, there are 11 special-status plant species and 12 special-status wildlife species documented within a 5-mile radius of the Project site. All 23 special-status species were evaluated to determine the potential for the species to occur within the Project site (refer to Table 4.D-1).

Table 4.D-1
Special-Status Species Potentially Occurring on the Project Site

Scientific Name **Common Name**	**Status Fed/State ESA CRPR G-Rank/S-Rank**	**Habitat Requirements**	**Potential for Occurrence / Basis for Determination**
Plants			
Atriplex serenana var. *davidsonii* Davidson's saltscale	--/ -- 1B.2 G5T2/S2	Annual herb. Blooms Apr-Oct. Coastal bluff scrub, coastal scrub. Alkaline soil. 3-250m (10-820ft).	**None.** Habitat requirements not present on site. Species was not observed during rare plant survey conducted on March 17, 2015.
Berberis nevinii Nevin's barberry	FE / SE 1B.1 G1/S1	Perennial evergreen shrub. Blooms Mar-Jun. Chaparral, cismontane woodland, coastal scrub, riparian scrub. On steep, N-facing slopes or in low grade sandy washes. 290-1575m (950-5165ft).	**None.** Habitat requirements not present on site. Species was not observed during rare plant survey conducted on March 17, 2015.
California macrophylla Round-leaved filaree	-- / -- 1B.1 G2 / S2	Annual herb. Blooms Mar-May. Cismontane woodland, valley and foothill grassland. Clay soils. 15-1200m (50-3935ft).	**Low.** Walnut woodland present on site; however, soils are primarily clay and highly disturbed by non-native grass undergrowth and regular ground maintenance. Species was not observed during rare plant survey conducted on March 17, 2015.
Dudleya multicaulis Many-stemmed dudleya	--/ -- 1B.2 G2/S2	Perennial herb. Blooms Apr-Jul. Chaparral, coastal scrub, valley and foothill grassland. In heavy, often clayey soils or grassy slopes. 0-790m (0-2590ft).	**Low.** Grassy slopes and clayed soils present on site; however, undergrowth primarily non-native grasses that undergo regular ground maintenance. Species was not observed during rare plant survey conducted on March 17, 2015.
Helianthus nuttallii ssp. p*arishii* Los Angeles sunflower	-- / -- 1A G5TH / SH	Perennial rhizomatous herb. Marshes and swamps (coastal salt and freshwater). Historical from Southern California. 5-1675m (15-5495ft).	**None.** Habitat requirements not present on site. Species was not

Table 4.D-1
Special-Status Species Potentially Occurring on the Project Site

Scientific Name **Common Name**	**Status Fed/State ESA CRPR G-Rank/S-Rank**	**Habitat Requirements**	**Potential for Occurrence / Basis for Determination**
			observed during rare plant survey conducted on March 17, 2015.
Horkelia cuneata var. *puberula* Mesa horkelia	-- / -- 1B.1 G4T2 / S2.1	Perennial herb. Blooms Feb-Sept. Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 70-810m (230-2655ft).	**Low.** Walnut woodland present on site; however, soils are primarily clay and highly disturbed by non-native grass undergrowth and regular ground maintenance. Species was not observed during rare plant survey conducted on March 17, 2015.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	--/ -- 1B.1 G4T3/S2.1	Annual herb. Blooms Feb-Jun. Coastal salt marshes, playas, valley and foothill grassland, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-1400m (3-4595ft).	**None.** Habitat requirements not present on site. Species was not observed during rare plant survey conducted on March 17, 2015.
Navarretia fossalis Spreading navarretia	FT/ -- 1B.1 G1/S1	Annual herb. Blooms Apr-Jun. Vernal pools, chenopod scrub, marshes and swamps, playas. San Diego hardpan and San Diego claypan vernal pools; in swales and vernal pools, often surrounded by other habitat types. 30-665m (100-2180ft).	**None.** Habitat requirements not present on site. Species was not observed during rare plant survey conducted on March 17, 2015.
Pseudognaphalium leucocephalum White rabbit-tobacco	-- / -- 2B.2 G4 / S2S3.2	Perennial herb. Blooms Jul-Dec. Riparian woodland, cismontane woodland, coastal scrub, chaparral. Sandy, gravelly sites. 0-2100m (0-6890ft).	**Low.** Walnut woodland present on site; however, soils are primarily clay and highly disturbed by non-native grass undergrowth and regular ground maintenance.
Ribes divaricatum var. *parishii* Parish's gooseberry	-- / -- 1A G4TH / SH	Perennial deciduous shrub. Blooms Feb-Apr. Riparian woodland. Salix swales in riparian habitats. 65-100m (215-330ft).	**None.** Habitat requirements not present on site. Species was not observed during rare plant survey

Table 4.D-1
Special-Status Species Potentially Occurring on the Project Site

Scientific Name **Common Name**	**Status Fed/State ESA CRPR G-Rank/S-Rank**	**Habitat Requirements**	**Potential for Occurrence / Basis for Determination**
			conducted on March 17, 2015.
Symphyotrichum greatae Greata's aster	-- / -- 1B.3 G2 / S2.3	Perennial rhizomatous herb. Blooms Jun-Oct. Chaparral, cismontane woodland. Mesic canyons. 800-1500m (2625-4920ft).	**Low.** Walnut woodland present on site; however, site elevation well below typical species requirements.
Reptiles			
Phrynosoma blainvillii Coast horned lizard (=Blainvilli's)	-- / -- SSC G3G4 / S3S4	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	**None.** Habitat requirements not present on site.
Birds			
Athene cunicularia Burrowing owl	-- / -- SSC G4 / S2	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	**Low.** Dry grasslands present, but no notable burrows observed during previous surveys.
Empidonax traillii extimus Southwestern willow flycatcher	FE / SE -- G5T1T2 / S1	Riparian woodlands in Southern California.	**None.** Habitat requirements not present on site.
Falco peregrinus anatum American peregrine falcon	FD / SD FP G4T4 / S2	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	**None.** Habitat requirements not present on site.
Riparia riparia Bank swallow	-- /ST -- G5 / S2S3	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	**None.** Habitat requirements not present on site.
Vireo bellii pusillus Least Bell's vireo	FE / SE -- G5T2 / S2	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	**None.** Habitat requirements not present on site.
Mammals			
Antrozous pallidus Pallid bat	-- / -- SSC G5 / S3	Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites. Roosts in rock crevices, abandoned mines, caves, hollow trees and in cavern□like building features (e.g. attics). Water must be available close by.	**None.** Habitat requirements not present on site. Site lacks watering source requirement.
Eumops perotis californicus Western mastiff bat	-- / -- SSC G5T4 / S3?	Frequently encountered in broad open areas associated with dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, montane meadows, and	**None.** Habitat requirements not present on site. Site lacks

Table 4.D-1
Special-Status Species Potentially Occurring on the Project Site

Scientific Name **Common Name**	**Status Fed/State ESA CRPR G-Rank/S-Rank**	**Habitat Requirements**	**Potential for Occurrence / Basis for Determination**
		agricultural area. Roosts in crevices in cliff faces, high buildings, trees and tunnels. Requires large open-water drinking sites.	watering source requirement.
Lasiurus cinereus Hoary bat	-- / -- -- G5 / S4?	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in woodlands and forests with medium to large-size trees and dense foliage. Feeds primarily on moths. Requires water.	**Low**. Marginally suitable roosting habitat (i.e. medium sized walnut trees) present on site. However, site lacks watering source requirement. The species was not observed/detected during the focused survey conducted on March 13, 2015.
Lasiurus xanthinus Western yellow bat	-- / -- SSC G5 / S3	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	**Low.** A few palms trees present along border of site, but constrained by development. Site lacks watering source requirement. The species was not observed/detected during the focused survey conducted on March 13, 2015.
Nyctinomops macrotis Big free-tailed bat	-- / -- SSC G4 / S2	Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	**None.** Habitat requirements (i.e. cliffs or rocky outcrops) not present on site.
Taxidea taxus American badger	-- / -- SSC G5 / S4	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	**Low.** Dry grasslands present, but no notable burrows observed during surveys conducted.

Regional Vicinity refers to within a 5 mile radius of site.
FT = Federally Threatened
FC = Federal Candidate Species
FE = Federally Endangered
SE = State Endangered
CRPR (CNPS California Rare Plant Rank):
1A=Presumed Extinct in California
1B=Rare, Threatened, or Endangered in California and elsewhere
2=Rare, Threatened, or Endangered in California, but more common

Table 4.D-1
Special-Status Species Potentially Occurring on the Project Site

Scientific Name **Common Name**	**Status Fed/State ESA CRPR G-Rank/S-Rank**	**Habitat Requirements**	**Potential for Occurrence / Basis for Determination**
ST = State Threatened *SR = State Rare* *SSC = CDFW Species of Special Concern* *FP = CDFW Fully Protected* *elsewhere* *3=Need more information (a Review List)* *4=Plants of Limited Distribution (a Watch List)* *CRPR Threat Code Extension:* *.1=Seriously endangered in California (> 80% of occurrences threatened / high degree and immediacy of threat)* *.2=Fairly endangered in California (20-80% occurrences threatened)* *.3=Not very endangered in California (<20% of occurrences threatened)* *G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDB RareFind 5.* *Source: Rinson Consultants, 2014.*			

No special-status plant species were detected during the field reconnaissance or rare plant surveys conducted at the site. Although elements of suitable habitat for some species are present (e.g., round-leaved filaree, many-stemmed dudleya, and mesa horkelia), each species is limited to specific biotypes or soil types (e.g., volcanic, alkaline, and/or clay soils; salt marshes; upland scrub; etc.), which do not occur on site.

Special-status wildlife species typically have very specific habitat requirements and may include, but are not limited to, vegetation communities, elevation levels and topography, and availability of primary constituent elements (i.e., space for individual and population growth, breeding, foraging, and shelter). Given the high degree of urbanization within the Project site and lack of suitable habitat for each species, no special-status wildlife species are expected to occur. The Project site contains marginal habitat for special status bat species (e.g. hoary bat and western yellow bat). However, as stated previously, no bats were detected during the focused surveys conducted at the site.

Special-Status Vegetation Communities

Plant communities are also considered sensitive biological resources if they have limited distributions, have high wildlife value, include sensitive species, or are particularly susceptible to disturbance. CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in CNDDB. CNDDB vegetation alliances are ranked 1 through 5 based on NatureServe's methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive.

The CNDDB has records for four sensitive terrestrial natural communities or habitat types that are reported from historical information within a 5-mile radius: California walnut woodland, southern coast live oak riparian forest, southern sycamore alder riparian woodland, and walnut forest. California walnut woodland is located within the Project site.

Walnut Woodland Habitat Quality Analysis

Approximately 3.44 acres of woodland exists within the Project boundary, which is afforded protection under the Los Angeles Municipal Code (LAMC) and by the Mount Washington /Glassell Park Specific Plan. On May 27, 2016, Rincon Senior Biologist Robin Murray conducted a site visit to collect habitat quality data to supplement the existing knowledge base of site conditions. Data collected during the site visit included the California Native Plant Society (CPNS) Vegetation Rapid Assessment Form, as well as metrics developed for use during terrestrial monitoring by the United States Forest Service for their Forest Inventory and Analysis program, and several qualitative features. Data also included in the habitat quality analysis were derived from previous Rincon site visits and biological reports (included in Appendix C to this Draft EIR).

Discussion of Selected Metrics

Plant species richness. The number of plant species observed on a site is termed species richness. Generally speaking, sites that have been subject to disturbance and invasion by exotic species tend to have lower species richness. This metric is often used as an indicator of the health of a particular habitat. The species richness of the Project site is considered low, particularly for native plant species.

Distance to nearest drainage channel. Wildlife species often use drainage channels as movement corridors. Areas that are in close vicinity to vegetated drainage channels would be considered more valuable as wildlife habitat than those that are farther away. The nearest drainage channel is the Los Angeles River, which is 1.17 miles away and channelized (devoid of vegetation) for most of its length, although there are three portions of the channel bottom that remain unpaved: through the Sepulveda Flood Control Basin in the San Fernando Valley, near Griffith Park through Elysian Valley where groundwater levels prevent it from being paved, and at the River estuary in Long Beach where the River empties into the Pacific Ocean.[1] Given the distance and the presence of suburban development between the channel and the site, this drainage channel does not significantly enhance the habitat's value to wildlife species.

Tree Health. Tree health grades were derived from the arborist tree report (included in Appendix C to this Draft EIR). These grades ranged from A to D. Walnut woodland with high average tree health is considered more valuable habitat than woodland with low average tree health. Since 83% of trees were graded A to B-, and 17% were graded C+ to D, the trees in general are in good health.

Vegetation Layer Structure. Mature shrubs and herbaceous layers provide additional niches for wildlife species, enhancing a vegetation community's value as habitat. This habitat is further enhanced by the

[1] *Los Angeles County Department of Public Works, website: www.ladpw.org/wmd/watershed/LA/History.cfm, accessed December 2, 2016.*

presence of large woody debris. However, these important features are absent from the walnut woodland within the Project site.

Fuel Management. Due to the fuel management of the site mandated by City requirements, shrub and herbaceous layer development as well as regeneration of native tree saplings that might be expected in an unmanaged landscape have not and will not take place (see also "Fuel Modification Memorandum" included in Appendix C to this Draft EIR). This diminishes the site's theoretical potential to support wildlife in the future.

Degree of Invasion. The degree of a site's invasion by exotic plant species can be a significant factor in determining the site's habitat value. In general, the greater the proportion of native species present, the greater the habitat's value to wildlife. This is particularly true of tree and shrub species, which generally have the greatest impact in determining the vegetation community's structure. Numerous tree species ranked as invasive by the California Invasive Plant Council (Cal-IPC 2016) are present throughout the site, particularly invasive *Eucalyptus* species as well as tree of heaven (*Ailanthus altissima*), which has created thickets by producing abundant root sprouts, displacing native vegetation. The site's moderate level of invasion by exotic plant species has negatively impacted its value as wildlife habitat.

Wildlife Connectivity. A site's relative isolation or connectivity to adjacent wildlands is an important factor to determine habitat quality, particularly for wildlife species with migratory life histories or large home ranges. Sites in proximity to natural lands with the potential to facilitate wildlife movement or those that are contiguous with established wildlife corridors have higher habitat value than those that are isolated. The site is over two miles from the nearest sensitive ecological area. Due to the site's isolation, it does not serve as a wildlife connectivity feature to adjacent wildlands. This reduces the site's value to wildlife species.

Project Impacts

Special-Status Species

As discussed previously, the Biological Resources Assessment prepared for the Project site did not identify any special-status plant or animal species at the Project site or any habitat that would support such species. Thus, development of the Project would not affect any special-status species, and impacts related to this issue would be less than significant.

Although not a special-status species, all nesting species are protected by CDFW and USFWS. It is possible that nesting species could be disturbed or harmed during construction of the Project. Therefore, Project impacts related to nesting species would be potentially significant.

Sensitive Plant Community

While the Project area contains a stand of California black walnut woodland trees in generally good health, the value of this habitat has been significantly degraded due to an intensive annual fuel

management regime required by City regulations, which has prevented the development of a functional shrub or herbaceous layer, both of which enhance a vegetation community's value to a range of wildlife species. The brush clearance regime does not appear to be detrimental to the health of the existing trees, but it precludes the establishment of young trees that would eventually replenish aging trees on the site. The quality of the site is also negatively affected by invasion of exotic plant species as well as its close proximity to residential development. The site is adjacent to natural areas with the potential to facilitate wildlife movement. However, since the Project site is bounded on three sides by existing residential land uses, development of the Project would not result in fragmentation of a habitat corridor.

Since the habitat within the site is fragmented and significantly degraded, mitigation for impacts to California walnut trees by replacement of walnut woodland habitat acreage is not warranted, and impacts with respect to a sensitive plant community would be less than significant.

Jurisdictional Waters and Wetlands

The Project site does not contain any federally protected waters or wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.); riparian habitat or streambed as defined by Section 1600 et seq. of the Fish and Game Code; or "waters of the State," pursuant to Section 401 of the Clean Water Act or the Porter-Cologne Water Quality Control Act. As discussed previously, Rincon biologists conducted a supplemental site visit to update the hydrologic conditions at the site and confirm the absence of jurisdictional waters and wetlands. One erosional feature was previously documented. It appears that this area developed into an erosional complex with several associated features that occur in the southwestern end of the Project site, likely due to nuisance runoff from adjacent residential development. These features generally traverse west to east for approximately 90 feet on a slope south of Brilliant Drive. They originate near houses at the top of a hillside along the western portion of a trail. The features then abate into the landscape with no headcutting, indicators of an Ordinary High Water Mark (OHWM), or bed, bank, or channel characteristics occurring beyond the eastern side of the trail. The features showed no evidence of ordinary conveyance of storm waters such as bed and bank, channel bottom, scouring, matted vegetation, or any other characteristics of an active stream course. Furthermore, no clear hydrologic connection to any potentially jurisdictional drainages downstream of the site was observed.

The erosional features contained no riparian vegetation, only sparse scatterings of California walnut, laurel sumac (*Malosma laurina*), and non-native annual grasses. The features have limited to no functional value or associated resources that are distinctively different from adjacent uplands. Due to the absence of these indicators of jurisdictional waters and wetlands, these features do not meet USACE, RWQCB, or CDFW established criteria for jurisdictional areas (i.e. OHWM, bed, bank, and channel). No other potentially jurisdictional waters or wetlands were observed within the Project site. Therefore, no impacts related to jurisdictional waters or wetlands would occur as a result of the Project.

Migratory Corridors

As discussed in the Biological Resources Assessment (refer to Appendix C) prepared for the Project, the City's General Plan Framework EIR does not identify the Project site as a Biological Resource Area (BRA) or Significant Ecological Area (SEA). In addition, the Project site is highly constricted by residential development on all sides and is not within or proximate to any native wildlife corridors, native wildlife nursery sites, critical habitat, land trust, habitat conservation plan or any other regional planning areas, as identified by the City or any other local, regional, state or federal agency.

Tree Preservation

Of the 218 trees inventoried for the Tree Report prepared for the Project (refer to Appendix C), 168 trees are "protected trees" as defined by the Tree Preservation Ordinance (160 Southern California black walnuts; 7 coast live oaks; 1 western sycamore), and 50 are "significant trees" as defined by the Mt. Washington-Glassell Park Specific Plan (various species). Implementation of the Project would result in the removal of 129 protected trees and 39 significant trees. Thirty-nine protected trees and 11 significant trees would be preserved. Twenty of the 39 protected trees to remain would sustain some degree of encroachment to their Tree Protection Zones. Therefore, Project impacts related to tree preservation would be potentially significant.

CUMULATIVE IMPACTS

Cumulative impacts refer to incremental, individual environmental effects of two or more projects when considered together. These impacts taken individually may be minor but may be collectively significant. Cumulative effects include future tribal, local, or private actions that are reasonably certain to occur in the Project vicinity. A cumulative impact to biological resources may occur if a project has the potential to collectively degrade the quality of the environment, substantially reduce the habitat of wildlife species, or cause a population to drop below self-sustaining levels, thereby threatening to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal species. Based on the list of related projects provided in Table 3-1, the nearest related project (Related Project No. 2) is located approximately 1.3 miles from the Project Site. Therefore, the Project would not combine with any related projects to impact biological resources. Additionally, implementation of Mitigation Measures D-1 through D-4 would ensure that the Project would not result in any significant impacts related to biological resources. Therefore, cumulative biological resources impacts would be less than significant.

MITIGATION MEASURES/REGULATORY COMPLIANCE MEASURES/PROJECT DESIGN FEATURES

Regulatory Compliance Measures

None required.

Project Design Features

None provided.

Mitigation Measures

Nesting Species

To ensure that the Project would not result in any significant impacts related to nesting species, the following mitigation measure is required:

D-1 To avoid potential significant impacts to nesting birds, including migratory birds and raptors, the following shall be implemented by the Project Applicant:

- To avoid disturbance of nesting and special status birds including raptorial species protected by the MBTA and Sections 3503, 3503.5, and 3513 of the CFGC, activities related to the Project, including, but not limited to, vegetation removal, ground disturbance, and construction and demolition shall occur outside of the bird breeding season (February 1 through August 30), but variable based on seasonal and annual climatic conditions. If construction must begin within the breeding season, then a pre-construction nesting bird survey shall be conducted no more than 3 days prior to initiation of ground disturbance and vegetation removal. The nesting bird pre-construction survey shall be conducted within the disturbance footprint and a 300-foot buffer within inaccessible areas (i.e. private lands) surveyed by binoculars. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in Los Angeles County.

- If nests are found, an avoidance buffer (which is dependent upon the species, the proposed work activity, and existing disturbances associated with land uses outside of the site) shall be determined and demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to mark the boundary. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No ground disturbing activities shall occur within this buffer until the avian biologist has confirmed that breeding/nesting is completed and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist.

Tree Preservation

To ensure that Project impacts related to trees would be less than significant, the following mitigation measures are required:

D-2 Protected Trees

- Removal of 129 'protected' trees shall require mitigation tree plantings at a ratio of 4:1, which equals 516 trees.

- Mitigation trees shall consist of *Quercus agrifolia, Platanus racemosa, Juglans californica* var. *californica*, or *Umbellularia californica*. Mitigation trees shall be planted on-site in the natural or manufactured slope areas of the lots.

- Removal trees that are in the public streets rights-of-way may be replaced at a lower ratio of 2:1. The City of Los Angeles will make the final determination in this regard.

- The City of Los Angeles' Urban Forestry Division generally requires 24-inch box trees to be planted on-site for mitigation. Depending on nursery availability, especially for Southern California black walnuts *(Juglans californica* var. *californica)* one- to fifteen-gallon container sizes may be more appropriate for mitigation trees. Therefore, the applicant may propose to plant smaller container sizes, subject to approval by the Urban Forestry Division in the final landscape/mitigation planting plans.

- Mitigation trees shall be planted in natural groupings, as well as individually, as space allows on each lot and in open spaces of the Project. A sample of the proposed mitigation planting schedule on a typical lot is provided in Exhibit K of the Carlberg 2016 report.

- The Project landscape architect shall incorporate mitigation trees into the landscape plans for the 32 lots. The color-coded mitigation trees shall be required on the landscape and irrigation plans and irrigation shall be provided for all mitigation trees to the satisfaction of the Urban Forestry Division as outlined in the final Protected Tree Removal Permit.

- Mitigation trees shall be guaranteed under a bond for a period of three years. The bond amount shall be determined through negotiations between the applicant team and the Urban Forestry Division prior to issuance of a grading permit. The bond shall be posted prior to issuance of a grading permit.

- Mitigation trees that are planted in private yards shall be protected by Project Conditions, Covenants, and Restrictions (CC&Rs) or other legal instrument. The CC&Rs or other legal instrument shall ensure access for reasonable mitigation monitoring, as required.

- The Urban Forestry Division shall be notified at least ten (10) days prior to the date of the approved Protected Tree removals. The applicant's Tree Expert (Project arborist) shall be on-site for the duration of the tree removals to ensure that the proper trees are removed. A post-tree removal site meeting with an Urban Forestry Division arborist shall be required one day after the removals are complete.

- The Urban Forestry Division shall be notified no later than five days after completion of the tree replacement plantings.

- The applicant, along with the Project arborist and landscape architect, shall be responsible to ensure that the tree removal permit tree replacement conditions are met. Monitoring and compliance documentation shall be required as outlined in the requirements set forth in measure D-4 below.

- The mitigation tree bond shall be released upon satisfactory compliance with the Protected Tree Removal Permit and all associated conditions.

D-3 Significant Trees

- In compliance with the Mount Washington/Glassell Park Specific Plan, removal of 39 'significant' trees shall require mitigation tree plantings at a ratio of 1:1, which equals 39 trees.

- Mitigation (replacement) trees shall have a minimum trunk diameter of two inches and a height of eight feet at the time of planting. Each replacement tree planted on a slope shall be a minimum of 15 gallons in size and shall be surrounded by native plants according to xeriscape and landform planting specifications. Replacement trees on substantially level grades shall be no smaller in diameter, measured 12 inches above the ground, than the trees removed, except that no trees larger than 24-inch box size shall be required.

- The Project landscape architect shall design mitigation trees into the landscape plans for the 32 lots. The color-coded mitigation trees shall be required on the landscape and irrigation plans and irrigation shall be provided for trees planted in the natural areas of the site.

D-4 All Trees

- Any demolition, digging, excavating, or trenching within the protected zone of any protected tree to remain shall be monitored by a qualified arborist.

- Exposed roots to remain shall be covered with burlap, carpet remnants or other material that may be kept moist until soil can be replaced.

- The Carlberg 2016 arborist report shall be part of the set of plans given to the contractors. Contractors shall be familiar with the specific instructions and responsibilities pertaining to protected trees. A professional arborist shall be retained and shall meet with the contractor and his personnel prior to commencement of the Project.

- If canopy pruning is found to be necessary for trees to remain, it shall only be performed by a qualified ISA Certified Arborist or ISA Certified Tree Worker. Climbing "gaffs" shall not be

used by any tree climber except in an emergency to reach an injured climber or when removing a tree.

- Protected trees shall not be removed until/unless approval is granted by the City of Los Angeles' Urban Forestry Division.

- Pruning or removals shall occur outside of the nesting bird season as defined by the California Department of Fish and Wildlife and other jurisdictional agencies. If removals must occur in nesting bird season, biological monitoring shall be required in accordance with Mitigation Measure D-1.

- Construction monitoring reports shall be submitted to the Urban Forestry Division at appropriate intervals. Intervals may vary depending on the level of activity on-site. A monitoring and reporting program shall be developed by the Project arborist for various phases of the development process. This program shall be submitted to the Urban Forestry Division prior to issuance of grubbing, grading, or demolition permits. A final compliance report shall be prepared for submission to Urban Forestry upon completion of the Project.

- A maintenance and monitoring program for mitigation trees shall be included in the monitoring and reporting program that shall be developed by the Project arborist. This program shall be developed in coordination with the Project landscape architect. At least three (3) years of monitoring for mitigation trees is recommended. The Urban Forestry Division shall dictate the actual monitoring period for mitigation trees.

- Equipment, materials, and vehicles shall not be stored, parked, or operated within the protected zone of trees to remain.

- Equipment with overhead exhaust shall not be placed in such a manner as to scorch overhanging branches or foliage. Smaller equipment shall be used in such areas as deemed necessary by the monitoring arborist.

- Five (5) foot high chain link fencing shall be installed as illustrated on the Tree Protection Plan prior to submission of this report to the Urban Forestry Division of the City of Los Angeles (reports may not be deemed complete by the Division if fencing is not in place). Photographs of the fencing shall be submitted with the report. When performing their inspection, Urban Forestry requires that the protective fencing be in place.

- A 'Warning' sign shall be prominently displayed on each protective enclosure. The sign shall be a minimum of 8.5 inches x 11 inches and clearly indicate the presence of a tree protection zone.

- Because of the close proximity of construction to protected and significant trees, a professional arborist with construction monitoring experience shall be retained to monitor and report on various phases of the Project.

- The Urban Forestry Division shall be notified immediately if any Protected Tree Removal Permit conditions have been violated or cannot be fulfilled.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Nesting Species

With implementation of Mitigation Measure D-1, impacts related to nesting species would be less than significant.

Tree Preservation

With implementation of Mitigation Measures D-2 through D-4, impacts related to tree preservation would be less than significant.

4. ENVIRONMENTAL IMPACT ANALYSIS

E. CULTURAL RESOURCES

INTRODUCTION

The information and analysis in this section is based on the following reports (refer to Appendix D):

- *Archaeological Resources Survey Report: Glassell Park – Haverhill Project, Paleo Solutions, June 2015.*
- *Paleontological Resources Letter Report for the Haverhill Project, Paleo Solutions, June 12, 2015.*
- *Archaeological Resources Records Search, South Central Coastal Information Center, February 19, 2015.*
- *Paleontological Resources Records Search, Los Angeles County Natural History Museum, February 25, 2015*

REGULATORY FRAMEWORK

California Public Resources Code and the California Environmental Quality Act

Archaeological, paleontological, and historical sites are protected pursuant to a wide variety of state policies and regulations enumerated under the California Public Resources Code (CPR). In addition, cultural resources are recognized as nonrenewable and therefore receive protection under the CPR and the California Environmental Quality Act (CEQA). The following CPR and CEQA Sections apply to activities related to this Project:

- California Public Resources Code Sections 5020–5029.5 continue the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The commission oversees the administration of the California Register of Historical Resources and is responsible for the designation of State Historical Landmarks and Historical Points of Interest.

- California Public Resources Code Sections 5079–5079.65 define the functions and duties of the Office of Historic Preservation (OHP). The OHP is responsible for the administration of federally and state mandated historic preservation programs in California and the California Heritage Fund

- California Public Resources Code Sections 5097.9–5097.991 provide protection to Native American historical and cultural resources and sacred sites and identify the powers and duties of the Native American Heritage Commission (NAHC). It also requires notification to descendants of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.

- California Health and Safety Code Section 7050.5(b) specifies protocol when human remains are discovered. Specifically, burials or human remains found inside or outside of a known cemetery

are not to be disturbed or removed unless by authority of law, and the area of a discovery of human remains should remain undisturbed until a County coroner is notified and has examined the remains prior to determining the appropriate course of action.

- CEQA Guidelines Section 15064.5(e) requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the NAHC must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as identified by the NAHC. Section 15064.5 directs the lead agency (or project proponent), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

Eligibility of Significance under CEQA

CEQA Guidelines Section 15064.5 provides direction on determining significance of impacts to archaeological and historical resources. Generally, a resource shall be considered "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code Section 5024.1, Title 14 CCR, Section 4852), including the following:

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

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

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

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

The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, or is not included in a local register of historical resources, does not preclude a lead agency from determining that the resource may be a historical resource.

County of Los Angeles Historical Landmarks and Records Commission

The Los Angeles County (the "County") Historical Landmarks and Records Commission (the "Commission"), a five-member committee appointed by the Board of Supervisors, oversees historical resources and monuments within the County. The Commission can make considerations and recommendations toward the registration of historical landmarks as a California Point of Historical Interest or California Historical Landmark. The Commission may also make recommendations toward listing on the National Register of Historic Places. Recommendations are made to the County Board of Supervisors.

City of Los Angeles Cultural Heritage Ordinance

The City of Los Angeles (the "City") Cultural Heritage Ordinance, enacted in 1962 and amended in 1985, provides official recognition and protection for cultural and historical resources throughout the City. The mayor-appointed five-member Cultural Heritage Commission comprises experts on the history, culture, and architecture of the City. In addition, the Ordinance also provides criteria for designating resources as Historic-Cultural Monuments.

Per Section 22.130 of the Ordinance, a Historical or Cultural Monument "is any site (including significant trees or other plant life located thereon), building, or structure of particular historical or cultural significance to the City of Los Angeles, such as historic structures or sites in which broad cultural, political, economic, or social history of the nation, state, or community is reflected or exemplified or which are identified with historic personages or with important events in the main currents of national, state, or local history, or which embody the distinguishing characteristics of an architectural-type specimen, inherently valuable for a study of a period style or method of construction, or a notable work of a master builder, designer, or architect whose individual genius influenced his age."

Upon a site, monument, or building's nomination as a Historic-Cultural Monument, the Cultural Heritage Commission reviews the nomination and passes it to the Arts, Health, and Humanities Committee of the City Council for review. Final approval or rejection can be determined by the City Council as a whole. Cultural or historically significant resources overseen by the City are presumed to be culturally significant under CEQA. Therefore, modification, relocation, or demolition must undergo an environmental review pursuant to CEQA.

ENVIRONMENTAL SETTING

The Project site is located in a warm Mediterranean climate in the Köppen Climate Classification, characterized by warm dry summers and cool wet winters. The Project area is located in the northeastern portion of the Los Angeles Basin. The Los Angeles Basin is a relatively important site for geological and paleontological studies of the western margin of North America because the stratigraphic sequence of its sediments is very complete; there are few gaps in a nearly continuous sequence of deposits from the Early Miocene (~ 23 million years old) to the latest part of the Pleistocene (~ 11,000 years old). The latter is important in human history, as it is around this time that people first traversed through present-day Southern California during their journey southward through the North and South American continents.

Although the City is virtually completely developed, the hilly natural landscape still retains some characteristic botanical and faunal species of the Walnut Woodland and Coastal Sage Scrub plant communities native to this region of southern California. Water bodies that are nearby include tributaries of the Los Angeles, San Gabriel, and Rio Hondo Rivers. The San Gabriel Mountains are situated four miles to the north, while the eastern edge of the Santa Monica Mountains is located three miles to the west. The closest distance to the Pacific coast is approximately 17 miles to the southwest.

Cultural Setting

The Project site is located in an area with extensive cultural background. A review of the prehistory, history, and ethnography of the area provides the context for historical significance and highlights the purposes of archaeological investigations and mitigation recommendations as they relate to the Project.

Prehistoric Background

Humans have lived in the region of southern California for at least 10,000 years, and several chronologies have been proposed to divide different periods of habitation and development. The commonly used chronology divides this time span into the Early Period (10,000 BP to 8000 BP), the Milling Stone Period (8000 BP to 3000 BP), the Intermediate Period (3000 BP to AD 1000), the Late Prehistoric Period (AD 1000 to 1770), and the Historic Period (1770 to present). Different patterns and types of material culture represent each of these periods.

Large projectile points from the Early Period indicate subsistence on large animals. The diet probably included smaller game and harvested plants. Sites representing this period have been found mostly inland at prehistoric lakebeds (i.e. China Lake, Tulare Lake).

The Milling Stone Period, as its name suggests, is characterized by milling stones and manos used in the preparation of plant and seed-based foods. Subsistence on terrestrial game supplemented the diet of people during this time, but did not include coastal resources.

During the Intermediate Period, subsistence expanded to marine resources and a greater diversity of plant foods. Tools used during this period included mortars and pestles to process plant-based foods.

During the Late Prehistoric Period, the Tongva (Gabrieleño), Acjachemen (Juaneño), and Payómkawichum (Luiseño) lived throughout much of the southern California coast extending from present-day southern Los Angeles County to northern San Diego County. Villages among these groups were permanent to semi-permanent, with seasonal camps, that comprised a fairly complex trade network throughout the coast, inland, and the Channel Islands.

The Historic Period, marked by the expansion of Spanish exploration and settlement in California, was followed by Mexican Independence and the Mexican-American War, in which the latter allowed the United States control of former Spanish and Mexican territories in the West. These periods witnessed the decimation of native peoples throughout southern California through disease, loss of their territories, incorporation into the mission system, and physical conflict. While some of the native people survived, many experienced great loss of culture and tradition despite efforts to keep them prospering. Many of their cultural traditions are reflected in the artifacts found at archaeological sites to this day, and continue to be passed to subsequent generations.

Historical Background

Europeans first sailed up the coast of California in 1542 as part of a Spanish exploration expedition led by the Portuguese captain, Juan Rodriguez Cabrillo. Spain would not resume in-depth exploration and settlement of the region until much later, when Russian and French encroachment threatened Spain's interests in the territories known as Alta California (Upper California). The return of Spanish presence in California was marked by the 1769 expedition led by Captain Gaspar de Portola. Shortly thereafter, Spain began to establish a system of pueblos, presidios, ranchos, and missions along the California coast to bolster Spanish settlement and presence. The Spanish Franciscan missionaries established a system of 21 missions along El Camino Real, and incorporated much of the Native American population during the process, leading to their decline and increasingly hostile relationships between the Europeans and the Native Americans.

The ranchos were a Spanish (and later Mexican) concession-granting system that awarded many Spanish military officers with large tracts of land for settlement and raising livestock in support of and alongside the pueblo, presidio, and missions. The Project area is located in a part of what was once Rancho San Rafael, a 36,403-acre grant bestowed by the Spanish Empire to the soldier José María Verdugo in 1784. The rancho encompassed lands from the present-day cities and neighborhoods of Pasadena, Glendale, La Cañada Flintridge, Glassell Park, Eagle Rock, Atwater Village, Highland Park, and Griffith Park. When Verdugo died in 1831, he left the rancho under the care of his son, Julio Antonio Verdugo, and his daughter, María Catalina Verdugo.

Following cession of Mexican-owned territories in California to the United States as a result of the Mexican-American War (1846-1848), the 1848 Treaty of Guadalupe Hidalgo provided land grants under the previous government. Following California statehood in 1850, the Land Act of 1851 required that land claims had to be filed with the Public Land Commission. Julio and María Verdugo were granted patents to the property in 1882 after filing for patents.

In 1857, lawyer Jonathan R. Scott, who owned Rancho La Cañada approached the Verdugo siblings and traded his rancho for roughly 4,607 acres of the western portion of the Rancho San Rafael in what is now known as Burbank. In 1861 Julio and Catalina Verdugo divided the remaining properties of Rancho San Rafael between themselves, with the northern portion given to Catalina, and the southern portion given to Julio.

By the late 1860s, Rancho San Rafael had been extensively sold off or lost due to foreclosures, leading to at least 36 individuals claiming to own portions of the land. In 1871, attorney Andrew Glassell, one of the founders of the City of Orange and after whom Glassell Park is named, and his law partner Alfred Chapman, filed a lawsuit now known as the "The Great Partition". In the lawsuit, Chapman and Glassell argued that the 36 defendants whom they were charging owned land on which boundaries were illegally established. After it was found that boundaries had indeed been illegally drawn, a partition of the lands was enacted, resulting in 31 different sections divided among 28 different people, which included descendants of the Verdugo family.

Following this lawsuit, Glassell and Chapman were awarded 5,745 acres in present day Glassell Park, and Glassell settled his family in the neighborhood. Tracts of land were continuously being sold to developers throughout the latter part of the century, spurring on development in the earlier part of the twentieth century and facilitated by the establishment of a Los Angeles Railway streetcar line through the neighborhood. In 1916, the City of Los Angeles completely annexed Glassell Park, and the Glassell family sold off many portions of their land, including the section that encompassed Forest Lawn Memorial Park, as the neighborhood continued to grow.

Ethnography

Tongva (Gabrieleño)

The Project area encompasses lands that were once inhabited by the Tongva, also known as the Gabrieleño. The Tongva come from an Uto-Aztecan (or Shoshonean) group that likely entered the Los Angeles Basin as recently as 1500 B.P. from the southern Great Basin or interior California deserts. However, it is also possible that they migrated in successive waves over a longer period of time beginning around 4000 B.P. It has been proposed that the Uto-Aztecan speakers displaced local Hokan occupants of the southern coast, as Hokan speakers in the area are represented by the Chumash to the north and the Diegueño to the South. Much of the review of the Tongva presented here is based on William McCawley's book, The First Angelinos (1996).

The Tongva lived in an area more than 1,500 square miles and included the watersheds of the Los Angeles River, San Gabriel River, Santa Ana River, and Rio Hondo, as well as the southern Channel Islands. There were at least 50 residential communities, or villages, with 50 to 150 individuals. Each community consisted of one or more lineages associated with a permanent territory. Each territory was represented by a permanent central settlement, with associated hunting, fishing, gathering, and ritual areas. A typical settlement would have had a variety of structures used for daily living, recreation, and rituals. In the larger communities, the layout was a little more intricate, characterized by a ritualistic or sacred enclosure that was encircled by the residences of the chief and community leaders, around which were smaller homes of the rest of the community. Sweathouses, cemeteries, and clearings for dancing and playing were also common at larger settlements.

Tongva subsistence was inclusive of many surrounding resources, including forest, water, and mountain animals. These included mule deer, pronghorn, rabbits, small rodents, freshwater and maritime fish and shellfish, sea mammals, snakes, lizards, insects, quail and mountain sheep. Botanical resources included native grass seeds, pine nuts, acorns, berries, and fresh greens and shoots. Food resources were managed by the chief, who was in charge of food reserves, and families were known to keep aside rations for when resources were less abundant. A complex trade network among themselves and their neighbors made the Tongva among the most materially wealthy of California's native groups.

The Tongva were very artistic people who had many forms of cultural materials, including beads, baskets, bone and stone tools and weapons, shell ornaments, wooden bowls and paddles, and steatite ornament and

cooking vessels. These items were also traded frequently, and with the Chumash, who often exchanged Olivella shell beads as currency for Tongva goods.

Like many other Native American groups, the settlement of Europeans in California brought many conflicts and disease as the Spanish sought to claim the lands as their own, and in the process incorporated Native American groups into the mission system. As a result of this and subsequent historical events, including the takeover of indigenous territories under Mexican and then American rule, and the displacement of Native populations, the Tongva people, along with other groups, saw their populations and cultural traditions drastically decimated. Today, the Tongva continue their traditions in southern California, with an approximate representation of 2,000 individuals.

Research and Records Search

Research into the cultural and environmental settings was conducted using public, in-house, and digital resources. A records search encompassing a 0.5-mile radius area within the Project location was conducted at the South Central Coastal Information Center on May 20, 2015. The search indicated that no previous studies have been conducted within a 0.5-mile radius of the Project location. The records search also indicated that six City of Los Angeles Historic-Cultural Monuments are located within a 0.5-mile radius of the Project area.

Paleontological Resources

The Project site lies within a geologic formation called the "Monterey Formation," which is a well-studied rock unit that was deposited in a deep-marine environment, and consists chiefly of mudstone, shale, diatomite, biogenic siltstone, and chert. The Monterey Formation is said to represent a condition rather than a laterally contiguous deposit – the condition being the opening of rift basins along the continental margin of coastal California during the Miocene (~10 to 15 million years ago) as the San Andreas Fault was forming and lengthening. This formation has yielded some of California's finest vertebrate, invertebrate, and plant fossils. Throughout its statewide distribution, the Monterey Formation has produced a high diversity of very well preserved, mostly marine vertebrates, invertebrates, and terrestrial plants. These include whales, dolphins, desmostylians, sea cows, sharks, bony fishes, marine and terrestrial plants, and diverse assemblages of marine invertebrates. This formation is one of the most important and paleontologically sensitive units in the state of California, as its fine grain and depositional environment make it eminently suitable for the exceptional preservation of fossils, including items that are not normally preserved, such as shark skeleton (cartilage), and marine plants, as well as unique and scientifically important assemblages such as whale falls (the community of creatures that scavenge and populate the area around a whale carcass on the sea floor). Particularly exciting are the well preserved fossil whales and dolphins, as well as the large numbers of finely preserved crabs and leatherback turtles. Arguably some of the most important finds, however, are the kelps and other large soft-bodied seaweeds, which are seldom found as fossils elsewhere. The Monterey Formation has the potential to contain significant nonrenewable paleontological resources and has a high paleontological sensitivity.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

CEQA Guidelines

In accordance with Appendix G to the *CEQA Guidelines*, a project would have a significant effect on cultural and historical resources if the project would:

a) Cause a substantial adverse change in significance of a historical resource as defined in State CEQA Section 15064.5;

b) Cause a substantial adverse change in significance of an archaeological resource pursuant to State CEQA Section 15064.5;

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

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

As discussed in Section 4.A (Impacts Found to be Less Than Significant), the Project would not result in any impacts related to issue "a." Thus, no further analysis of this issue is required.

Project Impacts

Archaeological Resources

Meghan Lamb, M.A., RPA and Michael Kay, M.A., RPA of Paleo Solutions conducted an intensive pedestrian survey of the Project area on May 22, 2015. The survey involved the visual inspection of ground surfaces within the boundary of the Project area that had not been previously graded or extensively disturbed. Transects were measured at 15 meters apart in open terrain, and as close as possible to 15 meters in areas that were considerably steep or overgrown with vegetation. Field documentation and photographs were taken.

The archaeological resources survey resulted in no discoveries of artifacts on the hilly open landscape. Isolated, loose fragments of brick and cement mortar were observed either near or downslope from existing residences and appear to have been remnants of old foundations or portions of buildings that have since been replaced and lost historical context. A bedrock exposure of the underlying Monterey Formation at the south edge of the Group A of the proposed residential lots conveyed scars from a three-foot bucket of an excavator, and is indicative of construction disturbance in the area. The Project area is undeveloped and virtually overgrown with wild grasses. A variety of both native and introduced trees were observed, particularly near the existing residences. A small network of dirt paths exist in the open area, and local residents appear to use the paths on a regular basis to walk their dogs. Light modern debris

appears on occasion. The Project area is also characterized by a steep northwest-southwest wash in which the scarred bedrock exposure of the Monterey Formation was observed. An inspection of the wash did not reveal any archaeological resources.

The records search has revealed that no previous archaeological investigations have been conducted in or within a 0.5-mile radius of the Project area and thus, no archaeology resources have been discovered within the Project area. While there are some signs of prior disturbance to the native soil in the area, it is unclear, given the overgrowth of vegetation and generally undeveloped landscape of the Project area, how extensive previous disturbance related to the construction of the existing offsite residences may be. From the field survey, however, it appears that the Monterey Formation is immediately below surface, with exposures already observed at the surface. Thus, it appears that archaeological sensitivity is low. Through compliance with the requirements contained in California Public Resources Code Section 21083.2 (formally provided as Regulatory Compliance Measure E-2 below), potential Project impacts to unknown archaeological resources would be less than significant.

Paleontological Resources

Meghan Lamb, M.A., RPA and Michael Kay, M.A., RPA of Paleo Solutions conducted an intensive cultural resources pedestrian survey of the Project area on May 22, 2015. The survey involved the visual inspection of ground surfaces within the boundary of the Project area that had not been previously graded or extensively disturbed. The Project area is undeveloped and virtually overgrown with wild grasses; however, a bedrock exposure of the underlying Monterey Formation was observed at the south edge of Group A of the proposed residential lots, which conveyed scars from a three-foot bucket of an excavator. Based on the results of the field survey, it appears that the Monterey Formation is immediately below surface. While the presence of Monterey Formation exposures at the surface indicates a low sensitivity for archaeological resources, it is indicative of a high sensitivity for paleontological resources. Additionally, while no paleontological resources were noted during the survey, this does not preclude the discovery of subsurface paleontological resources. A records search with the Natural History Museum of Los Angeles County showed that important paleontological fossils have been discovered within the Project area.

Due to the high paleontological potential of the Monterey Formation, potential Project impacts related to paleontological resources would be potentially significant.

Human Remains

No human remains are known to exist at the Project site. Through compliance with California Health and Safety Code Section 7050.5, (formally provided as Regulatory Compliance Measure E-3, below), potential Project impacts to human remains would be less than significant.

CUMULATIVE IMPACTS

Impacts related to cultural resources are site-specific and are assessed on a site-by-site basis. All development in the City (including the proposed Project and the related projects) that involves ground-disturbing activities is required to implement state requirements related to archaeological and paleontological resources. Additionally, these projects are required to comply with State's Health and Safety Code Section 7050.5 in the event of discovery or recognition of any human remains. Through compliance with existing requirements, cumulative impacts related to cultural resources would be less than significant.

MITIGATION MEASURES/REGULATORY COMPLIANCE MEASURES/PROJECT DESIGN FEATURES

Mitigation Measure

Paleontological Resources

E-1 All earth-moving activities that occur within the Monterey Formation shall be monitored by a qualified paleontologist. If any paleontological materials are encountered during the course of Project development, all further development activities shall be halted in the area of the discovery and:

a. The paleontologist shall assess the discovered material(s) and prepare a survey, study, or report evaluating the impact.

b. The paleontologist's survey, study, or report shall contain a recommendation(s), if necessary, for the preservation, conservation, or relocation of the resource.

c. The applicant shall comply with the recommendations of the evaluating paleontologist, as contained in the survey, study, or report.

d. Project development activities may resume once copies of the paleontological survey, study, or report are submitted to the Los Angeles County Natural History Museum.

e. Prior to the issuance of any building permit, the applicant shall submit a letter to the case file indicating what, if any, paleontological reports have been submitted, or a statement indicating that no material was discovered.

f. A covenant and agreement binding the applicant to this condition shall be recorded prior to the issuance of a grading permit.

Regulatory Compliance Measures

Archaeological Resources

E-2 If any archaeological materials are encountered during the course of Project development, all further development activity shall be halted in the area of the discovery and:

a. The services of an archaeologist shall then be secured by contacting the South Central Coastal Information Center located at California State University Fullerton, or a member of the Society of Professional Archaeologists (SOPA), or a SOPA-qualified archaeologist, who shall assess the discovered material(s) and prepare a survey, study, or report evaluating the impact.

b. The archaeologist's survey, study, or report shall contain a recommendation(s), if necessary, for the preservation, conservation, or relocation of the resource.

c. The applicant shall comply with the recommendations of the evaluating archaeologist, as contained in the survey, study, or report.

d. Project development activities may resume once copies of the archaeological survey, study, or report are submitted to the South Central Coastal Information Center at California State University Fullerton.

e. Prior to the issuance of any building permit, the applicant shall submit a letter to the case file indicating what, if any, archaeological reports have been submitted, or a statement indicating that no material was discovered.

f. A covenant and agreement binding the applicant to this condition shall be recorded prior to issuance of a grading permit.

Human Remains

E-3 In the event that human remains are discovered during excavation activities, the following procedure shall be observed:

a. Stop immediately and contact the County Coroner.

b. The coroner has two working days to examine human remains after being notified by the responsible person. If the remains are Native American, the coroner has 24 hours to notify the Native American Heritage Commission.

c. The Native American Heritage Commission will immediately notify the person it believes to be the most likely descendant of the deceased Native American.

d. The most likely descendant has 48 hours to make recommendations to the owner, or representative, for the treatment or disposition, with proper dignity, of the human remains and grave gods.

e. If the descendant does not make recommendations within 48 hours, the owner shall reinter the remains in an area of the property secure from further disturbance.

f. If the owner does not accept the descendant's recommendations, the owner or the descendant may request mediation by the Native American Heritage Commission.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Archaeological Resources

With implementation of Regulatory Compliance Measure E-2, Project impacts related to archaeological resources would be less than significant.

Paleontological Resources

With implementation of Mitigation Measure E-1, Project impacts related to paleontological resources would be less than significant.

Human Remains

With implementation of Regulatory Compliance Measure E-3, Project impacts related to human remains would be less than significant.

Cumulative Impacts

Cumulative impacts would also be less than significant.

4. ENVIRONMENTAL IMPACT ANALYSIS

F. GEOLOGY AND SOILS

INTRODUCTION

The information and analysis in this section is based primarily on the following report (refer to Appendix E):

- *Preliminary Geotechnical Engineering and Engineering Geology Investigation, SASSAN Geosciences, Inc., March 20, 2015.*

ENVIRONMENTAL SETTING

Regulatory Setting

State

California Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (the "Act") was signed into state law in 1972, as amended, with its primary purpose to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault. The Act requires the State Geologist to delineate "Earthquake Fault Zones" along faults that are "sufficiently active" and "well defined." The Act also requires that cities and counties withhold development permits for sites within an Earthquake Fault Zone until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting. Pursuant to this Act, structures for human occupancy are not allowed within 50 feet of the trace of an active fault.

Seismic Hazard Mapping Act

The Seismic Hazard Mapping Act (SHMA) was adopted by the state in 1990 for the purpose of protecting the public from the effects of non-surface fault rupture earthquake hazards, including strong ground shaking, liquefaction, seismically induced landslides, or other ground failure caused by earthquakes. The goal of the Act is to minimize loss of life and property by identifying and mitigating seismic hazards. The California Geological Survey (CGS) prepares and provides local governments with seismic hazard zones maps that identify areas susceptible to amplified shaking, liquefaction, earthquake-induced landslides, and other ground failures.

California Building Code

Current law states that every local agency enforcing building regulations, such as cities and counties, must adopt the provisions of the California Building Code (CBC) within 180 days of its publication. The California Building Standards Commission establishes the publication date of the CBC, and the code is also known as Title 24 of the California Code of Regulations. The most recent building standard adopted

by the legislature and used throughout the state is the 2013 version of the CBC, often with local, more restrictive amendments that are based upon local geographic, topographic, or climatic conditions. These codes provide minimum standards to protect property and the public welfare by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The procedures and limitations for the design of structures are based on site characteristics, occupancy type, configuration, structural system height, and seismic zoning for Seismic Zone 4. Seismic ratings are derived from the Uniform Building Code (UBC) specifications, which divide the U.S. into five geographical zones (0 through 4), of which Seismic Zone 4 - comprising most of central, coastal and southern California - is the most prone to earthquake activity.

Natural Hazards Disclosure Act

The Natural Hazards Disclosure Act requires that sellers of real property and their agents provide prospective buyers with a "Natural Hazard Disclosure Statement" when the property being sold lies within one or more state-mapped hazard areas. If a property is located in a Seismic Hazard Zone, as shown on a map issued by the State Geologist, the seller or the seller's agent must disclose this fact to potential buyers. California law also requires that when houses built before 1960 are sold, the seller must give the buyer a completed earthquake hazards disclosure report and a booklet titled "The Homeowners Guide to Earthquake Safety." This publication was written and adopted by the California Seismic Safety Commission.

Project Site Geologic Conditions

The Project site is located in the Mount Washington area at the northwest end of the Repetto Hills, approximately four miles north of downtown Los Angeles. The Project site includes generally northeast-facing, natural slope inclined at slope angles varying from 20 to 30 degrees. The natural slope varies in height but generally is approximately 100 to 140 feet in vertical height. Although the Project site is generally in a natural undeveloped condition, a dirt road provides access to the site area from the end of pavement.

Undocumented fill soils have been placed in a small canyon area between proposed lots 132 to 134 west of the road and proposed lots 118 to 120 to the east. Similar undocumented fill soils have been placed in an area of intersection of Haverhill Way and Brilliant Drive between proposed lot 161 north of the intersection and proposed lot 191 to the south.

The Project site is underlain by bedrock of the Monterey Formation consisting of generally thin-bedded to laminated, white to tan, shaly siltstone with sandstone interbeds. The bedrock is mantled by residual soil/colluvium varying in thickness from 1.5 feet to a maximum of approximately 15 feet in the subdued canyon area at the toe of slope. The thickness of undocumented fill, overlying the native residual soil, encountered on proposed lots 118 to 120 and proposed lots 132 to 134 is up to approximately 15 feet.

The strike and dip of bedding within the Monterey Formation on the southern portion of the Project site is relatively uniform, striking northwesterly and dipping at moderate to steep angles (32 to 61 degrees) to the southwest (in-to-slope). However, on the northern portion of the Project site, the strike and dip of bedding varies within the site area, indicating a synclinal fold. In this area, bedding generally strikes northwesterly and dips steeply to the northeast on the west limb of the syncline, and southeasterly on the east limb.

Liquefaction

The Project site is located outside of the liquefaction hazard zones. However, the proposed lots situated on the east side of Haverhill Drive and Haverhill Way are located within potential, seismically induced landslide hazard zones.

Groundwater

Groundwater seepage was not encountered in the test pits to the depths explored at the Project site (18 feet).

ENVIRONMENTAL IMPACTS

Threshold of Significance

CEQA Guidelines

In accordance with Appendix G of the CEQA Guidelines, a project could have a significant environmental impact if the project would result in one or more of the following:

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;

    ii) Strong seismic ground-shaking;

    iii) Seismic-related ground failure, including liquefaction; or

    iv) Landslides;

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

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

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

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

As discussed in Section IV.A (Impacts Found to be Less Than Significant), the Project would not result in any impacts related to issues "ai," "d," and "e." Thus, no further analysis of these issues is required.

Regarding issue "b," Project impacts related to soil erosion or the loss of topsoil is addressed in Section 4.H (Hydrology and Water Quality).

L.A. CEQA Thresholds Guide

The L.A. CEQA Thresholds Guide requires the geotechnical analysis to address the following areas of study: (1) geologic hazards; (2) sedimentation and erosion; (3) landform alteration; and (4) mineral resources. Area 4 (mineral resources) is discussed in Section 4.A (Impacts Found to be Less Than Significant).

1. Geologic Hazards

A project would normally have a significant geologic hazard impact if the project would cause or accelerate geologic hazards, which would result in substantial damage to structures or infrastructure, or expose people to substantial risk of injury.

2. Sedimentation and Erosion

A project would normally have significant sedimentation or erosion impacts if the project would:

- Constitute a geologic hazard to other properties by causing or accelerating instability from erosion; or

- Accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on site.

3. Landform Alteration

A project would normally have a significant impact on landform alteration if one or more distinct and prominent geologic or topographic feature would be destroyed, permanently

covered, or materially and adversely modified. Such features may include, but are not limited to hilltops, ridges, hillslopes, canyons, ravines, rock outcrops, water bodies, streambeds, and wetlands.

Project Impacts

Seismic Ground-Shaking

Given the Project site's location in a seismically active region, the Project site could experience seismic groundshaking in the event of an earthquake. However, the City would require the Project Applicant to design and construct the Project in conformance to the most recently adopted Building Code and applicable recommendations made in a Final Geotechnical Report prepared for the Project. Conformance with the City's current Building Code requirements would minimize the potential for structural failure, injury, and loss of life during an earthquake event and thus, not cause or accelerate geologic hazards or expose people to substantial risk of injury. Therefore, Project impacts related to groundshaking would be less than significant.

Ground Failure/Liquefaction/Landslides

The Project site is located outside of the liquefaction hazard zones. The susceptibility of the site soils to liquefaction is further mitigated by the presence of bedrock at a shallow depth. However, the proposed lots situated on the east side of Haverhill Drive and Haverhill Way are located within potential, seismically-induced landslide hazard zones.

To determine whether these lots would be subject to instability, the preparers of the Preliminary Geotechnical Engineering and Engineering Geology Investigation for the Project (SASSAN Geosciences) conducted a slope stability analysis using GSTABL7, a computer program developed to handle general slope stability problems by the Simplified Janbu and the Modified Bishop method of slices. The results of the slope stability analyses indicate that the slopes within the Project site possess factors of safety against static and seismic stability in excess of minimum Building Code requirements. Additionally, as stated previously, the City would require the Project Applicant to design and construct the Project in conformance to the most recently adopted Building Code and applicable recommendations made in a Final Geotechnical Report prepared for the Project. Conformance with the City's current Building Code requirements would minimize the potential for structural failure, injury, and loss of life associated with ground failure, liquefaction, and landslides. Therefore, Project impacts related to ground failure, liquefaction, and landslides would be less than significant.

CUMULATIVE IMPACTS

Geotechnical impacts related to future development in the City involve hazards related to site-specific soil conditions, erosion, and ground-shaking during earthquakes. The impacts on each site are specific to that site and its users and would not be in common or contribute to (or shared with, in an additive sense) the

impacts on other sites. In addition, development on each site is subject to uniform site development and construction standards that are designed to protect public safety. Therefore, cumulative geotechnical impacts related would be less than significant.

MITIGATION MEASURES/REGULATORY COMPLIANCE MEAURES/PROJECT DESIGN FEATURES

Mitigation Measures

None required.

Regulatory Compliance Measures

None required.

Project Design Features

F-1 The Project shall comply with the conditions contained within the Department of Building and Safety's Geology and Soils Report Approval Letter for the Proposed Project, and as it may be subsequently amended or modified.

F-2 **Geotechnical Engineering Investigation**

All structures and buildings shall be constructed to industry standards and agency regulations for all geotechnical considerations, including seismic, soil excavation, de-watering requirements, grading, foundation design, settlement, pavement recommendations, retaining walls, drainage, shoring, and any other relevant recommendations within the Geotechnical Investigation.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

No mitigation measures are required.

Project Design Feature F-1 would ensure that the Project is compliant with the City's building and safety requirements.

Project Design Feature F-2 would ensure that the Project is feasible from a geotechnical engineering perspective.

Overall, impacts related to geology and soils would be less than significant.

Cumulative impacts would be less than significant.

4. ENVIRONMENTAL IMPACT ANALYSIS

G. GREENHOUSE GAS EMISSIONS

INTRODUCTION

The information and analysis in this section is based primarily on the following technical modeling (refer to Appendix B):

- *Air Quality and Greenhouse Gas Technical Modeling, DKA Planning, 2015.*

BACKGROUND

Various gases in the Earth's atmosphere, classified as atmospheric GHG emissions, play a critical role in determining the Earth's surface temperature. Solar radiation entering Earth's atmosphere is absorbed by the Earth's surface. When the Earth emits this radiation back toward space, the radiation changes from high-frequency solar radiation to lower-frequency infrared radiation. GHG emissions are transparent to solar radiation and absorb infrared radiation. As a result, radiation that otherwise would escape back into space is now retained, warming the atmosphere. This phenomenon is known as the greenhouse effect.

GHG emissions that contribute to the greenhouse effect include:

- Carbon Dioxide (CO_2) is released to the atmosphere when solid waste, fossil fuels (oil, natural gas, and coal), and wood and wood products are burned. CO_2 emissions from motor vehicles occur during operation of vehicles and operation of air conditioning systems. CO_2 comprises over 80 percent of GHG emissions in California.[1]

- Methane (CH_4) is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from the decomposition of organic waste in solid waste landfills, raising livestock, natural gas and petroleum systems, stationary and mobile combustion, and wastewater treatment. Mobile sources represent 0.5 percent of overall methane emissions.[2]

- Nitrous Oxide (N_2O) is emitted during agricultural and industrial activities, as well as during combustion of solid waste and fossil fuels. Mobile sources represent about 14 percent of N_2O

[1] *California Environmental Protection Agency, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, p. 11.*

[2] *United States Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990-2003, April 2005 (EPA 430-R-05-003)*

emissions.[3] N_2O emissions from motor vehicles generally occur directly from operation of vehicles.

- Hydrofluorocarbons (HFCs) are one of several high global warming potential (GWP) gases that are not naturally occurring and are generated from industrial processes. HFC (refrigerant) emissions from vehicle air conditioning systems occur due to leakage, losses during recharging, or release from scrapping vehicles at end of their useful life.

- Perfluorocarbons (PFCs) are another high GWP gases that are not naturally occurring and are generated in a variety of industrial processes. Emissions of PFCs are generally negligible from motor vehicles.

- Sulfur Hexafluoride (SF_6) is another high GWP gas that is not naturally occurring and is generated in a variety of industrial processes. Emissions of SF_6 are generally negligible from motor vehicles.

For most non-industrial development projects, motor vehicles produce the bulk of GHG emissions, particularly carbon dioxide, methane, nitrous oxide, and HFCs.[4] The other GHGs are less abundant but have higher GWP than CO_2 (refer to Table 4.G-1). To account for this higher potential, emissions of other GHGs are frequently expressed in the equivalent mass of CO_2, denoted as CO_2e. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted. High GWP gases such as HFCs, PFCs, and SF_6 are the most heat-absorbent.

The effects of increasing global temperature are difficult to quantify. In general, increases in the ambient global temperature as a result of increased GHGs is anticipated to result in rising sea levels which could threaten coastal areas through accelerated coastal erosion, threats to levees and inland water systems and disruption to coastal wetlands and habitat.

If the temperature of the ocean warms, it is anticipated that the winter snow season would be shortened. The snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the state. This phenomenon could lead to significant challenges securing an adequate water supply for a growing state population. Further, the increased ocean temperature could result in increased moisture flux into the state; however, since this would likely increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential and severity of flood events, placing more pressure on

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[3] *United States Environmental Protection Agency, U.S. Adipic Acid and Nitric Acid N2O Emissions 1990-2020: Inventories, Projections and Opportunities for Reductions, December 2001*

[4] *California Air Resources Board, Climate Change Emission Control Regulations, 2004*

California's levee/flood control system. If sea level rise occurs, resultant effects could include increased coastal flooding, saltwater intrusion and disruption of wetlands. As the existing climate throughout California changes over time, migration or failure of species to migrate in time to adapt to the perturbations in climate could also result.

Table 4.G-1
Global Warming Potential for Greenhouse Gases

Greenhouse Gas	Global Warming Potential
Carbon Dioxide (CO_2)	1
Methane (CH_4)	28
Nitrous Oxide (N_2O)	265
Hydrofluorocarbons (HFCs)	100-12,000
Perfluorocarbons (PFCs)	7,000 – 11,000
Sulfur Hexafluoride (SF_6)	23,500
Source: California Air Resources Board, First Update to the Climate Change Scoping Plan. May 2014.	

While efforts to reduce the rate of GHG emissions continue, the State has developed a strategy to begin the process of adapting the State's infrastructure to the impacts of climate change. The 2009 California Climate Adaptation Strategy analyzed risks and vulnerabilities and proposes strategies to reduce risks. The Strategy began an ongoing process of adaptation, as directed by Governor Schwarzenegger's Executive Order S-13-08. The Strategy analyzed two components of climate change: (1) projecting the amount of climate change that may occur using computer-based global climate models; and (2) assessing the natural or human systems' abilities to cope with and adapt to change by examining past experience with climate variability and extrapolating from this to understand how the systems may respond to the additional impact of climate change. The Strategy's key preliminary adaptation recommendations included the following:

- Appointment of a Climate Adaption Advisory Panel;
- Improved water management in anticipation of reduced water supplies, including a 20 percent reduction in per capita water use by 2020 from 2011 levels;
- Consideration of project alternatives that avoid significant new development in areas that cannot be adequately protected from flooding due to climate change;
- Preparation of agency-specific adaptation plans, guidance or criteria by September 2010;
- Consideration of climate change impacts for all significant state projects;
- Assessment of climate change impacts on emergency preparedness;

- Identification of key habitats and development of plans to minimize adverse effects from climate change;

- Development of guidance by the California Department of Public Health by September 2010 for use by local health departments to assess adaptation strategies;

- Amendment of General Plans and Local Coastal Plans to address climate change impacts and to develop local risk reduction strategies; and

- Inclusion of climate change impact information into fire program planning by State fire fighting agencies.

Regulatory Setting

International

Kyoto Protocol

In 1988, the United Nations established the Intergovernmental Panel on Climate Change to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States (the "U.S.") joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (the "UNFCCC") agreement with the goal of controlling greenhouse gas emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHG emissions in the U.S. The plan currently consists of more than 50 voluntary programs for member nations to adopt.

The Kyoto Protocol (the "Protocol") is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. Some have estimated that if the commitments outlined in the Protocol are met, global GHG emissions could be reduced an estimated five percent from 1990 levels during the first commitment period of 2008-2012. Notably, while the U.S. is a signatory to the Kyoto protocol, Congress has not ratified the Protocol and the U.S. is not bound by the Protocol's commitments. In December 2009, international leaders from 192 nations met in Copenhagen to address the future of international climate change commitments post-Protocol.

The Protocol's major feature is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions. The targets amount to an average of five percent reduction levels against 1990 levels over the five-year period 2008-2012. The major distinction between the Protocol and the UNFCCC is that while the UNFCCC encouraged industrialized countries to stabilize GHG emissions, the Protocol commits them to do so. Recognizing that developed countries are principally responsible for the current high levels of GHG emissions in the atmosphere as a result of more than 150 years of industrial activity, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

On December 12, 2015, a Conference of the Parties to the UNFCCC and the 11th session of the Kyoto Protocol negotiated an agreement in Paris that would keep the rise of temperature below 2 degrees Celsius. While 186 countries published their action plans detailing how they plan to reduce their GHG emissions, these reductions would still result in up to three degrees Celsius of global warming. The Paris agreement asks all countries to review their plans every five years from 2020, and acknowledges that $100 billion is needed each year to enable countries to adapt to climate change. The agreement was signed into law on April 22, 2016.

The Western Regional Climate Action Initiative

The Western Regional Climate Action Initiative (the "WCI") is a partnership among seven states, including California, and four Canadian provinces to implement a regional, economy-wide cap-and-trade system to reduce global warming pollution. The WCI will cap GHG emissions from the region's electricity, industrial, and transportation sectors with the goal to reduce the heat trapping emissions that cause global warming to 15 percent below 2005 levels by 2020. When the WCI adopted this goal in 2007, it estimated that this would require 2007 levels to be reduced worldwide between 50 percent and 85 percent by 2050. California is working closely with the other states and provinces to design a regional GHG reduction program that includes a cap-and-trade approach. The California Air Resources Board's (CARB) planned cap and-trade program, discussed below, is also intended to link California and the other member states and provinces.

Federal

The United States Environmental Protection Agency (the "U.S. EPA") has historically not regulated GHGs because it determined the Clean Air Act did not authorize it to regulate emissions that addressed climate change. In 2007, the U.S Supreme Court found that GHGs could be considered within the Clean Air Act's definition of a pollutant.[5] In December 2009, U.S. EPA issued an endangerment finding for GHGs under the Clean Air Act, setting the stage for future regulation. In September 2009, the National Highway Traffic Safety Administration and U.S. EPA announced a joint rule that would tie fuel economy to GHG emission reduction requirements. This currently equates to an overall light-duty vehicle fleet average fuel economy of 35.5 miles per gallon.

In June 2013, President Obama announced a Climate Action Plan that calls for a number of initiatives, including funding $8 billion in advanced fossil energy efficiency projects, calls for federal agencies to develop new emission standards for power plants, invests in renewable energy sources, calling for adaptation programs, and leading international efforts to address climate change. In September 2013, U.S. EPA announced its first steps to implement a portion of the Obama Climate Action Plan by proposing carbon pollution standards for new power plants.

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[5] *Massachusetts v. Environmental Protection Agency et al [127 S. Ct. 1438 (2007])*

Vehicle Standards

Other regulations have been adopted to address vehicle standards including the U.S. EPA and National Highway Traffic Safety Administration (the "NHTSA") joint rulemaking for vehicle standards.

- On March 30, 2009, the NHTSA issued a final rule for model year 2011.[6]
- On May 7, 2010, the U.S. EPA and the NHTSA issued a final rule regulating fuel efficiency and GHG emissions pollution from motor vehicles for cars and light-duty trucks for model years 2012–2016.[7]
- On August 9, 2011, U.S. EPA and NHTSA issued a Supplemental Notice of Intent announcing plans to propose stringent, coordinated federal GHG emissions and fuel economy standards for model year 2017-2025 light-duty vehicles.[8]
- NHSTA intends to set standards for model years 2022-2025 in a future rulemaking.[9]
- In addition to the regulations applicable to cars and light-duty trucks, on August 9, 2011, the U.S. EPA and the NHTSA announced fuel economy and GHG emissions standards for medium- and heavy-duty trucks that applies to vehicles from model year 2014–2018.[10]

Energy Independence and Security Act

Among other key measures, the Energy Independence and Security Act (the "EISA") would do the following, which would aid in the reduction of national GHG emissions, both mobile and non-mobile:

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[6] *NHSTA. 2009. Average Fuel Economy Standards Passenger Cars and Light Trucks Model Year 2011, Final Rule. 75 Fed. Reg. 25324.*

[7] *U.S. EPA. 2010. Light Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, Final Rule. 75 Fed. Reg. 25324.*

[8] *Available: http://www.gpo.gov/fdsys/pkg/FR-2011-08-09/pdf/2011-19905.pdf. Accessed August 2016.*

[9] *NHSTA. 2012. 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards. 77 Fed. Reg. 62624.*

[10] *U.S. EPA Office of Transportation and Air Quality. 2011. EPA and NHTSA Adopt First-Ever Program to Reduce Greenhouse Gas Emissions and Improve Fuel Efficiency of Medium-and Heavy-Duty Vehicles. Available: http://www.epa.gov/otaq/climate/documents/420f11031.pdf. Accessed August 30, 2016.*

1) Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.

2) Prescribe or revise standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

3) While superseded by NHTSA and U.S. EPA actions described above, EISA also set miles per gallon targets for cars and light trucks and directed the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."

State

Assembly Bill 1493

California has adopted a series of laws and programs to reduce emissions of GHGs into the atmosphere. Assembly Bill (AB) 1493 was enacted in September 2003 and requires regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by vehicles used for personal transportation in the state.

Executive Order S-3-05

On June 1, 2005, Governor Schwarzenegger issued Executive Order S-3-05, which set the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels. The California Environmental Protection Agency formed a Climate Action Team that recommended strategies that can be implemented by State agencies to meet GHG emissions targets.

Executive Order B-30-15

On April 29, 2015, Governor Brown issued an executive order setting a Statewide GHG reduction target of 40 percent below 1990 levels by 2030. This action aligns the State's GHG targets with those set in October 2014 by the European Union and is intended to help the State meets its target of reducing GHG emissions 80 percent below 1990 levels by 2050. The measure calls on State agencies to implement measures accordingly and directs CARB to update the Climate Change Scoping Plan.

A recent study shows that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40 percent below 1990 levels by 2030 (consistent with Executive Order B-30-15), and to 60 percent below 1990 levels by 2050. Even though this study did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, it demonstrated that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the study could allow the State to meet the 2030 and 2050 targets.[11]

AB 32

In September 2006, AB 32 was signed into law by Governor Arnold Schwarzenegger, focusing on achieving GHG emissions equivalent to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. It mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. A companion bill, Senate Bill (SB) 1368, requires the California Public Utilities Commission and the California Energy Commission to establish GHG emission performance standards for the generation of electricity. These standards will also apply to power that is generated outside of California and imported into the state.

AB 32 charges CARB with the responsibility to monitor and regulate sources of GHG emissions. On June 1, 2007, CARB adopted three early action measures: setting a low carbon fuel standard, reducing refrigerant loss from motor vehicle air conditioning maintenance, and increasing methane capture from landfills.[12] On October 25, 2007, CARB approved measures improving truck efficiency (i.e., reducing aerodynamic drag), electrifying port equipment, reducing PFCs from the semiconductor industry, reducing propellants in consumer products, promoting proper tire inflation in vehicles, and reducing sulfur hexaflouride emissions from the non-electricity sector. CARB determined that the total statewide

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[11] *Greenblatt, Jeffrey, Energy Policy, "Modeling California Impacts on Greenhouse Gas Emissions" (Vol. 78, pp. 158-172).*

[12] *California Air Resources Board, Proposed Early Action Measures to Mitigate Climate Change in California, April 20, 2007.*

aggregated GHG 1990 emissions level and 2020 emissions limit is 427 million metric tons of CO_2 equivalent (CO_2e). The 2020 target reductions are currently estimated to be 174 million metric tons of CO_2e.

CARB developed an AB 32 Scoping Plan that contains strategies to achieve the 2020 emissions cap. This Scoping Plan, which was developed by CARB in coordination with the Climate Action Team, was first published in October 2008 (the "2008 Scoping Plan"). The 2008 Scoping Plan proposed a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce the state's dependence on oil, diversify the state's energy sources, save energy, create new jobs, and enhance public health. An important component of the plan is a cap-and-trade program covering 85 percent of the state's emissions. Additional key recommendations of the 2008 Scoping Plan include strategies to enhance and expand proven cost-saving energy efficiency programs; implementation of California's clean cars standards and increasing the amount of clean and renewable energy used to power the state. Furthermore, the 2008 Scoping Plan proposes full deployment of the California Solar Initiative, high-speed rail, water-related energy efficiency measures, and a range of regulations to reduce emissions from trucks and from ships docked in California ports. As required by AB 32, CARB must update its Scoping Plan every five years to ensure that California remains on the path toward a low carbon future.

In order to assess the scope of reductions needed to return to 1990 emissions levels, CARB first estimated the 2020 business-as-usual (BAU) GHG emissions in the 2008 Scoping Plan. These are the GHG emissions that would be expected to result if there were no GHG emissions reduction measures, and as if the state were to proceed on its pre-AB 32 GHG emissions track. After estimating that statewide 2020 BAU GHG emissions would be 596 metric tons, the 2008 Scoping Plan then identified recommended GHG emissions reduction measures that would reduce BAU GHG emissions by approximately 174 metric tons (an approximately 28.35 percent reduction) by 2020.

On August 19, 2011, following legal action in opposition to the Scoping Plan, CARB updated the Scoping Plan through a Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED or 2011 Scoping Plan).[13] CARB's updated projected BAU GHG emissions in the 2011 Scoping Plan are based on current economic forecasts (i.e., as influenced by the 2007-2009 economic downturn) and certain GHG emissions reduction measures already in place. CARB's revised 2020 BAU emissions estimate was 545 million metric tons of CO_2e when taking in to account the economic recession and associated future fuel and energy demand.[14] As such, the state found that a collective reduction of its

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[13] *California Air Resources Board, Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED), Attachment D, August 19, 2011.*

[14] *California Air Resources Board, "Status of Scoping Plan Recommended Measures, http://ww.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf. Accessed August 2016.*

BAU GHG emissions by approximately 21.7 percent by 2020 (down from 28.4 percent) would be needed to achieve AB 32 objectives.

On May 22, 2014, CARB approved its first update to the AB 32 Scoping Plan, recalculating 1990 GHG emissions using Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report (AR4) released in 2007. It states that based on the AR4 global warming potentials, the 427 million metric tons of CO_2e ($MMTCO_2e$) 1990 emissions level and 2020 GHG emissions limit would be slightly higher than identified in the Scoping Plan, at 431 $MMTCO_2e$. Based on the revised estimates of expected 2020 emissions identified in the 2011 supplement to the FED and updated 1990 emissions levels identified in the draft first update to the Scoping Plan, achieving the 1990 emission level would require a reduction of 76 $MMTCO_2e$ (down from 507 $MMTCO_2e$) or a reduction by approximately 15.3 percent (down from 28.5 percent) to achieve in 2020 emissions levels in the BAU condition.

Senate Bill 32

In August 2016, Governor Brown signaled his intent to sign into law a measure that extends AB 32 another ten years to 2030 and increases the State's objectives. SB 32 calls on Statewide reductions in GHG 40 percent below 1990 levels by 2030. Further regulatory actions by the State are forthcoming that will further challenge communities to reduce GHG emissions in the future.

State Bill 1368

Senate Bill (SB) 1368, requires the California Public Utilities Commission and the California Energy Commission to establish GHG emissions performance standards for the generation of electricity. These standards also apply to power that is generated outside of California and imported into the state.

SB 97 & CEQA Guidelines

In August 2007, the California State Legislature adopted Senate Bill 97 (SB 97), requiring the Governor's Office of Planning and Research (OPR) to prepare and transmit new CEQA guidelines for the mitigation of GHG emissions or the effects of GHG emissions to the Resources Agency by July 1, 2009. In response to SB 97, the OPR adopted CEQA guidelines that became effective on March 18, 2010. The amendments provide guidance to public agencies on analysis and mitigation of the effects of GHG emissions in CEQA documents, including the following:

- Lead agencies should quantify all relevant GHG emissions and consider the full range of project features that may increase or decrease GHG emissions as compared to the existing setting;

- Consistency with the CARB Scoping Plan is not a sufficient basis to determine that a project's GHG emissions would not be cumulatively considerable;

- A lead agency may appropriately look to thresholds developed by other public agencies, including the CARB's recommended CEQA thresholds;

- To qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project. General compliance with a plan, by itself, is not mitigation;

- The effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis; and

- Given that impacts resulting from GHG emissions are cumulative, significant advantages may result from analyzing such impacts on a programmatic level. If analyzed properly, later projects may tier, incorporate by reference, or otherwise rely on the programmatic analysis.

SB 375

On September 30, 2008, SB 375 was instituted to help achieve AB 32 goals through regulation of cars and light trucks. SB 375 aligns three policy areas of importance to local government: (1) regional long-range transportation plans and investments; (2) regional allocation of the obligation for cities and counties to zone for housing; and (3) a process to achieve GHG emissions reductions targets for the transportation sector. It establishes a process for CARB to develop GHG emissions reductions targets for each region (as opposed to individual local governments or households). SB 375 also requires Metropolitan Planning Organizations (MPOs) to prepare a Sustainable Communities Strategy (SCS) within the Regional Transportation Plan (RTP) that guides growth while taking into account the transportation, housing, environmental, and economic needs of the region. SB 375 uses CEQA streamlining as an incentive to encourage residential projects, which help achieve AB 32 goals to reduce GHG emissions. Although SB 375 does not prevent CARB from adopting additional regulations, such actions are not anticipated in the foreseeable future.

On October 24, 2008, CARB published draft guidance for setting interim GHG significance thresholds. This was the first step toward developing the recommended statewide interim thresholds of significance for GHG emissions that may be adopted by local agencies for their own use. The guidance does not attempt to address every type of project that may be subject to CEQA, but instead focuses on common project types that are responsible for substantial GHG emissions (i.e., industrial, residential, and commercial projects). CARB believes that thresholds in these sectors will advance climate objectives, streamline project review, and encourage CEQA analyses of GHG emissions throughout the state.

On September 23, 2010, CARB adopted regional targets for the reduction of GHG emissions applying to the years 2020 and 2035.[15] For the area under the Southern California Association of Governments' (SCAG) jurisdiction—including the Project area—CARB adopted Regional Targets for reduction of

[15] *California Air Resources Board. Notice of Decision: Regional Greenhouse Gas Emissions Reduction Targets for Automobiles and Light Trucks Pursuant to Senate Bill 375. http://www.arb.ca.gov/cc/sb375/notice%20of%20decision.pdf*

GHG emissions by 8 percent for 2020 and by 13 percent for 2035. On February 15, 2011, the CARB's Executive Officer approved the final targets.[16]

Title 24 Energy Efficiency Standards

California's Energy Efficiency Standards for Residential and Nonresidential Buildings, located at Title 24, Part 6 of the California Code of Regulations and commonly referred to as "Title 24," were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.

The most recent update to Title 24 was adopted by the California Energy Commission (CEC) on May 31, 2012, revised in December 2013, and became effective in July 2014. The 2013 Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings, and include requirements that will enable both demand reductions during critical peak periods and future solar electric and thermal system installations. The most significant efficiency improvements to the residential Standards are proposed for windows, envelope insulation, and heating, ventilation, and air conditioning (HVAC) system testing. The most significant efficiency improvements to the nonresidential Standards are proposed for lighting controls, windows, unitary HVAC equipment, and building commissioning. New efficiency requirements for process loads such as commercial refrigeration, data centers, kitchen exhaust systems, and compressed air systems are included in the nonresidential Standards. The 2013 Building Energy Efficiency Standards include expanded criteria for acceptance testing of mechanical and lighting systems, as well as new requirements for code compliance data to be collected in a California Energy Commission-managed repository.

The 2013 Building Energy Efficiency Standards also include updates to the energy efficiency divisions of the California Green Building Code Standards (Title 24, Part 11). A set of prerequisites has been established for both the residential and nonresidential Reach Standards, which include efficiency measures that should be installed in any building project striving to meet advanced levels of energy efficiency. The residential Reach Standards have also been updated to require additional energy efficiency or on-site renewable electricity generation to meet a specific threshold of expected electricity use. Both the residential and nonresidential Reach Standards include requirements for additions and alterations to existing buildings.

[16] *CARB. 2011. Executive Order No. G-11-024: Relating to Adoption of Regional Greenhouse Gas Emission Reduction Targets for Automobiles and Light Trucks Pursuant to Senate Bill 375.*

California Green Building Standards

The California Green Building Standards Code, which is Part 11 of the California Code of Regulations (the "CCR"), is commonly referred to as the CALGreen Code. The 2008 edition, the first edition of the CALGreen Code, contained only voluntary standards. The 2010 CALGreen Code is a code with mandatory requirements for state-regulated buildings and structures throughout California beginning on January 1, 2011. The 2010 CALGreen Code contains requirements for construction site selection, storm water control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation and more. The CALGreen Code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The CALGreen Code also requires building commissioning which is a process for the verification that all building systems, like heating and cooling equipment and lighting systems are functioning at their maximum efficiency.

CARB's Preliminary Draft Staff Proposal for Interim Significance Thresholds

Separate from its Scoping Plan approved in December of 2008, CARB issued a Staff Proposal in October 2008, as its first step toward developing recommended statewide interim thresholds of significance for GHG emissions that may be adopted by local agencies for their own use. CARB's preliminary proposal consisted of a quantitative threshold of 7,000 metric tons (MT) of CO_2e per year for operational emissions (excluding transportation), and performance standards for construction and transportation emissions. Further, CARB's proposal sets forth draft thresholds for industrial projects that have high operational stationary GHG emissions, such as manufacturing plants, or uses that utilize combustion engines.[17] There is currently no timetable for finalized thresholds.

Regional

Southern California Association of Governments

On April 4, 2012, the Regional Council of the Southern California Association of Governments (SCAG) adopted the 2012–2035 Regional Transportation Plan/Sustainable Communities Strategy: Towards a Sustainable Future (2012–2035 RTP/SCS). SCAG's SCS is included in the 2012-2035 RTP/SCS. The 2012-2035 RTP/SCS plans to concentrate future development and provide higher intensity development, including residential development, in proximity to transit hubs in order to reduce VMT and thereby reduce GHG emissions from personal vehicles. Within the RTP, the SCS demonstrates the region's ability to attain and exceed the GHG emission-reduction targets set forth by the CARB. The SCS outlines the region's plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation

[17] *http://www.arb.ca.gov/cc/localgov/ceqa/meetings/102708/prelimdraftproposal102408.pdf*

demands. The SCS focuses the majority of new housing and job growth in high-quality transit areas and other opportunity areas in existing main streets, downtowns, and commercial corridors, resulting in an improved jobs-housing balance and more opportunity for transit-oriented development. This overall land use development pattern supports and complements the proposed transportation network that emphasizes system preservation, active transportation, and transportation demand management measures. On June 4, 2012, CARB accepted SCAG's quantification of GHG emission reductions from the 2012–2035 RTP/SCS and the determination that the 2012–2035 RTP/SCS would, if implemented, achieve the 2020 and 2035 GHG emission reduction targets established by CARB.[18]

On April 17, 2016, SCAG adopted its 2016-2040 RTP/SCS update, calling for a continuation of integrated planning for land use and transportation that will help achieve the State's goal of reducing per capita GHG emissions by eight percent by 2020 compared to 2005 levels, by 18 percent by 2035, and 21 percent by 2040. The RTP/SCS update calls for public transportation improvements that will reduce GHG emissions per household by up to 30 percent. The RTP/SCS would obtain a further one percent reduction in GHG emissions by 2040 from increased use of zero emission vehicles, neighborhood vehicles, and carsharing/ridesourcing.

The RTP/SCS also includes a number of mitigation measures designed to reduce the potential of development to conflict with AB 32 or any other plan designed to reduce GHG. These mitigation measures are particularly important where streamlining mechanisms under SB 375 are utilized. Examples of GHG emissions reduction mitigation measures include the following:

- **MM-GHG-3(a)(4)**: SCAG shall work with utilities, sub-regions, and other stakeholders to promote accelerated penetration of zero- (and/or near zero) emission vehicles in the region, including developing a strategy for the deployment of public charging infrastructure.

- **MM-GHG-3(a)(5)**: SCAG shall in its capacity as a Clean Cities Coalition establish coordinated, creative public outreach activities, including publicizing the importance of reducing GHG emissions and steps community members may take to reduce their individual impacts.

- **MM-GHG-3(a)(6)**: SCAG shall work with local community groups and business associations to organize and publicize walking tours and bicycle events, and to encourage pedestrian and bicycle modes of transportation such as the "Go Human" Campaign.

- **MM-GHG-3(a)(7):** SCAG shall support and/or sponsor workshops on water conservation activities, such as selecting and planting drought tolerant, native plants in landscaping, and installing advanced irrigation systems.

[18] *CARB Executive Order G-12-039, www.arb.ca.gov/cc/sb375/exec_order_scag_scs.pdf.*

- **MM-GHG-3(a)(8):** SCAG shall in coordination with local jurisdictions (as practicable) support and/or sponsor a periodic Climate Protection Summits or Fairs, to educate the public on current climate science, projected local impacts, and local efforts and opportunities to reduce GHG emissions, including exhibits of the latest technology and products for conservation and efficiency.

- **MM-GHG-3(a)(9):** Schools Programs: SCAG shall develop and implement a program in coordination with school districts to present information to students about climate change and ways to reduce GHG emissions, and will support school-based programs for GHG reduction, such as school-based trip reduction and the importance of recycling.

- **MM-GHG-3(a)(11):** SCAG shall encourage local jurisdictions to support the following transportation-related strategies to reduce emissions:

    - Support the planning and development of HQTAs, jobs and housing balance, transit oriented development, and infill development through transportation investments and other funding decisions.

    - Offer incentives such as free or low-cost monthly transit passes to employees or free ride areas to residents and customers

    - Coordinate the funding of low carbon transportation with smart growth development.

    - Promote parking management measures that encourage walking and transit use in smart growth areas.

    - Develop comprehensive parking policies that encourages the use of alternative transportation

    - Incorporate bicycle lanes, routes and facilities into street systems, new subdivisions, and large developments, and create transit, bicycle, and pedestrian connections.

    - Require amenities for non-motorized transportation, such as secure and convenient bicycle parking.

- **MM-GHG-3(a)(10):** As part of SCAG's Sustainability Program, SCAG shall assist local jurisdictions in developing Climate Action Plans (CAPs, also known as Plans for the Reduction of Greenhouse Gas Emissions), as appropriate and feasible.

The SCAG RTP/SCS also identifies a number of recommended project-level mitigation measures in its EIR's Mitigation Measure MM-GHG-3(b), including:

- Measures in an adopted plan or mitigation program for the reduction of emissions that are required as part of the Lead Agency's decision.

- Reduction in emissions resulting from a project through implementation of project features, project design, or other measures, such as those described in Appendix F of the State CEQA Guidelines.

- Off-site measures to mitigate a project's emissions.

- Measures that consider incorporation of Best Available Control Technology (BACT) during design, construction and operation of projects to minimize GHG emissions, including but not limited to:

    - Use energy and fuel efficient vehicles and equipment;

    - Deployment of zero- and/or near zero emission technologies;

    - Use lighting systems that are energy efficient, such as LED technology;

    - Use the minimum feasible amount of GHG-emitting construction materials that is feasible;

    - Use cement blended with the maximum feasible amount of flash or other materials that reduce GHG emissions from cement production;

    - Incorporate design measures to reduce GHG emissions from solid waste management through encouraging solid waste recycling and reuse;

    - Incorporate design measures to reduce energy consumption and increase use of renewable energy;

    - Incorporate design measures to reduce water consumption;

    - Use lighter-colored pavement where feasible;

    - Recycle construction debris to maximum extent feasible;

    - Plant shade trees in or near construction projects where feasible; and

    - Solicit bids that include concepts listed above.

- Measures that encourage transit use, carpooling, bike-share and car-share programs, active transportation, and parking strategies, including, but not limited to, transit-active

transportation coordinated strategies, increased bicycle carrying capacity on transit and rail vehicles;

- Incorporating bicycle and pedestrian facilities into project designs, maintaining these facilities, and providing amenities incentivizing their use; providing adequate bicycle parking and planning for and building local bicycle projects that connect with the regional network;

- Improving transit access to rail and bus routes by incentives for construction of transit facilities within developments, and/or providing dedicated shuttle service to transit stations; and

- Adopting employer trip reduction measures to reduce employee trips such as vanpool and carpool programs, providing end-of-trip facilities, and telecommuting programs.

- Designate a percentage of parking spaces for ride-sharing vehicles or high-occupancy vehicles, and provide adequate passenger loading and unloading for those vehicles;

- Land use siting and design measures that reduce GHG emissions, including:

    - Developing on infill and brownfields sites;

    - Building high density and mixed use developments near transit;

    - Retaining on-site mature trees and vegetation, and planting new canopy trees;

- Measures that increase vehicle efficiency, encourage use of zero and low emissions vehicles, or reduce the carbon content of fuels, including constructing or encouraging construction of electric vehicle charging stations or neighborhood electric vehicle networks, or charging for electric bicycles; and

- Measures to reduce GHG emissions from solid waste management through encouraging solid waste recycling and reuse.

South Coast Air Quality Management District (SCAQMD)

The SCAQMD convened a GHG CEQA Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. Members of the working group include government agencies implementing CEQA and representatives from stakeholder groups that will provide input to the SCAQMD staff on developing GHG CEQA significance thresholds. On December 5, 2008, the SCAQMD Governing Board adopted interim GHG significance threshold for projects where the SCAQMD is lead agency, but did not take action on GHG threshold for residential, commercial or mixed use projects.

The SCAQMD has not adopted guidance for CEQA projects under other lead agencies. In September 2010, the Working Group released the following screening thresholds: (a) Option #1 - 3,500 $MTCO_2e$ for residential projects, 1,400 $MTCO_2e$ for commercial projects, and 3,000 $MTCO_2e$ for mixed-use projects; and (b) Option #2 - 3.000 MTCO2e for all projects. The SCQAQMD staff recommended the use of Option #2, but would allow lead agencies to choose Option #1 if they prefer that approach. Additionally, the Working Group identified project-level efficiency targets of 4.8 $MTCO_2e$ per service population as a 2020 target and 3.0 $MTCO_2e$ per service population as a 2035 target. The recommended area wide or plan-level target for 2020 was 6.6 $MTCO_2e$ and the plan-level target for 2035 was 4.1 $MTCO_2e$. The SCAQMD has not established a timeline for formal consideration of these thresholds.[19]

The SCAQMD has also adopted Rules 2700, 2701, and 2702 that address GHG emissions reductions. However, these rules address boilers and process heaters, forestry, and manure management projects, none of which are proposed or required of the Project.

Local

The City has adopted its LA Green Plan that outlines goals and actions to reduce the generation of GHG emissions to 35 percent below 1990 levels. Key strategies include increasing the generation of renewable energy, improving energy conservation and efficiency, and changing land use patterns to reduce dependence on autos.

The City adopted a Green Building Ordinance in April 2008 that calls for reduction of the use of natural resources for new development. The City's Green Building Ordinance has several requirements that call for reductions in GHG emissions from reducing in energy use, water use, and solid waste generation, including the following:

Section 99.24.204. Energy Reduction. Equipment and fixtures shall comply with the following where applicable:

1. Installed gas-fired space heating equipment shall have an Annual Fuel Utilization Ratio (AFUE) of .90 or higher.

2. Installed electric heat pumps shall have a Heating Seasonal Performance Factor (HSPF) of 8.0 or higher.

3. Installed cooling equipment shall have a Seasonal Energy Efficiency Ratio (SEER) higher than 13.0 and an Energy Efficiency Ratio (EER) of at least 11.5.

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[19] *SCAQMD Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15 Tuesday, September 28, 2010, available at http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds/page/2*

4. Installed tank type water heaters shall have an Energy Factor (EF) higher than .6.

5. Installed tankless water heaters shall have an Energy Factor (EF) higher than .80.

6. Perform duct leakage testing to verify a total leakage rate of less than 6 percent of the total fan flow.

7. Building lighting in the kitchen and bathrooms within the dwelling units shall consist of at least 90 percent ENERGY STAR qualified hard-wired fixtures (luminaires).

8. Installed swimming pool circulating pump motors shall be multi-speed or variable-speed. The pump motor controls shall have the capability of operating the pump at a minimum of three speeds; low speed, medium speed, and high speed. The daily low speed shall not exceed 300 watts. The daily medium speed shall be adjustable.

Section 99.04.211. Renewable Energy. Future Access for Electrical Solar System. An electrical conduit shall be provided from the electrical service equipment to an accessible location in the attic or other location suitable for future connection to a solar system. The conduit shall be adequately sized by the designer but shall not be less than one inch. The conduit shall be labeled as per the Los Angeles Fire Department requirements. The electrical panel shall be sized to accommodate the installation of a future electrical solar system. Exception: Buildings designed and constructed with a solar photovoltaic system or an alternate system with means of generating electricity at time of final inspection.

Section 99.04.211.4.1. Space for Future Electrical Solar System Installation. A minimum of 250 square feet of contiguous unobstructed roof area shall be provided for the installation of future photovoltaic or other electrical solar panels. The location shall be suitable for installing future solar panels as determined by the designer.

Section 99.04.303.1. Twenty Percent Savings. A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by at least 20 percent shall be provided. The reduction shall be based on the maximum allowable water use per plumbing fixture and fitting as required by the California Building Standards Code. The 20 percent reduction in potable water use shall be demonstrated by one of the following methods:

1. Each plumbing fixture and fitting shall meet reduced flow rates specified on Table 4.303.2; or

2. A calculation demonstrating a 20 percent reduction in the building "water use" baseline as established on Table 4.303.1 shall be provided. For low-rise residential occupancies, the calculation shall be limited to the following plumbing fixture and fitting types: water closets, urinals, lavatory faucets, kitchen faucets and showerheads.

Section 99.04.303.2. Multiple Showerheads Serving One Shower. When single shower fixtures are served by more than one showerhead, the combined flow rate of all the showerheads shall not exceed the

maximum flow rates specified in the 20 percent reduction column contained on Table 4.303.2 or the shower shall be designed to only allow one showerhead to be in operation at a time. Exception: The maximum flow rate for showerheads when using the calculation method specified in Section 99.04.303.1, Item 2, is 2.5 gpm @ 80 psi.

Section 99.04.304.1. Irrigation Controllers. When automatic irrigation system controllers for landscaping are provided and installed at the time of final inspection, the controllers shall comply with the following:

1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change;

2. Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor that connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input. Buildings on sites with over 2,500 square feet of cumulative irrigated landscaped areas shall have irrigation controllers that meet the criteria in Section 99.04.304.1.

Section 99.04.408. Construction Waste Reduction, Disposal And Recycling. Construction Waste Reduction of at Least 50 Percent. Comply with Section 66.32 et seq. of the LAMC.

ENVIRONMENTAL IMPACTS

Methodology

The methodology utilized for this analysis is based on a Technical Advisory released by the Governor's Office of Planning and Research (OPR) on June 19, 2008 titled *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*. Both one-time emissions and indirect emissions are expected to occur each year after build-out of the Project. One-time emissions from construction and vegetation removal were amortized over a 30-year period because no significance threshold has been adopted for such emissions. The Project emission reductions are results of the Project's commitments and regulatory changes, which include the implementation of the Renewables Portfolio Standard (RPS) of 33 percent, the Pavley regulation and Advanced Clean Cars program mandating higher fuel efficiency standards for light-duty vehicles, and the Low Carbon Fuel Standard (LCFS).

The California Climate Action Registry (Climate Registry) General Reporting Protocol provides basic procedures and guidelines for calculating and reporting GHG emissions from a number of general and industry-specific activities.[20] The General Reporting Protocol is based on the "Greenhouse Gas Protocol:

[20] *California Climate Action Registry, General Reporting Protocol Version 3.1, January 2009, www.sfenvironment.org/sites/default/files/fliers/files/ccar_grp_3-1_january2009_sfe-web.pdf, accessed August 1, 2016.*

A Corporate Accounting and Reporting Standard" developed by the World Business Council for Sustainable Development and the World Resources Institute through "a multi-stakeholder effort to develop a standardized approach to the voluntary reporting of GHG emissions."[21] Although no numerical thresholds of significance have been developed, and no specific protocols are available for land use projects, the General Reporting Protocol provides a basic framework for calculating and reporting GHG emissions from the project. The information provided in this analysis is consistent with the General Reporting Protocol's reporting requirements.

The General Reporting Protocol recommends the separation of GHG emissions into three categories that reflect different aspects of ownership or control over emissions. They include the following:

- Scope 1: Direct, on-site combustion of fossil fuels (e.g., natural gas, propane, gasoline, and diesel).
- Scope 2: Indirect, off-site emissions associated with purchased electricity or purchased steam.
- Scope 3: Indirect emissions associated with other emissions sources, such as third-party vehicles and embodied energy (e.g., energy used to convey, treat, and distribute water and wastewater).[22]

The General Reporting Protocol provides a range of basic calculations methods. However, the General Reporting Protocol calculations are typically designed for existing buildings or facilities. These retrospective calculation methods are not directly applicable to planning and development situations where buildings do not yet exist.

CARB recommends consideration of indirect emissions to provide a more complete picture of the GHG footprint of a facility. Annually reported indirect energy usage aids the conservation awareness of a facility and provides information to CARB to be considered for future strategies.[23] For example, CARB has proposed requiring the calculation of direct and indirect GHG emissions as part of the AB 32 reporting requirements. Additionally, the Office of Planning and Research has noted that lead agencies

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[21] *Ibid.*

[22] *Embodied energy is a scientific term that refers to the quantity of energy required to manufacture and supply to the point of use a product, material, or service.*

[23] *California Air Resources Board, Initial Statement of Reasons for Rulemaking, Proposed Regulation for Mandatory Reporting of Greenhouse Gas Emissions Pursuant to the California Global Warming Solutions Act of 2006 (AB 32), Planning and Technical Support Division Emission Inventory Branch, October 19, 2007, www.arb.ca.gov/regact/2007/ghg2007/isor.pdf, accessed August 1, 2016.*

"should make a good-faith effort, based on available information, to calculate, model, or estimate… GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities."[24] Therefore, direct and indirect emissions have been calculated for the Project.

GHG emissions were quantified from construction and operation of the Project using SCAQMD's California Emissions Estimator Model (CalEEMod). Operational emissions include both direct and indirect sources including mobile sources, water use, solid waste, area sources, natural gas, and electricity use emissions. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. The model is considered by the SCAQMD to be an accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.[25]

Threshold of Significance

Given the evolving nature of the issue, there are no formally adopted applicable quantitative standards for judging the significance of the Project's impacts on climate change in the South Coast Air Basin. As a result, this analysis relies on primary direction from the CEQA Guidelines. The March 2010 amendments to CEQA Guidelines Appendix G indicate a project could have a significant impact if it would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. [26]

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[24] *OPR Technical Advisory, p. 5.*

[25] *See www.caleemod.com.*

[26] *In a recent opinion dated, November 30, 2015 (Center for Biological Diversity v. California Department of Fish and Wildlife), the California Supreme Court determined that a development project's CEQA GHG analysis did not adequately substantiate the conclusion that the GHG cumulative impacts would be less than significant because there was insufficient information in the record to show the linkage between the statewide GHG reduction target established by CARB in AB 32's scoping plan, and how this statewide target should be applied to individual land use projects. The Supreme Court also stated that a lead agency could assess a project's climate change impacts and consistency with AB 32's goals by looking to compliance with regulatory programs designed to reduce GHG emission from particular activities.*

Further, CEQA Guidelines Section 15064.4 states that:

1. A lead agency should consider the following factors, among others, when assessing the significance of greenhouse gas emissions on the environment:

    a. The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

    b. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and

    c. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

Consequently, this analysis discloses potential GHG emissions and finds that the Project's impact on climate change would be significant if:

1. It conflicts with or obstructs implementation of the AB 32 Scoping Plan; or

2. It exceeds the draft SCAQMD screening threshold of 3,000 $MTCO_2e$/yr., ***and*** it conflicts with the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016–2040 RTP/SC) ***or*** the City of Los Angeles' Green Building Ordinance.

Project Impacts

The methodology utilized for the following analysis is based on a Technical Advisory released by the OPR on June 19, 2008 titled CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review. GHG emissions were quantified from construction and operation of the Project using the CalEEMod 2013.2.2 model. Operational emissions include both direct and indirect sources including mobile sources, water use, solid waste, area sources, natural gas, and electricity use emissions.

Generation of GHG Emissions

Construction of the Project would emit GHG emissions through the combustion of fossil fuels by heavy-duty construction equipment and through vehicle trips generated by construction workers and vendors traveling to and from the Project site. These impacts would vary day to day over the 17-month duration

of construction activities. As illustrated on Table 4.G-2, construction emissions of CO_2 would peak in 2017, when up to 22,763 pounds of CO_2e per day are anticipated following implementation of recommended Mitigation Measures C-1 through C-3 and Regulatory Compliance Measure C-4 (refer to Section 4.C [Air Quality]). In accordance with the SCAQMD's guidance, GHG emissions from construction were amortized over the lifetime of the Project. The SCAQMD defines the lifetime of a project as 30 years. Therefore, total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions

Table 4.G-2
Estimated Project Construction Emissions (Pounds Per Day)

Construction Year	CO_2	CH_4	N_2O	CO_2e
2017	22,666	5	0	22,763
2018	15,144	3	0	15,206
Source: DKA Planning 2016, based on CalEEMod 2013.2.2 (refer to Appendix B).				

The analysis in this Draft EIR uses the 2014 Revised AB 32 Scoping Plan's statewide goals (i.e., 15.8 percent reduction from No Action Taken, or NAT) to assess the efficacy of the applicable GHG reduction plans and programs. The methodology is to compare the Project's emissions as proposed to the Project's emissions if the Project were built using under an NAT scenario in terms of design, methodology, and technology. This means the Project's emissions were calculated as if the Project was constructed before AB 32 to the Project as constructed with project design features to reduce GHG and with several regulatory measures adopted in furtherance of AB 32.

GHG emissions were calculated for long-term operations. As shown on Table 4.G-3, the emissions for the Project as proposed and its associated CARB 2020 NAT scenario are estimated to be 1,773 and 2,274 $MTCO_2e$ per year, respectively, which shows the Project would reduce emissions by 22 percent from the CARB 2020 NAT scenario. The emission reductions under the Project result from compliance with applicable plans and policies to reduce GHG emissions.

Table 4.G-3
Estimated Project Annual CO_2e GHG Emissions (Metric Tons per Year)

Scenario and Source	NAT Scenario*	As Proposed Scenario	Reduction from NAT Scenario[27]	Change from NAT Scenario
Area Sources	31	31	-	0%
Energy Sources	397	279	-117	-30%
Mobile Sources	1,673	1,289	-384	-23%
Waste Sources	25	25	-	0%
Water Sources	98	98	-	0%
Construction	50	50	-	0%
Total Emissions	**2,274**	**1,773**	**-501**	**-22%**

Note: Daily construction emissions amortized over 30-year period pursuant to SCAQMD guidance. Annual construction emissions derived by taking total emissions over duration of activities and dividing by construction period.

* *The NAT scenario does not assume 30% reduction in in mobile source emissions from Pavley emission standards (19.8%), low carbon fuel standards (7.2%), vehicle efficiency measures 2.8%); does not assume 42% reduction in energy production emissions from the State's renewables portfolio standard (33%), natural gas extraction efficiency measures (1.6%), and natural gas transmission and distribution efficiency measures (7.4%).*

Source: DKA Planning, 2016.

Additionally, the Project would comply with the City's Green Building Ordinance standards that compel LEED certification, reduce emissions beyond the NAT scenario, and are consistent with the AB 32 Scoping Plan's recommendation for communities to adopt building codes that go beyond the State's codes. Under the City's Green Building Code, the Project must incorporate several measures and design elements that reduce the carbon footprint of the development.

It is important to note that the CO_2 estimates from mobile sources (particularly CO_2, CH_4, and N_2O emissions) are likely much greater than the emissions that would actually occur. The methodology used assumes that all emissions sources are new sources and that emissions from these sources are 100 percent additive to existing conditions. This is a standard approach taken for air quality analyses. In many cases, such an assumption is appropriate because it is impossible to determine whether emissions sources associated with a project move from outside the air basin and are in effect new emissions sources, or whether they are sources that were already in the air basin and just shifted to a new location. Because the effects of GHGs are global, a project that shifts the location of a GHG-emitting activity (e.g., where people live, where vehicles drive, or where companies conduct business) would result in no net change in global GHG emissions levels.

[27] *This information is included for informational purposes and to assess the efficacy of the applicable plans and policies to reduce GHG emissions. The percentage break from NAT is not a threshold of significance.*

For example, if a substantial portion of California's population migrated from the South Coast Air Basin to the San Joaquin Valley Air Basin, this would likely decrease GHG emissions in the South Coast Air Basin and increase emissions in the San Joaquin Valley Air Basin, but little change in overall global GHG emissions. However, if a person moves from one location where the land use pattern requires auto use (commuting, shopping, etc.) to a new development that promotes shorter and fewer vehicle trips, more walking, and overall less energy usage, then it could be argued that the new development would result in a potential net reduction in global GHG emissions.

It is impossible to know at this time whether residents of the Project would have longer or shorter trips relative to their destinations; whether they would walk, bike, and use public transportation more or less than under existing circumstances; and whether their overall driving habits would result in higher or lower VMT. Much of the vehicle-generated CO_2 emissions attributed to the Project could simply be from vehicles at an existing location moving to the project site, and not from new vehicle emissions sources relative to global climate change. Therefore, although it is not possible to calculate the net contribution of vehicle-generated CO_2, CH_4, and N_2O emissions from the Project (i.e., Project-generated emissions minus current emissions from vehicles that would move to the Project), the net contribution would likely be less than the estimated emissions.

As set forth in Table 4.G-3, the Project would generate 1,773 $MTCO_2e$ per year of GHG emissions. As noted, this likely overstates the Project's GHG actual emissions. Nonetheless, the projected GHG emissions of the Project are below the SCAQMD's recommended screening threshold of 3,000 $MTCO_2e$ per year.

GHG Policy Consistency

The Project would contribute to increases in GHG emissions over time in the absence of policy intervention. The AB 32 Scoping Plan provides the basis for policies that reduce cumulative GHG emissions within California to 1990 levels by 2020. The Project is judged against its consistency with the AB 32 Scoping Plan to determine whether it will result in adverse cumulative impacts to global climate change. As shown on Table 4.G-4, the Project would be consistent with all feasible and applicable strategies recommended in the Scoping Plan.

As noted earlier, the Project would also be consistent with a number of relevant plans and policies that govern climate change. In particular, the Project would be consistent with the State's Executive Order S-3-05, which calls for reducing GHG emissions statewide to 1990 levels, including 15.3 percent reductions by 2020. In addition, as set forth in Table 4.G-5 below, the Project would be consistent with SCAG's 2016-2040 RTP/SCS, which calls for regional growth and transportation emissions to be consistent with regional and state air pollution objectives. With regard to local policies and regulations, the Project would comply with the City of Los Angeles' Green Building Ordinance standards that reduce emissions beyond an NAT scenario.

Based on the Project's consistency with AB 32, SCAG's 2016-2040 RTP/SCS, and the City's Green Building Ordinance, the Project's impact with respect to GHG emissions and global climate change is considered less than significant.

Table 4.G-4
Project Consistency With AB 32 Scoping Plan GHG Emissions Reduction Strategies

Strategy	Project Consistency
California Cap-and-Trade Program. Implement a broad-based California cap-and-trade program to provide a firm limit on emissions.	**N/A.** The statewide program is not relevant to the Project.
California Light-Duty Vehicle Greenhouse Gas Standards. Implement adopted Pavley standards and planned second phase of the system. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	**N/A.** The implementation of standards is not relevant to the Project, as vehicle manufacturers and refineries are responsible for implementing these clean air standards.
Energy Efficiency. Maximize energy efficiency building and appliance standards and pursue additional efficiency efforts including new technologies, and new policy and mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	**Consistent**. The Project would be designed and constructed to meet Cal Green building standards by including several measures designed to reduce energy consumption.
Renewables Portfolio Standard. Achieve 33 percent renewable energy mix statewide.	**Consistent**. The Project would use energy from the Los Angeles Department of Water and Power (LADWP), which has goals to diversify its portfolio of energy sources to increase the use of renewable energy.
Low-Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard.	**N/A.** The statewide program is not relevant to the Project.
Regional Transportation-Related Greenhouse Gases. Develop regional greenhouse gas emissions reduction targets for passenger vehicles.	**N/A.** The development of regional planning goals is not relevant to the Project.
Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.	**N/A.** State agencies are responsible for implementing efficiency measures.
Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.	**N/A**. State agencies are responsible for implementing regulations and promoting efficiency in goods movement.
Million Solar Roofs Program. Install 3,000 MW of solar-electric capacity under California's existing solar programs.	**Neutral**. The Project does not include solar roofs and is not part of the proposed statewide initiative. However, the Project would use energy from LADWP, which obtains a portion of its power through solar sources.
Medium/Heavy-Duty Vehicles. Adopt medium and heavy-duty vehicle efficiency measures.	**N/A.** State agencies are responsible for implementing efficiency measures.
Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission.	**N/A.** This measure addresses industrial facilities.
High Speed Rail. Support implementation of a high speed rail system.	**N/A.** This calls for the California High Speed Rail Authority and stakeholders to develop a statewide rail transportation system.
Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and	**Consistent**. The Project would be designed and constructed to meet Cal Green building

Table 4.G-4
Project Consistency With AB 32 Scoping Plan GHG Emissions Reduction Strategies

Strategy	Project Consistency
existing inventory of buildings.	standards and will include several measures designed to reduce energy consumption.
High Global Warming Potential Gases. Adopt measures to reduce high global warming potential gases.	**N/A.** State agencies are responsible for implementing these measures.
Recycling and Waste. Reduce methane emissions at landfills. Increase waste diversion, composting and other beneficial uses of organic materials and mandate commercial recycling. Move toward zero waste.	**Consistent**. The Project would have a less than significant impact on landfill capacity.
Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation.	**N/A.** Resource Agency departments are responsible for implementing this measure.
Water. Continue efficiency programs and use cleaner energy sources to move and treat water.	**Consistent**. The Project would use water-efficient landscaping including point-to-point irrigation and a smart controller drip system to reduce water use.
Agriculture. In the near-term, encourage investment in manure digester and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.	**N/A.** The Project does not include agricultural facilities.
Source: DKA Planning, 2016 (refer to Appendix B).	

Table 4.G-5
Project Consistency with SCAG 2016-2040 RTP/SCS GHG Emissions Reduction Strategies

Actions and Strategies	Responsible Party(ies)	Consistency Analysis[a]
Land Use Strategies		
Reflect the changing population and demands, including combating gentrification and displacement, by increasing housing supply at a variety of affordability levels.	Local jurisdictions	**Consistent.** The Project would include residences that would add to the supply of housing in metropolitan Los Angeles County. Additionally, by offering new single-family home ownership opportunities, the Project would serve the needs of a growing and increasingly diverse population within the City of Los Angeles.
Focus new growth around transit.	Local Jurisdictions	**Consistent.** The Project would accommodate regional growth projected by SCAG in the Los Angeles Planning Area by providing much needed housing within an infill site that is adjacent to existing, approved, and planned infrastructure, urban services, transportation corridors, transit facilities, and major employment centers, in furtherance of SB 375 policies.
Plan for growth around livable corridors, including growth on the Livable Corridors network.	SCAG, Local Jurisdictions	**Consistent.** The Project would accommodate regional growth projected by SCAG in the Los Angeles Planning Area by providing much needed housing within an infill site that is adjacent to existing, approved, and planned infrastructure, urban services, transportation corridors, transit facilities, and major employment centers, in furtherance of SB 375 policies.
Provide more options for short trips through Neighborhood	SCAG, Local Jurisdictions	**Consistent.** The Project is a residential infill development in close proximity to neighborhood services, destinations, and

Table 4.G-5
Project Consistency with SCAG 2016-2040 RTP/SCS GHG Emissions Reduction Strategies

Actions and Strategies	Responsible Party(ies)	Consistency Analysis[a]
Mobility Areas and Complete Communities.		jobs.
Support local sustainability planning, including developing sustainable planning and design policies, sustainable zoning codes, and Climate Action Plans.	Local Jurisdictions	**Consistent.** This strategy calls on local governments to adopt General Plan updates, zoning codes, and Climate Action Plans to further sustainable communities. The Project would be consistent with the City's adopted sustainable planning and design policies.
Protect natural and farm lands, including developing conservation strategies.	SCAG Local Jurisdictions	**Consistent.** As discussed in Section 4.D, Biological Resources, the California black walnut woodland habitat within the Project Site is fragmented and significantly degraded, and therefore, impacts with respect to the removal of the walnut woodland would be less than significant. In addition, as provided in Mitigation Measures D-2 and D-3, all protected trees that are removed would be replaced at a ratio of 4:1 and all significant trees that are removed would be replaced at a ratio of 1:1, respectively.
Transportation Strategies		
Preserve our existing transportation system.	SCAG County Transportation Commissions Local Jurisdictions	**Not Applicable.** This strategy calls on investing in the maintenance of our existing transportation system.
Manage congestion through programs like the Congestion Management Program, Transportation Demand Management, and Transportation Systems Management strategies.	County Transportation Commissions Local Jurisdictions	**Consistent.** The Project would accommodate regional growth projected by SCAG in the Los Angeles Planning Area by providing much needed housing within an infill site that is adjacent to existing, approved, and planned infrastructure, urban services, transportation corridors, transit facilities, and major employment centers, in furtherance of SB 375 policies.
Promote safety and security in the transportation system.	SCAG County Transportation Commissions Local Jurisdictions	**Not Applicable.** This strategy aims to improve the safety of the transportation system and protect users from security threats, which does not apply to the Project.
Complete our transit, passenger rail, active transportation, highways and arterials, regional express lanes, goods movement, and airport ground transportation systems.	SCAG County Transportation Commissions Local Jurisdictions	**Not Applicable.** This strategy calls for transportation planning partners to implement major capital and operational projects that are designed to address regional growth, which does not apply to the Project.
Technological Innovation and 21st Century Transportation		
Promote zero-emissions	SCAG	**Consistent.** This action/strategy is not necessarily applicable

Table 4.G-5
Project Consistency with SCAG 2016-2040 RTP/SCS GHG Emissions Reduction Strategies

Actions and Strategies	Responsible Party(ies)	Consistency Analysis[a]
vehicles.	Local Jurisdictions	on a project-specific basis. However, the Project would be wired for EV charging in accordance with the CalGreen requirements.
Promote neighborhood electric vehicles.	SCAG Local Jurisdictions	**Consistent.** This action/strategy is not necessarily applicable on a project-specific basis. However, the Project would be wired for EV charging in accordance with the CalGreen requirements.
Implement shared mobility programs.	SCAG Local Jurisdictions	**Not Applicable.** This strategy is designed to integrate new technologies for last-mile and alternative transportation programs, which does not apply to the Project. While projects can implement such programs, the initiative is designed to be developed and implemented through jurisdiction-level strategies that promote community-level mobility options.
Source: Southern California Association of Governments; 2016–2040 RTP/SCS, Chapter 5: The Road to Greater Mobility and Sustainable Growth; April 2016.		

CUMULATIVE IMPACTS

A project's GHG emissions typically would be relatively very small in comparison to state or global GHG emissions and, consequently, an individual project would, in isolation, have no significant direct impact on climate change. Rather, it is the increased accumulation of GHG from more than one project and many sources in the atmosphere that may result in global climate change, which can cause the adverse environmental effects previously discussed. Accordingly, the threshold of significance for GHG emissions determines whether a project's contribution to global climate change is "cumulatively considerable." Many air quality agencies (including SCAQMD) concur that GHG and climate change should be evaluated as a potentially significant cumulative, rather than a project's direct impact.[28] The previous assessment of the Project's contribution to cumulative GHG emissions impacts concluded that Project impacts related to GHG emissions would be less than significant.

As shown in Table 4.G-3, the Project would generate 1,773 $MTCO_2e$/yr of GHG emissions, which is less that SCAQMD's recommended draft screening threshold of 3,000 $MTCO_2e$/yr. As set forth above, the Project would be consistent with AB 32, the City's Green Building Ordinance, and 2016-2040 RTP/SCS. Therefore, the Project's impacts with respect to GHG emissions and global climate change would be less than significant.

[28] *South Coast Air Quality Management District, Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008.*

MITIGATION MEASURES/REGULATORY COMPLIANCE MEASURES/PROJECT DESIGN FEATURES

No significant impacts related to GHG emissions have been identified, and no mitigation measures are required.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts related to GHG emissions would be less than significant.

4. ENVIRONMENTAL IMPACT ANALYSIS

H. HYDROLOGY AND WATER QUALITY

INTRODUCTION

The information and analysis in this section is based primarily on the following report (refer to Appendix F):

- *Hydrology Study for Tract 8943 Haverhill Drive Glassell Park, Unite Civil, Inc., January 29, 2015.*

ENVIRONMENTAL IMPACTS

Regulatory Framework

Federal Regulations

National Flood Insurance Program

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 mandate the Federal Emergency Management Agency (FEMA) to evaluate flood hazards. FEMA provides flood insurance rate maps (FIRMs) for local and regional planners to promote sound land use and floodplain development, identifying potential flood areas based on the current conditions. To delineate a FIRM, FEMA conducts engineering studies referred to as flood insurance studies (FIS). Using information gathered in these studies, FEMA engineers and cartographers delineate special flood hazard areas (SFHA) on FIRMs. The Flood Disaster Protection Act requires owners of all structures in identified SFHAs to purchase and maintain flood insurance as a condition of receiving federal or federally-related financial assistance, such as mortgage loans from federally-insured lending institutions. Community members within designated areas are able to participate in the National Flood Insurance Program (NFIP) afforded by FEMA. The NFIP is required to offer federally-subsidized flood insurance to property owners in those communities that adopt and enforce floodplain management ordinances that meet minimum criteria established by FEMA. The National Flood Insurance Reform Act of 1994 further strengthened the NFIP by providing a grant program for state and community flood mitigation projects. The act also established the Community Rating System, a system for crediting communities that implement measures to protect the natural and beneficial functions of their floodplains, as well as manage erosion hazards. The City of Los Angeles participates in the NFIP.

Clean Water Act

The United States Environmental Protection Agency (the "USEPA") regulates water quality under the Clean Water Act (also known as the Federal Water Pollution Control Act). Enacted in 1972, and significantly amended in subsequent years, the Clean Water Act is designed to restore and maintain the chemical, physical, and biological integrity of waters in the United States. The Clean Water Act provides the legal framework for several water quality regulations, including National Pollutant Discharge

Elimination System (NPDES) Permits, effluent limitations, water quality standards, pretreatment standards, anti-degradation policy, non-point source discharge regulation, and wetlands protection. The Clean Water Act requires NPDES permits for the discharge of pollutants to waters of the United States. In 1987, the Clean Water Act was amended to require that the USEPA establish regulations for permitting of municipal and industrial storm water discharges under the NPDES permit program. The USEPA published final regulations regarding storm water discharges on November 16, 1990. The regulations require that municipal separate storm sewer system (MS4) discharges to surface waters be regulated by a NPDES permit. The USEPA has delegated the responsibility for portions of the Clean Water Act to state and regional agencies. The Clean Water Act requires states to adopt water quality standards for receiving water bodies and to have those standards approved by the USEPA. Water quality standards consist of designated beneficial uses for a particular receiving water body (e.g., wildlife habitat, agricultural supply, fishing, etc.), along with water quality criteria necessary to support those uses. Water quality criteria are prescribed concentrations or levels of constituents, such as lead, suspended sediment, and fecal coliform bacteria, or narrative statements that represent the water quality that support a particular use.

National and State Safe Drinking Water Acts

The Federal Safe Drinking Water Act, established in 1974, sets drinking water standards throughout the country and is administered by USEPA. The drinking water standards established in the Act, as set forth in the Code of Federal Regulations (CFR), are referred to as the National Primary Drinking Water Regulations (Primary Standards, Title 40, CFR, Part 141) and the National Secondary Drinking Water Regulations (Secondary Standards, 40 CFR Part 143). California passed its own Safe Drinking Water Act in 1986 that authorizes the State's Department of Health Services (the "DHS") to protect the public from contaminants in drinking water by establishing maximum contaminants levels (MCLs), as set forth in the California Code of Regulations (CCR), Title 22, Division 4, Chapter 15, that are at least as stringent as those developed by the USEPA, as required by the federal Safe Drinking Water Act.

Federal Antidegradation Policy

The Federal Antidegradation Policy requires states to develop statewide anti-degradation policies and identify methods for implementing them. Pursuant to this policy, state anti-degradation policies and implementation methods shall, at a minimum, protect and maintain: (1) existing in-stream water uses; (2) existing water quality where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource. State permitting actions must be consistent with the Federal Antidegradation Policy.

State and Local Regulations

California Porter-Cologne Act

The Porter-Cologne Water Quality Control Act (embodied in the California Water Code) established the principal California legal and regulatory framework for water quality control. The California Water Code authorizes the State Water Resources Control Board (the "SWRCB") to implement the provisions of the Federal Clean Water Act including the authority to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The California Water Code also establishes reporting requirements for unintended discharges of hazardous substance, sewage, or oil or petroleum products. Under the California Water Code, the State of California is divided into nine regions governed by regional water quality control boards (the "RWQCB") that, under the guidance and review of the SWRCB, implement and enforce provisions of the California Water Code and the Clean Water Act. Each RWQCB must formulate and adopt a water quality control plan (the "Basin Plan") for its region. The Basin Plan must conform to the policies set forth in the California Water Code and established by the SWRCB in its state water policy. The California Water Code also provides RWQCBs the authority to include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Los Angeles Regional Board Basin Plan

The Los Angeles Regional Board's Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan: (i) designates beneficial uses for surface and ground waters; (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's antidegradation policy; and (iii) describes implementation programs to protect all waters in the Region. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. Those of other agencies are referenced in appropriate sections throughout the Basin Plan.

California Toxics Rule

The USEPA has established water quality criteria for certain toxic substances via the California Toxics Rule. The California Toxics Rule establishes acute (i.e., short-term) and chronic (i.e., long-term) standards for bodies of water such as inland surface waters and enclosed bays and estuaries that are designated by the Los Angeles Regional Water Quality Control Board (the "LARWQCB") as having beneficial uses protective of aquatic life or human health. Due to the intermittent nature of storm water runoff, especially in southern California, the acute criteria are considered to be more relevant to storm water than are the chronic criteria. California Toxics Rule criteria for certain metals are expressed as a function of hardness because hardness and/or water quality characteristics that are usually correlated with hardness can reduce or increase the toxicities of some metals. Hardness is used as a surrogate for a number of water quality characteristics that affect the toxicity of metals: increasing hardness has the

effect of decreasing the toxicity of metals. At higher hardness values for the receiving water, copper, lead, and zinc are more likely to be complexed (bound with) components in the water column; this in turn reduces the bioavailability and resulting potential toxicity of these metals. Therefore, the California Toxics Rule criteria increase with increasing levels of hardness.

Construction Permits

Pursuant to the Clean Water Act Section 402(p), requiring regulations for permitting of certain storm water discharges, the SWRCB has issued a statewide General Permit for Stormwater Discharges Associated with Construction Activity and Land Disturbance Activities (Order No. 2010-0014-DWQ, adopted by the SWRCB on November 16, 2010 and effective February 14, 2011). Under this Construction General Permit, discharges of storm water from construction sites with a disturbed area of one or more acres are required to either obtain individual NPDES permits for storm water discharges or be covered by the Construction General Permit. Coverage under the Construction General Permit is accomplished by completing and filing permit registration documents, which include a Notice of Intent (NOI), Storm Water Pollution Prevention Plan (SWPPP), and other documents required by this General Permit, and mailing the appropriate permit fee to the State Water Board, prior to the commencement of construction activity. SWPPPs incorporate erosion control, sediment removal, and construction waste management control measures during construction, site stabilization measures in the short-term post-construction period, and may identify best management practices (BMPs) for post-construction land use. The SWPPP must do the following:

1. Be developed and implemented by Qualified SWPPP Developers and Practitioners who have taken the appropriate state certified training;

2. Address control of all pollutants and their sources, including sources of sediment, associated with construction activities;

3. Ensure all non-storm water discharges are identified and either eliminated, controlled, or treated;

4. Include a Monitoring and Reporting Plan (M&RP) to be immediately implemented at the start of construction;

5. Include a description of all post-construction best management practices on a site and a maintenance schedule; and

6. Be available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Municipal inspector.

Dischargers must file a Notice of Termination (NOT) with the Regional Water Board when construction is complete and final stabilization has been reached or ownership has been transferred. The discharger must certify that all State and local requirements have been met in accordance with this General Permit.

In order for construction to be found complete, the discharger must install post-construction storm water management measures and establish a long-term maintenance plan.

Los Angeles County MS4 Permit

The State's Municipal Storm Water Permitting Program regulates storm water discharges from Municipal Separate Storm Sewer Systems (MS4s). Under Phase I of the Program, which started in 1990, the RWQCBs have adopted NPDES storm water permits for medium (serving between 100,000 and 250,000 people) and large (serving 250,000 people) municipalities. Most of these permits were issued to a group of co-permittees encompassing an entire metropolitan area. In 2001, the LARWQCB issued an NPDES Permit and Waste Discharge Requirements (Order No. 01-182) under the Clean Water Act and the Porter-Cologne Act for discharges of urban runoff in public storm drains in Los Angeles County. The Permit was most recently amended on April 14, 2011, pursuant to the peremptory writ of mandate in L.A. Superior Court Case No. BS122724, which voided and set aside a 2006 amendment. The Permittees are the Los Angeles County incorporated cities (including the City of Los Angeles but excluding the City of Long Beach) and the County (collectively, the Co-permittees). An important element incorporated into the NPDES MS4 Permit is the requirements associated with development or redevelopment of a site. The NPDES MS4 Permit requires development/redevelopment projects to incorporate permanent (post-construction) storm water mitigation measures, if the project is one of the following:

- Parking lots that are greater than 5,000 square feet or 25 or more parking spaces
- More than 10 houses, condos, or apartment units
- Restaurant
- Auto Service Facility
- Retail Gas Outlet
- Commercial area that is more than 1 acre
- Adjacent to an Environmentally Sensitive Area (i.e. a river)
- Redevelopment of any of the above disturbing more than 5,000 square feet

These measures are addressed by developers through the preparation of a Standard Urban Stormwater Mitigation Plan (SUSMP) or a Site-Specific Mitigation Plan. The primary purpose of these plans is to reduce the quantity and improve the quality of storm water runoff that leaves a site. To implement the requirements of the NPDES permit, the Co-permittees have created development planning guidance and control measures that control and mitigate storm water quality and quantity impacts to receiving waters as a result of new development and redevelopment. The Co-permittees are also required to implement other municipal source detection and elimination programs, as well as maintenance measures.

Stormwater Quality Management Program

The Los Angeles County MS4 Permit requires the Co-permittees to implement a Stormwater Quality Management Program (SQMP). The SQMP summarizes the program components the Co-permittees will implement to comply with the MS4 Permit. The Los Angeles County MS4 Permit contains the following provisions for implementation of the SQMP by the Co-permittees:

- General Requirements – Each Permittee is required to implement the SQMP to comply with applicable storm water program requirements and implement additional controls where necessary to reduce the discharge of pollutants in storm water to the maximum extent practicable.

- BMP Implementation – Permittees are required to implement the most effective combination of BMPs for stormwater/urban runoff pollution control.

- SQMP Revision – Permittees are required to revise the SQMP to comply with regional, watershed specific requirements, and/or waste load allocations for implementation of TMDLs for impaired water bodies.

- Responsibilities of the Principal Permittee – The responsibilities of the Los Angeles County Department of Public Works (as the Principal Permittee) include, but are not limited to, coordinating activities necessary to comply with the NPDES permit, providing personnel and fiscal resources to prepare SQMP updates and annual reports and summaries of reports required under the SQMP, and implementing a County-wide Monitoring Program and evaluating results of the monitoring program.

- Responsibilities of Co-permittees – Each Co-permittee is required to comply with the requirements of the SQMP applicable to the discharges within its boundaries.

- Watershed Management Committees (WMCs) – WMCs are comprised of a voting representative from each Permittee within the Watershed Management Areas (WMAs). WMCs are required to facilitate efforts and exchange of information between Co-permittees, establish additional goals for WMAs, prioritize pollution control efforts, monitor implementation of tasks designated for the WMA, and assess the effectiveness of and recommend revisions to the SQMP.

- Legal Authority – Co-permittees are granted the necessary legal authority to prohibit non-storm water discharges to the storm drain system.

The objective of the SQMP is to reduce pollutants in urban storm water discharges to the maximum extent practicable in order to attain water quality objectives and to protect the beneficial uses of receiving waters in Los Angeles County. Special provisions are provided in the Los Angeles County MS4 Permit to facilitate implementation of the SQMP. These provisions include the following:

- BMP substitution;
- Public Information and Participation Program (PIPP);
- Industrial/Commercial Facilities Control Program;
- Development Planning Program;
- Development Construction Program;
- Public Agency Activities Program; and
- Illicit Connections and Illicit Discharges Elimination Program.

Standard Urban Stormwater Mitigation Plan

The NPDES program establishes a comprehensive stormwater quality program to manage urban stormwater and minimize pollution of the environment to the maximum extent practicable. Pursuant to the NPDES, the Project is subject to the requirements set forth in the County's SUSMP. The goals and objectives of the SUSMP are achieved through the use of BMPs to help manage runoff water quality. The City of Los Angeles has adopted the regulatory requirements set forth in the SUSMP of the LARWQCB under the City of Los Angeles Ordinance No. 173,494. BMPs typically include controlling roadway and parking lot contaminants by installing oil and grease separators at storm drain inlets; cleaning parking lots on a regular basis; incorporating peak-flow reduction and infiltration features (such as grass swales, infiltration trenches, and grass filter strips) into landscaping; and implementing education programs. The SUSMP identifies the types and sizes of private development projects that are subject to its requirements. Requirements of the SUSMP are enforced through the City's plan approval and permit process.

On March 8, 2000, the development planning program requirements, including the SUSMP requirements (collectively, development planning program requirements, including SUSMP requirements, are referred to in this EIR as SUSMP requirements) were approved by the LARWQCB as part of the MS4 program to address storm water pollution from new construction and redevelopment. The SUSMP contains a list of minimum BMPs that must be employed to infiltrate or treat storm water runoff, control peak flow discharge, and reduce the post-project discharge of pollutants from storm water conveyance systems. The SUSMP defines, based upon land use type, the types of practices that must be included and issues that must be addressed as appropriate to the development type and size. The 2002 County of Los Angeles' Manual for the Standard Urban Stormwater Mitigation Plan (the "Manual") details the requirements for new development and significant redevelopment BMPs. The Manual is a model guidance document for use by the Co-permittees and certain individual project owners to select post-construction BMPs and otherwise comply with the SUSMP requirements. The Manual addresses water quality and drainage issues by specifying design standards for structural or treatment control BMPs that infiltrate or treat storm water runoff and control peak flow discharge. BMPs are defined in the Manual and SUSMP requirements

as "any program, technology, process, sizing criteria, operational methods or measures, or engineered systems, which, when implemented, prevent, control, remove, or reduce pollution." Treatment BMP design criteria and guidance are also contained in the Los Angeles County MS4 Permit, the Manual, and in the 2004 Technical Manual for Stormwater Best Management Practices in the County of Los Angeles, issued by the Los Angeles County Department of Public Works.

General Dewatering Permit

The LARWQCB has issued a General NPDES Permit and General Waste Discharge Requirements (WDRs) governing construction-related dewatering discharges (the "General Dewatering Permit"). This permit addresses discharges from temporary dewatering operations associated with construction and permanent dewatering operations associated with development. The discharge requirements include provisions mandating notification, sampling and analysis, and reporting of dewatering and testing-related discharges. The General Dewatering Permit authorizes such construction-related activities so long as all conditions of the permit are fulfilled.

Los Angeles Stormwater Ordinance (LAMC 64.70)

On October 1, 1998, the Stormwater and Urban Runoff Pollution Control Ordinance became law in the City. The ordinance not only makes it a crime to discharge pollutants into the storm drain system and imposes stiff fines on violators, but also gives City public officers the authority to issue citations or arrest business owners or residents who deliberately and knowingly dump or discharge hazardous chemicals or debris into the system. This ordinance was amended by the Low Impact Development (LID) ordinance, which became effective in May 2012, and is described below.

Water Quality Compliance Master Plan for Urban Runoff (WQCMPUR)

On March 2, 2007, the City's Energy and the Environment/Ad Hoc River Committee filed a Motion directing the Bureau of Sanitation to create a WQCMPUR. In May 2009, the final plan, a 20-year strategy for clean storm water and urban runoff to protect the City's rivers, lakes, and beaches from pollution, was adopted by the Board of Public Works. By promoting a green infrastructure, the WQCMPUR seeks a broad watershed-based perspective using green and natural solutions to improve water quality and bring Los Angeles into compliance with current and emerging water quality regulations.

Low Impact Development

LID is a stormwater management strategy that seeks to prevent impacts of runoff and stormwater pollution as close to its source as possible. The ordinance (passed in 2011 and effective in May 2012) amended the Los Angeles Municipal Code (LAMC) 64.70 (the City's stormwater ordinance) and expanded on the City's existing SUSMP requirements. LID is different from the previous SUSMP, requiring a larger scope of development and redevelopment projects to comply with stormwater measures, and incorporating new LID practices and measures. All development and redevelopment projects that

create, add, or replace 500 square feet or more of impervious area need to comply with the LID Ordinance. Projects must comply with the LID BMPs (determined on a case by case basis by Public Works), and if that is not feasible, only then do SUSMP BMPs apply. The City adopted LID standards and practices in future developments and redevelopments to encourage the following: Beneficial use of rainwater and urban runoff; Water quality improvement; Rainwater harvesting; Reduction of offsite runoff and provide increased groundwater recharge; Reduction of erosion and hydrologic impacts downstream; and Enhancement of recreational and aesthetic values in our communities. The LID ordinance requires rainwater from a three-quarter inch rainstorm to be captured, infiltrated and, or used, onsite.[1] Construction activities associated with the Project are subject to City inspection and implementation of stormwater BMPs.

EXISTING CONDITIONS

The Project site in its existing condition is mostly undeveloped and located on a hillside. Existing drainage occurs mostly through natural drainage from the west to the east portion of the site. Storm water runoff from the northern portion of the Project site discharges into an existing 24-inch reinforced concrete pipe (RCP) storm drainpipe, which extends from Haverhill Drive down to Division Street and transitions to a 36-inch concrete channel before discharging into the curb and gutter on Division Street. Storm water runoff not collected through the existing 24-inch RCP sheets naturally and flows to a lower adjacent lot though an existing ribbon gutter and eventually drains onto Division Street. The total runoff is collected through the nearest storm drain system, an existing 27-inch RCP lateral catch basin inlet on Division Street, located southeast of the Project site at the intersection of Jessica Drive and Division Street. Table 4.H-1 includes a summary of the hydrology results for the existing conditions for each tributary area calculated from the County of Los Angeles Public Work's HydroCalc program.

Table 4.H-1
Hydrology Calculations for the Project Site – Existing Conditions

Tributary Area	Area (acre)	Impervious (%)	Pervious (%)	Flowrate (Q_{50}) (cfs)
A	2.31	29	71	8.23
B	3.39	18	82	12.08
C	10.45	10	90	28.62
D	2.60	6.21	93.79	9.28
E	0.73	100	0	1.96
F	1.39	9.58	90.42	4.96
Total	**20.87**			**64.13**

cfs = cubic feet per second
Source: Unite Civil, Inc. 2015.

[1] *Low Impact Development: http://www.lastormwater.org/green-la/low-impact-development/*

ENVIRONMENTAL IMPACTS

Thresholds of Significance

CEQA Guidelines

In accordance with Appendix G to the *CEQA Guidelines*, a project could result in a significant impact if the project would result in the following:

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

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

c) Substantially alter the existing drainage pattern of 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;

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

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

f) Otherwise substantially degrade water quality;

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

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

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

j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.

As discussed in Section 4.A (Impacts Found to be Less Than Significant), the Project would not result in any significant impacts related to issues "a" through "d" and "f" through "j." No further analysis of these issues is required.

L.A. CEQA Thresholds Guide

The *L.A. CEQA Thresholds Guide* requires the hydrology analysis to address the following two areas of study: (1) surface water hydrology, and (2) groundwater level.

1. Surface Water Hydrology

The *L.A. CEQA Thresholds Guide* states that a project would normally have a significant impact on surface water hydrology if the project would:

a) Cause flooding during the projected 50-year developed storm event, which would have the potential to harm people or damage property or sensitive biological resources;

b) Substantially reduce or increase the amount of surface water in a water body; or

c) Result in a permanent, adverse change to the movement of surface water sufficient to produce a substantial change in the current or direction of water flow.

Regarding "Surface Water Hydrology," the factors listed for this study area are all related to changes in the volume and flow of runoff from the site and are similar to issues "c," "d," and "e" listed under *CEQA Guidelines.* As discussed in Section 4.A (Impacts Found to be Less Than Significant), the Project would not result in any significant impacts related to issues "c" and "d." No further analysis of these issues is required. Issue "e" (storm drain capacity) is discussed below.

2. Groundwater Level

The *L.A. CEQA Thresholds Guide* states that a project would normally have a significant impact on groundwater level if the project would:

a) Change potable water level sufficiently to:

- Reduce the ability of a water utility to use the groundwater basin for public water supplies, conjunctive use purposes, storage of imported water, summer/winter peaking, or to respond to emergencies and drought;

- Reduce yields of adjacent wells or well fields (public or private); or

- Adversely change the rate or direction of flow of groundwater.

or

b) Result in demonstrable and sustained reductions of groundwater recharge capacity.

Regarding "Groundwater Level," the factors listed for this study area are all related to changes in groundwater and are similar to issue "b" listed under the *CEQA Guidelines.* As discussed in Section 4.A (Impacts Found to be Less Than Significant), the Project would not result in any significant impacts related to issue "a." No further analysis of these issues is required.

Project Impacts

Storm Drain Capacity

The Project Site is divided into 11 tributary areas; four areas (E, F, H, and I) would remain undisturbed. Except for the four areas that would remain undisturbed, storm water runoff from the tributary areas would be collected through street grate inlets and discharge into Division Street. Thirteen grate inlets are proposed to collect all water runoff from all the tributary areas. A 24-inch RCP is proposed to collect the water from the grate inlets into two discharge locations on Division Street. These two discharge locations are situated near the north and south portion of the Project Site.

Storm water runoff from the northern portion of the Project Site would discharge through a proposed 24-inch RCP into an existing 24-inch wide concrete channel. The existing channel was constructed to include some storm water runoff from the Project. The existing channel extends from an adjacent lot, below lot 119, down to Division Street.

Runoff from the south portion of the Project Site would be collected through a proposed 24-inch RCP into a proposed 30-inch wide concrete channel. The existing 6-inch diameter outlet was observed by Unite Civil to be insufficient for the Project's peak flowrate. Therefore, this would be removed and replaced with the proposed concrete channel. The channel would be placed within the existing 10-foot sewer and storm drain easement. Any existing improvement within the existing easement would be demolished and removed. A 24-inch RCP would connect to the concrete channel to collect runoff from the Project. The channel extends down to Division Street, where a parkway drain is proposed to discharge water into a curb and gutter into Division Street. Total storm water runoff from the Project Site would ultimately discharge into an existing street catch basin inlet on Division Street, located at the intersection of Jessica Drive.

Table 4.H-2 includes a summary of the hydrology results for the proposed conditions for each tributary area calculated from the County of Los Angeles Public Work's HydroCalc program.

Table 4.H-2
Hydrology Calculations for the Project Site – Post Project

Tributary Area	Area (acre)	Development Type	Impervious (%)	Pervious (%)	Flowrate (Q_{50}) (cfs)
A	1.78	Disturbed	43.8	56.2	6.33
B	3.41	Disturbed	65.2	34.8	12.11
C	1.08	Disturbed	21.5	78.5	3.85
D	4.08	Disturbed	63.0	37.0	11.53
E	2.67	Undisturbed	5.0	95.0	9.53
F	2.60	Undisturbed	6.21	93.79	9.28
G	1.12	Disturbed	48.0	52.0	3.98
H	1.39	Undisturbed	9.58	90.42	3.43
I	0.73	Undisturbed	100	0	1.96
J	0.82	Disturbed	40.0	60.0	2.92
K	1.20	Disturbed	2	98	4.28
Total	**20.88**				**69.20**
L (off-site)	9.21	Undisturbed	5	95	24.32

cfs = cubic feet per second

Source: Unite Civil, Inc. 2015.

Tables 4.H-3 through 4.H-5 include summaries of the hydraulic results for each system calculated from Bentley's Flowmaster software.

Table 4.H-3
Hydraulic Calculations for the Project Site – Proposed Grate Inlets

Grate Inlet (GI)	Contributing Tributary Subarea(s)	Area (ac)	Q_{10}	Total Flow (Q_{10} + $Q_{upstream\ bypass}$)	Grate Inlet Full Capacity (cfs)	Flow Bypass to Downstream GI (cfs)
GI-1	B1	1.83	4.19	4.19	5.75	0
GI-2	B2	1.43	3.27	3.27	3.27	0
GI-3	B3	0.11	0.25	0.25	0.25	0
GI-4	B4	0.04	0.10	0.10	3.90	0
GI-5	D1	1.71	3.05	3.05	3.30	0
GI-6	D2	0.79	1.41	1.41	2.15	0
GI-7	D3	0.34	0.61	0.61	1.70	0
GI-8	D6	0.12	0.21	0.21	0.50	0
GI-9	D5	0.09	0.16	0.16	0.70	0
GI-10	D4	0.53	0.94	0.94	0.94	0
GI-11	D7	0.50	0.89	0.89	0.90	0
GI-12	G1	0.49	1.22	1.22	1.50	0
GI-13	G2	0.03	0.08	0.08	0.08	0

cfs = cubic feet per second
Source: Unite Civil, Inc. 2015.

Table 4.H-4
Hydraulic Calculations for the Project Site – Proposed Storm Drain Pipes

Pipe Location	Contributing Tributary Areas	Q_{50} (cfs)	Proposed Pipe Size (in)	Pipe Size Capacity (cfs)	Pipe Slope (ft/ft)	Pipe Velocity (fps)
North of Area B	B	12.11	24	71.53	0.4	45.54
South End of Haverhill Dr	D+G+J+K	22.71	24	50.58	0.2	32.20

cfs = cubic feet per second *ft = foot* *fps = feet per second* *in = inch*

Source: Unite Civil, Inc. 2015.

Table 4.H-5
Hydraulic Calculations for the Project Site – Proposed Concrete Channels

Pipe	Contributing Tributary Areas	Q_{50} (cfs)	Slope (ft/ft)	Velocity (fps)	Depth (in)	% Full
Existing 24" Wide	B	12.11	0.135	17.15	4.20	35.00
Proposed 30" Wide	D+G+J+K	22.71	0.25	24.70	4.44	74.00

cfs = cubic feet per second *ft = foot* *fps = feet per second* *in = inch*

Source: Unite Civil, Inc. 2015.

As mentioned previously, the total runoff from the Project site is collected through the nearest street catch basin inlet. The closest catch basin is located at the intersection of Division Street and Jessica Drive, southeast of the Project site's Tract Boundary and includes a 27-inch RCP lateral that carries runoff into the existing storm drain main. Table 4.H-6 includes a summary of the hydraulic results showing both the existing catch basin inlet and the 27-inch RCP lateral.

Table 4.H-6
Hydraulic Calculations for the Division/Jessica Drainage Facilities – Pre- and Post-Project Conditions

Facility	Contributing Tributary Areas	Slope (ft/ft)	Street/Full Pipe Capacity	Design Capacity (Q_{50})	% Full
Existing Catch Basin (Division Street)	All (A – K)	0.0650	116.19	93.50	-
27" RCP Lateral	All (A – K)	0.2054	138.50	69.18	50.6

ft/ft = foot per foot

Source: Unite Civil, Inc. 2015.

As demonstrated, the Project would provide adequate storm drain facilities to accommodate the Project's drainage. As such, the Project would not cause flooding on or off site. Therefore, Project impacts related to flooding would be less than significant.

CUMULATIVE IMPACTS

As discussed above, the Project would have a less than significant impact with respect to all hydrology and water quality issues, therefore, its incremental impacts are not cumulatively considerable. Other projects developed in the area would also be required to adhere to regulatory requirements that control storm water and pollutant discharges. In addition, the Project Site and surrounding areas are serviced by an MS4 system that is designed with capacity to handle 50-year storm flows. Thus, while the Project and other projects may change the onsite land uses, the existing MS4 system is sufficient to handle the new uses. Furthermore, future development projects within the Project area are likely to be subject to more stringent BMPs (since BMPs are regularly updated) than what are in use under the existing conditions. As such, it is possible that future development, including the Project, would improve the quality of water draining from the area as water quality features are implemented as requirements of Project development to meet current standards.

Additionally, similar to the Project, each of the six other cumulative projects would be required to prepare and implement a SWPPP and/or SUSMP and undergo a preliminary review by the City of Los Angeles to determine what drainage improvements and BMPs would be required to ensure no significant water quality issues occur. Accordingly, taken together with cumulative projects, the Project would not create an impact that is cumulatively considerable because each development project would have to comply with site-specific development standards and state water quality regulations. Compliance with these standards

would ensure that the projects would further the objectives of applicable regional water quality plans. Therefore, cumulative impacts to hydrology and water quality would not be cumulatively considerable.

MITIGATION MEASURES/REGULATORY COMPLIANCE MEASURES/PROJECT DESIGN FEATURES

No significant impacts related to hydrology and water quality have been identified, and no mitigation measures are required.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts related to hydrology and water quality would be less than significant.

Cumulative impacts would also be less than significant.

4. ENVIRONMENTAL IMPACT ANALYSIS

I. LAND USE AND PLANNING

INTRODUCTION

This section provides an analysis of the Project's potential land use impacts based upon two criteria: physical compatibility with surrounding land uses and consistency with applicable land use policies of agencies with jurisdictions over the Project Site. In addition, the potential cumulative land use impacts of the Project in combination with all known related projects are evaluated in this section.

ENVIRONMENTAL SETTING

The Project site is located within the Northeast Los Angeles Community Plan, within the Glassell Park neighborhood, which is, in many respects, a complex corridor linking Cypress Park, Mt. Washington, Atwater Village, Highland Park, and Eagle Rock. It is primarily a residential and commercial area, with some industrial activity, located generally east of San Fernando Road along an axis formed by Eagle Rock Boulevard between Division Street and York Boulevard. Outlying neighborhoods extend up the northern slopes of Mt. Washington, along the Fletcher Drive corridor between San Fernando Road and Eagle Rock Boulevard, and in the Verdugo Road corridor between Eagle Rock Boulevard and the City of Glendale.

The Project site is located on a hillside area on Haverhill Drive, Haverhill Way, and Brilliant Drive and is bound by existing single-family development to the north, east, and west and undeveloped area to the south/southeast. Elevations on the Project site vary from approximately 680 feet above sea level (asl) to approximately 740 asl. The Project site location is shown on Figures 2-1 and 2-2. The existing land use designation and zoning are shown on Figures 2-3 and 2-4, respectively. Views of the Project Site are shown in Figures 3-1 and 3-2.

Surrounding Uses

The Project site is surrounded to the north, east, and west with single-family development. The area to the south/southeast is undeveloped. Other land uses in the Project area include commercial/retail land uses along Eagle Rock Boulevard approximately 1.0 mile north and west of the Project site and the Glassell Park Recreation Center and Youth Center on Verdugo Road approximately 0.75 mile northwest of the Project site. Views of the areas surrounding the Project site are shown on Figures 3-3 and 3-4.

REGULATORY FRAMEWORK

Regional Plans

Southern California Association of Governments

The Southern California Association of Governments (SCAG) functions as the Metropolitan Planning Organization for six counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial.

The SCAG region encompasses a population exceeding 18 million persons in an area of more than 38,000 square miles. As the federally-designated Metropolitan Planning Organization, SCAG is mandated to research and create plans for transportation, growth management, hazardous waste management, and air quality. Applicable SCAG publications are discussed below.

Compass Blueprint Growth Vision Report/Compass Blueprint 2% Strategy Areas

The Compass Blueprint Growth Vision Report/Compass Blueprint 2% Strategy (the "Compass Blueprint Report"), adopted by SCAG as part of its June 2004 Southern California Compass Growth Vision Report, is an implementing mechanism for the regional growth strategies outlined in the SCAG's 1996 Regional Comprehensive Plan and Guide (the "RCPG"). The Compass Blueprint Report is intended to provide a strategy to accommodate the projected 24 million residents expected to live in the region by 2035, while balancing valuable quality of life goals. The Compass Blueprint Report emphasizes focusing growth in existing and emerging centers and along major transportation corridors, creating significant areas of mixed-use development and walkable communities, targeting growth around existing and planned transit stations, and preserving existing open space and stable residential areas.

Four principles were established for the Compass Blueprint Report that are intended to promote and maximize regional mobility, livability, prosperity, and sustainability. It is SCAG's intention that decisions regarding growth, transportation, land use, and economic development should support and be guided by these principles. Specific policy and planning strategies are also provided as a way to achieve each of the principles, as summarized below.

- *Principle 1. Improve mobility for all residents.* Strategies to support Principle 1 include: (1) encourage transportation investments and land use decisions that are mutually supportive; (2) locate new housing near existing jobs and new jobs near existing housing; (3) encourage transit-oriented development; and (4) promote a variety of travel choices.

- *Principle 2. Foster livability in all communities.* Strategies to support Principle 2 include: (a) promote infill development and redevelopment to revitalize existing communities; (b) promote developments that provide a mix of uses; (c) promote "people scaled," pedestrian friendly communities; and (d) support the preservation of stable, single-family neighborhoods.

- *Principle 3. Enable prosperity for all people.* Strategies to support Principle 3 include: (a) provide a variety of housing types in each community to meet the housing needs of all income levels; (b) support educational opportunities that promote balanced growth; (c) ensure environmental justice regardless of race, ethnicity, or income class; (d) encourage civic engagement; and (e) support local and state fiscal policies that encourage balanced growth.

- *Principle 4. Promote sustainability for future generations.* Strategies to support Principle 4 include: (a) preserve rural, agricultural, recreational, and environmentally sensitive areas; (b) focus development in urban centers and existing cities; (c) develop strategies to accommodate

growth that use resources efficiently, eliminate pollution, and significantly reduce waste; and (d) utilize "green" development techniques.

The Compass Blueprint Report is a guideline for how and where the Growth Vision can be implemented. It calls for moderate changes to current land use and transportation trends in two percent of the land area of the region, known as the 2% Strategy Opportunity Areas. These areas are defined as having a high potential to implement projects, plans, and/or policies consistent with the Compass Blueprint Report principles that would result in the greatest progress towards economic, mobility, livability and sustainability benefits to local neighborhoods. The Project Site is not located in a Compass Blueprint 2% Strategy Area.

Regional Comprehensive Plan

SCAG has also prepared the 2008 Regional Comprehensive Plan (the "2008 RCP") in response to SCAG's Regional Council directive in the 2002 Strategic Plan to define solutions to interrelated housing, traffic, water, air quality, and other regional challenges. The 2008 RCP is an advisory document that describes future conditions if current trends continue, defines a vision for a healthier region, and recommends an Action Plan with a target year of 2035. The 2008 RCP may be voluntarily used by local jurisdictions in developing local plans and addressing local issues of regional significance. The plan incorporates principles and goals of the Compass Growth Vision Report and includes nine chapters addressing land use and housing, transportation, air quality, energy, open space, water, solid waste, economy, and security and emergency preparedness. The action plans contained therein provide a series of recommended near-term policies that developers and key stakeholders should consider for implementation, as well as potential policies for consideration by local jurisdictions and agencies when conducting project review.

The 2008 RCP replaced the RCPG for use in SCAG's Intergovernmental Review (IGR) process. SCAG's Community, Economic and Human Development Committee and the Regional Council took action to accept the 2008 RCP, which now serves as an advisory document for local governments in the SCAG region for their information and voluntary use in developing local plans and addressing local issues of regional significance. However, as indicated by SCAG, because of its advisory nature, the 2008 RCP is not used in SCAG's IGR process. Rather, SCAG reviews new projects based on consistency with the Regional Transportation Plan (the "RTP") (discussed below) and the Compass Blueprint Report.

2016-2040 Regional Transportation Plan/Sustainable Communities Strategy

On September 30, 2008, SB 375 was instituted to help achieve AB 32[1] goals through regulation of cars and light trucks. SB 375 aligns three policy areas of importance to local government: (1) regional long-

[1] *AB 32 was signed into law in 2006 and focuses on achieving GHG emissions equivalent to Statewide levels in 1990 by 2020.*

range transportation plans and investments; (2) regional allocation of the obligation for cities and counties to zone for housing; and (3) a process to achieve GHG emissions reductions targets for the transportation sector. It establishes a process for the CARB to develop GHG emissions reductions targets for each region (as opposed to individual local governments or households). SB 375 also requires Metropolitan Planning Organizations to prepare a Sustainable Communities Strategy (SCS) within the RTP that guides growth while taking into account the transportation, housing, environmental, and economic needs of the region. SB 375 uses CEQA streamlining as an incentive to encourage residential projects, which help achieve AB 32 goals to reduce GHG emissions.

On September 23, 2010, CARB adopted regional targets for the reduction of GHG emissions applying to the years 2020 and 2035.[2] For the area under the SCAG jurisdiction, including the Project area, CARB adopted Regional Targets for reduction of GHG emissions by eight percent for 2020 and by 13 percent for 2035. On February 15, 2011, CARB's Executive Officer approved the final targets.[3]

On April 7, 2016, the Regional Council of SCAG adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016-2040 RTP/SCS). For the past three decades, SCAG has prepared RTPs with the primary goal of increasing mobility for the region's residents and visitors. Through the 2016-2040 RTP/SCS, SCAG continues to emphasize sustainability and integrated planning, whose vision encompasses three principles that collectively work as the key to the region's future: mobility, economy, and sustainability.

The 2016-2040 RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with SB 375, improve public health, and meet the National Ambient Air Quality Standards (NAAQS) as set forth by the Federal Clean Air Act. As such, the 2016-2040RTP/SCS contains a regional commitment for the broad deployment of zero- and near-zero-emission transportation technologies in the 2016-2040 time frame and clear steps to move toward this objective. This is especially critical for the goods movement system. The development of a world-class, zero- or near-zero-emission freight transportation system is necessary to maintain economic growth in the region, to sustain quality of life, and to meet federal air quality requirements. The 2016-2040RTP/SCS puts forth an aggressive strategy for technology development and deployment to achieve this objective. This strategy will have many co-benefits, including energy security, cost certainty, increased public support for infrastructure, GHG reduction, and economic development.

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[2] *California Air Resources Board, Notice of Decision: Regional Greenhouse Gas Emissions Reduction Targets for Automobiles and Light Trucks Pursuant to Senate Bill 375,*

[3] *CARB, Executive Order No. G-11-024, Relating to Adoption of Regional Greenhouse Gas Emission Reduction Targets for Automobiles and Light Trucks Pursuant to Senate Bill 375.*

For the first time, the 2016-2040 RTP/SCS includes a significant consideration of the economic impacts and opportunities provided by the transportation infrastructure plan set forth in the 2016-2040 RTP/SCS, considering not only the economic and job creation impacts of the direct investment in transportation infrastructure, but also the efficiency gains in terms of worker and business economic productivity and goods movement. The 2016-2040 RTP/SCS outlines a transportation infrastructure investment strategy that will benefit Southern California, the state, and the nation in terms of economic development, competitive advantage, and overall competitiveness in the global economy in terms of attracting and retaining employers in the Southern California region.

The 2016-2040 RTP/SCS provides a blueprint for improving quality of life for residents by providing more choices for where they will live, work, and play, and how they will move around. It is designed to promote safe, secure, and efficient transportation systems to provide improved access to opportunities, such as jobs, education, and healthcare. Its emphasis on transit and active transportation is designed to allow residents to lead a healthier, more active lifestyle. Its goal is to create jobs, ensure the region's economic competitiveness through strategic investments in the goods movement system, and improve environmental and health outcomes for its 22 million residents by 2040. More importantly, the RTP/SCS is also designed to preserve what makes the region special, including stable and successful neighborhoods and array of open spaces for future generations.

The 2016-2040 RTP/SCS also includes examples of measures that could reduce impacts from planning, development, and transportation. It notes, however, that the example measures are "not intended to serve as any kind of checklist to be used on a project-specific basis." Since every project and project setting is different, project-specific analysis is needed to identify applicable and feasible mitigation. These mitigation measures are particularly important where streamlining mechanisms under SB 375 are utilized.

South Coast Air Quality Management District

Air Quality Management Plan

The Project is also located within the South Coast Air Basin (the "Basin") and is, therefore, within the jurisdiction of the SCAQMD. In conjunction with SCAG, the SCAQMD is responsible for formulating and implementing air pollution control strategies, including periodic updates to the AQMP, and guidance to local government about how to incorporate these strategies into their land use plans and decisions about development.

SCAG is responsible for generating the socio-economic profiles and growth forecasts on which land use, transportation, and air quality management and implementation plans are based. The growth forecasts provide the socioeconomic data used to estimate vehicle trips and VMT. Emission estimates then can be forecast by SCAQMD based on these projected estimates. Reductions in emissions due to changes in the socio-economic profile of the region are an important way of taking account of changes in land use patterns. For example, changes in jobs/housing balance induced by changes in urban form and transit-

oriented development induce changes in VMT by more closely linking housing to jobs. Thus, socio-economic growth forecasts are a key component to guide the Basin toward attainment of the NAAQS.

The current AQMP establishes a comprehensive regional air pollution control program leading to the attainment of State and federal air quality standards in the Basin. In addition to setting minimum acceptable exposure standards for specified pollutants, the AQMP incorporates SCAG's growth management strategies that can be used to reduce vehicle trips and VMT, and hence air pollution. These include, for example, co-location of employment and housing, and mixed-use land patterns that allow the integration of residential and non-residential uses.

Air quality impacts of the Project and consistency of the Project with the AQMP are analyzed in Section 4.C., Air Quality, of this Draft EIR.

Los Angeles County Metropolitan Transportation Authority

Congestion Management Plan

The Congestion Management Plan (CMP) for Los Angeles County is intended to address vehicular congestion relief by linking land use, transportation, and air quality decisions. The CMP also seeks to develop a partnership among transportation decision-makers to devise appropriate transportation solutions that include all modes of travel, and to propose transportation projects, which are eligible to compete for state gas tax funds. Within Los Angeles, the Los Angeles County Metropolitan Transportation Authority (Metro) is the designated congestion management agency responsible for coordinating the CMP.

The Project's potential impacts with respect to the CMP are analyzed in Section 4.K., Transportation and Traffic, of this Draft EIR.

Local Plans

City of Los Angeles

City of Los Angeles General Plan

The City of Los Angeles General Plan (the "General Plan"), adopted December 1996 and re-adopted August 2001, provides general guidance on land use issues for the entire City. The General Plan consists of a Framework Element, a Land Use Element, and 10 citywide elements. The Framework Element of the General Plan serves as guide for the City's overall long-range growth and development policies and serves as a guide to update the community plans and the citywide elements. The citywide elements address functional topics that cross community boundaries, such as transportation, and address these topics in more detail than is appropriate in the Framework Element, which is the "umbrella document" that provides the direction and vision necessary to bring cohesion to the City's overall general plan. The Framework Element provides a conceptual relationship between land use and transportation, and provides guidance for future updates to the various elements of the General Plan, but does not supersede the more

detailed community and specific plans. The Land Use chapter of the Framework Element contains Long Range Land Use Diagrams that depict the generalized distribution of centers, districts, and mixed-use boulevards throughout the City, but the community plans determine the specific land use designations. The Land Use Element of the General Plan is contained within 35 community plans.

Northeast Los Angeles Community Plan

The Northeast Los Angeles Community Plan area was established more than 30 years ago to encompass the hills and valleys lying east of the Los Angeles River and north of the Boyle Heights Community Plan area within the City. The area serves as a transition between the downtown center of Los Angeles and the neighboring cities of Glendale, Pasadena, South Pasadena, and Alhambra to the north and east, as well as the City of Monterey Park and the unincorporated community of City Terrace on the south.

The Community Plan area comprises some 15,000 acres and is occupied by roughly 250,000 inhabitants living in a diverse collection of communities and neighborhoods. Their histories can be traced back to the mid-nineteenth century when the first farms and orchards, subdivisions, railroad and streetcar lines, and irrigation canals were established.

By the beginning of the twentieth century, Northeast Los Angeles was a major gateway to traffic moving between Central Los Angeles and distant regions to the east and north. It was also recognized throughout the emerging metropolis as the location of major recreational resources (Eastlake Park and the Los Angeles Zoo), the largest medical facility (General Hospital), one of the area's most important centers of higher learning (Occidental College), and the City's first museum, the Southwest Museum.

These institutions largely remain and have been augmented by the Southwest Indian Museum, the University of Southern California Health Sciences Schools, and California State University at Los Angeles, as well as a major shopping center, The Eagle Rock Plaza. However, the area's prominence in the region has been diminished since World War II because of the tremendous exodus to growing suburbs fostered by freeway development and commercial and industrial decentralization that characterized development in Southern California.

The impact of freeway development on the Plan area cannot be overemphasized. It has provided an efficient means for developing outlying areas and allowing the resulting traffic to bypass the older industrial and commercial corridors of Northeast Los Angeles. It also had the effect of dividing former neighborhoods and communities; altering established commercial activity almost exclusively serving the immediate neighborhoods scattered along Cypress Avenue, Figueroa Street, and San Fernando Road.

These major developments in Northeast Los Angeles have changed the arrangement of land uses and the relationship of the Plan area with the rest of the expanding metropolis. However, within the Community Plan area, the distinctiveness of neighborhoods and communities persists because they are separated by hills and watercourses, and man-made features such as railroad tracks and freeways. Localized demographic, social, and economic factors have also varied over time.

The Project site is located within the Glassell Park neighborhood, which is, in many respects, a complex corridor linking Cypress Park, Mt. Washington, Atwater Village, Highland Park, and Eagle Rock. It is primarily a residential and commercial area, with some industrial activity, located generally east of San Fernando Road along an axis formed by Eagle Rock Boulevard between Division Street and York Boulevard. Outlying neighborhoods extend up the northern slopes of Mt. Washington, along the Fletcher Drive corridor between San Fernando Road and Eagle Rock Boulevard, and in the Verdugo Road corridor between Eagle Rock Boulevard and the City of Glendale.

Land uses have evolved into a complex and troublesome mixture in some areas. Residential uses are often not buffered adequately from neighboring industrial and commercial uses. Some extremely large apartment complexes intrude into older, lower density residential areas. There are also inadequate neighborhood retail services to support the areas where several of the large residential complexes, mostly built in the 1980's, are concentrated.

Entertainment uses are almost non-existent. In recent years, Glassell Park has increased its visibility and identity in Northeast Los Angeles. The Mount Washington/Glassell Park Specific Plan is widely known as the primary mechanism regulating development east of Verdugo Road and south of El Paso Drive. Moreover, the community has erected attractive monument signs in the median of Eagle Rock Boulevard to announce itself to passing motorists.

Mount Washington/Glassell Park Specific Plan

The Project site is located within the boundaries of the Mount Washington/Glassell Park Specific Plan (the "Specific Plan"), which was established on May 10, 1993. The Specific Plan establishes standards for development within the Plan area, related to floor area, height, yards, and landscaping.

City of Los Angeles Planning and Zoning Code

All development activity in the City, including the Project site, is subject to the LAMC, particularly Chapter 1, General Provisions and Zoning, also known as the City of Los Angeles Planning and Zoning Code (the "Zoning Code"). The Zoning Code includes development standards for the various districts in the City. As shown on Figure 2-5 (refer to Section 2, Project Description), the Project site is currently zoned R1-1 (One-Family Zone, Height District 1).

ENVIRONMENTAL IMPACTS

Thresholds of Significance

Appendix G of the CEQA Guidelines

In accordance with Appendix G of the *CEQA Guidelines*, a project could have a significant impact related to land use and planning if it were to:

(a) Physically divide an established community.

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

(c) Conflict with any applicable habitat conservation plan or natural community conservation plan.

As discussed in Section 4.A (Impacts Found to be Less Than Significant), the Project would not result in any significant impacts related to issues "a" and "c." No further analysis of these issues is required.

City of Los Angeles CEQA Thresholds Guide

Based on criteria established in the L.A. CEQA Thresholds Guide, the determination of significance for the Proposed Project's impacts on land use consistency and compatibility shall be made on a case-by-case basis considering the following factors:

Consistency Analysis

1. Whether the proposal is inconsistent with the adopted land use/density designation in the Community Plan, redevelopment plan or specific plan for the site.

2. Whether the proposal is inconsistent with the General Plan or adopted environmental goals or policies contained in other applicable plans.

   Based on these factors, the Project would have a significant land use consistency impact if it were found to be in substantial conflict with the adopted Community Plan or with relevant environmental policies in other applicable plans. It is important to note that inconsistency with a few policies within a plan does not necessarily constitute a significant impact.

Compatibility Analysis

1. The extent of the area that would be impacted, the nature and degree of impacts, and the type of land uses within that area.

2. The extent to which existing neighborhoods, communities, or land uses would be disrupted, divided or isolated, and the duration of the disruptions.

3. The number, degree, and type of secondary impacts to surrounding land uses that could result from implementation of the proposed project.

   Based on these factors, the Project would be considered to have a significant land use compatibility impact if it would substantially and adversely change the existing land use

relationships between the Project Site and existing off-site uses or have a long-term effect of adversely altering a neighborhood or community through ongoing disruption, division, or isolation.

Project Impacts

Consistency with Applicable Plans, Policies, and Regulations

Compass Blueprint Report

Although the Project site is not located within a Compass Blueprint 2% Strategy Area, the Project's consistency with the Compass Blueprint Report is discussed on Table 4.I-1. As discussed, the Project would be consistent with applicable land use policies of the Compass Blueprint Report, and Project impacts related to inconsistency with this report would be less than significant.

Table 4.I-1
Project Consistency with Applicable Policies of the Compass Blueprint Report

Policy	Project Consistency
Principle 1: Improve mobility for all residents.	
Encourage transportation investments and land use decisions that are mutually supportive. Encourage transit-oriented development. Promote a variety of travel choices.	**Consistent.** The Project would take advantage of existing and proposed transportation investments by developing the Project site with residential uses on land designated by the City for residential use.
Locate new housing near existing jobs and new jobs near existing housing.	**Consistent.** The Project site is zoned for single--family residential land uses. Also, the area immediately surrounding the Project site is developed with single-family residential land uses.
Principle 2: Foster livability in all communities.	
Support the preservation of stable single-family neighborhoods.	**Consistent.** The Project site is zoned for single--family residential land uses. Also, the area immediately surrounding the Project site is developed with single-family residential land uses. The Project would not impinge on any existing single-family neighborhoods.
Principle 3: Enable prosperity for all people.	
Provide a variety of housing types in each community to meet the housing needs of all income levels.	**Consistent.** The Project includes development of single-family homes and is an extension of the existing single-family residential neighborhood in the existing Glassell Park neighborhood.
Principle 4: Promote sustainability for future generations.	
Focus development in urban centers and existing cities.	**Consistent.** The Project includes development of single-family homes and is an extension of the existing single-family residential neighborhood in the existing Glassell Park neighborhood within the Northeast Los Angeles Community Plan area.
Utilize "green" development techniques.	**Consistent.** The Project would comply with CalGreen

Table 4.I-1
Project Consistency with Applicable Policies of the Compass Blueprint Report

Policy	Project Consistency
	requirements of the California Building Code and incorporates green and conservation features. The Project would also be consistent with the City of Los Angeles Building Code, including the Los Angeles Green Building Code (LAGBC), which is designed to reduce the Project's energy and water use, reduce waste, and reduce the carbon footprint.
Develop strategies to accommodate growth that use resources efficiently, and minimize pollution and greenhouse gas emissions.	**Consistent.** As discussed in Section 4.G. of this Draft EIR, the Project would result in a reduction of GHG emissions as compared to the BAU scenario.

Source: Southern California Association of Governments, Southern California Compass Blueprint 2% Strategy, Southern California Compass Blueprint Growth Vision Report, June 2004.

2016-2040 RTP/SCS

The Project's consistency with the applicable goals of the 2016-2040 RTP/SCS is discussed on Table 4.I-2. As discussed, the Project would be consistent with the 2016-2040 RTP/SCS. Therefore, impacts related to inconsistency with the 2016-2040 RTP/SCS would be less than significant.

Table 4.I-2
Project Consistency with the 2016-2040 RTP/SCS

Goal	Consistency Discussion
1. Align the plan investments and policies with improving regional economic development and competitiveness.	**Not Applicable.** This policy is not applicable to individual development projects.
2. Maximize mobility and accessibility for all people and goods in the region.	**Consistent.** While not necessarily applicable on a project-specific basis, the Project would support this goal by providing an on-site circulation network to improve local access, with appropriate design considerations to ensure travel safety and reliability.
3. Ensure travel safety and reliability for all people and goods in the region.	**Consistent.** While not necessarily applicable on a project-specific basis, the Project would support this goal by providing an on-site circulation network to improve local access, with appropriate design considerations to ensure travel safety and reliability.
4. Preserve and ensure a sustainable regional transportation system.	**Consistent.** While not necessarily applicable on a project-specific basis, the Project would support this goal by providing an on-site circulation network to improve local access, with appropriate design considerations to ensure travel safety and reliability.
5. Maximize the productivity of our transportation system.	**Consistent.** While not necessarily applicable on a project-specific basis, the Project would support this goal by providing an on-site circulation network to improve local access, with appropriate design considerations to ensure travel safety and reliability.

6. Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking).	**Consistent.** The new roadways within the Project will accommodate walking and bicycling. Also, the Project's location on an infill site near retail amenities and jobs would reduce vehicle miles traveled.
7. Actively encourage and create incentives for energy efficiency, where possible.	**Consistent.** The Project would comply with CalGreen requirements of the California Building Code, for water and energy conservation. The Project would exceed Title 24 standards with compliance with the City's Green Building Ordinance and the Project would also be consistent with the City of Los Angeles Building Code, including the LAGBC, which is designed to reduce the Project's energy and water use, reduce waste, and reduce the carbon footprint.
8. Encourage land use and growth patterns that facilitate transit and non-motorized transportation.	**Consistent.** The Project site is zoned for single-family residential land uses. Also, the area immediately surrounding the Project site is developed with single-family residential land uses and is well-served by transit. The new roadways within the project will accommodate walking and bicycling.
9. Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	**Not Applicable.** This policy is not applicable to individual development projects.
Source: Southern California Association of Governments, 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, April 2016.	

General Plan (Framework Element)

The Project's consistency with the General Plan Framework Element land use policies is discussed on Table 4.I-3. As shown, the Project would be consistent with all of the applicable policies, and Project impacts related to inconsistency of the Project with the General Plan Framework Element would be less than significant.

Table 4.I-3
Project Consistency with Applicable Policies of the Framework Element

Objective/Policy	Project Consistency
Framework Element: Land Use Chapter	
Policy 3.1.4: Accommodate new development in accordance with land use and density provisions of the General Plan Framework Long-Range Land Use Diagram (Figures 3-1 to 3-4) and Table 3-1.	**Consistent.** The Project would include development of 32 single-family homes in accordance with the land use and density provisions for the Project Site contained in the General Plan Framework Long-Range Land Use Diagram.
Policy 3.1.7: Allow for the development in accordance with the policies, standards, and programs of specific plans in areas in which they have been adopted. In accordance with Policy 3.1.6, consider amending these plans when new transit routes and stations are confirmed and funding is secured.	**Consistent.** As discussed later in this section (under "Mount Washington/Glassell Park Specific Plan"), the Project would be consistent with the standards identified in the Specific Plan for one-family projects.
Objective 3.2: Provide for the spatial distribution of development that promotes an improved quality of life by facilitating a reduction of vehicular trips, vehicle miles traveled, and air pollution.	**Consistent.** The Project's location on an infill site near retail amenities and jobs would reduce vehicle miles traveled. In addition, the new roadways within the Project will accommodate walking and bicycling.
Policy 3.2.1: Provide a pattern of development consisting of distinct districts, centers, boulevards, and neighborhoods that are differentiated by their functional role, scale, and character. This shall be accomplished by considering factors such as the existing concentrations of use, community-oriented activity centers that currently or potentially service adjacent neighborhoods, and existing or potential public transit corridors and stations.	**Consistent.** The Project includes development of single-family homes and is an extension of the existing single-family residential neighborhood in the existing Glassell Park neighborhood within the Northeast Los Angeles Community Plan area.
Policy 3.2.4: Provide for the siting and design of the City's stable residential neighborhoods and enhance the character of commercial and industrial districts.	**Consistent.** The Project includes development of single-family homes and is an extension of the existing single-family residential neighborhood in the existing Glassell Park neighborhood within the Northeast Los Angeles Community Plan area. The Project would be required to be designed and constructed in accordance with all of the City's applicable design standards, including those in the Mt. Washington/Glassell Park Specific Plan and the Citywide Hillside Ordinance. The proposed structures would be similar to and compatible with other uses in the immediate vicinity, and the Project would maintain the prevailing scale and character of surrounding residential neighborhoods.

Table 4.I-3
Project Consistency with Applicable Policies of the Framework Element

Objective/Policy	Project Consistency
Objective 3.3: Accommodate projected population and employment growth within the City and each community plan area and plan for the provision of adequate supporting transportation and utility infrastructure and public services.	**Consistent.** As discussed in Section 4.A., under "Public Services" and "Utilities," the existing public services and utility infrastructure would be adequate to accommodate the Project's population growth.
Policy 3.4.1: Conserve existing stable residential neighborhoods and lower-intensity commercial districts and encourage the majority of new commercial and mixed-use (integrated commercial and residential) development to be located (a) in a network of neighborhood districts, community, regional, and downtown centers, (b) in proximity to rail and bus transit stations and corridors, (c) along the City's major boulevards, referred to as districts, centers, and mixed-use boulevards, in accordance with the Framework Long-Range Land Use Diagram (Figure 3-1 and 3-2).	**Consistent.** The Project would place single-family homes on a site that is zoned for single-family residential land uses. Also, the area immediately surrounding the Project site is developed with single-family residential land uses.
Source: City of Los Angeles General Plan.	

Northeast Los Angeles Community Plan

Consistency of the Northeast Los Angeles Community Plan is discussed on Table 4.I-4. As discussed, the Project would be consistent with all applicable policies of the Northeast Los Angeles Community Plan. As such, the Project would not result in any inconsistencies with the Plan. Therefore, Project impacts related to inconsistency with the Northeast Los Angeles Community Plan would be less than significant.

Table 4.I-4
Project Consistency with Applicable Policies of the Northeast Los Angeles Community Plan

Policy	Project Consistency
Residential	
1-1.1 Protect existing stable single-family and other lower density residential neighborhoods from encroachment by higher density residential and other uses that are incompatible as to scale and character or would otherwise diminish the quality of life.	**Consistent.** The Project includes development of single-family homes and is an extension of the existing single-family residential neighborhood in the existing Glassell Park neighborhood within the Northeast Los Angeles Community Plan area. The proposed structures would be similar to and compatible with other uses in the immediate vicinity, and the Project would maintain the prevailing scale and character of surrounding residential neighborhoods

Table 4.I-4
Project Consistency with Applicable Policies of the
Northeast Los Angeles Community Plan

Policy	Project Consistency
1-1.2 Promote neighborhood preservation, particularly in existing single-family neighborhoods, as well as in areas with existing multiple-family residences.	**Consistent.** The Project would promote neighborhood preservation by developing compatible single-family homes in an existing single-family residential neighborhood.
1-3.1 Protect the quality and scale of the residential environment through attention to the appearance of communities, including attention to building and site design.	**Consistent.** The Project would comply with all of the City's applicable Design Guidelines and Standards for residential development. The Project would be required to be designed and constructed in accordance with all of the City's applicable design standards, including those in the Mt. Washington/Glassell Park Specific Plan and the Citywide Hillside Ordinance. The proposed structures would be similar to and compatible with other uses in the immediate vicinity, and the Project would maintain the prevailing scale and character of surrounding residential neighborhoods.
1-5.1 Limit development according to the adequacy of the existing and assured street circulation system within the Plan Area and surrounding areas.	**Consistent.** As discussed in Section 4.K (Transportation/Traffic), the roadway infrastructure serving the Project site would be adequate to accommodate the Project, and the Project would not result in any significant traffic impacts.
1-5.2 Ensure the availability of paved streets, adequate sewers, drainage facilities, fire protection services and facilities, and other emergency services and public utilities to support development in hillside areas.	**Consistent.** The Project includes extension of Haverhill Drive to provide access to some of the proposed single-family homes. As discussed in Section 4.K (Transportation/Traffic), the roadway infrastructure serving the Project site would be adequate to accommodate the Project, and the Project would not result in any significant traffic impacts. As discussed in Section 4.A (Impacts Found to be Less Than Significant, Public Services), existing fire and police protection services would be adequate to serve the Project, and no significant impacts related to fire and police protection would occur. The Project applicant would be required by the City to ensure that the Project includes adequately-sized utility infrastructure to serve the Project.
1-5.3 Consider the steepness of the topography and the geologic stability in any proposal for development within the Plan area.	**Consistent.** The Project site is located in a hillside area. The Project would be designed and constructed in accordance with the recommendations of a Final Geotechnical Report and the City's Building Code.

Table 4.I-4
Project Consistency with Applicable Policies of the
Northeast Los Angeles Community Plan

Policy	Project Consistency
1-5.4 Require that any proposed development be designed to enhance and be compatible with adjacent development.	**Consistent.** The Project includes development of single-family homes and is an extension of the existing single-family residential neighborhood in the existing Glassell Park neighborhood within the Northeast Los Angeles Community Plan area. The Project would be required to be designed and constructed in accordance with all of the City's applicable design standards, including those in the Mt. Washington/Glassell Park Specific Plan and the Citywide Hillside Ordinance. The proposed structures would be similar to and compatible with other uses in the immediate vicinity, and the Project would maintain the prevailing scale and character of surrounding residential neighborhoods.
1-6.1 Promote individual choice in type, quality, price, and location of housing.	**Consistent.** The Project would offer new single family home ownership opportunities.
Park and Recreational Facilities	
5-1.1 Preserve the existing recreational facilities and park space.	**Consistent.** The Project would not affect any designated recreational facilities or park space.
Police Protection	
8-1.1 Coordinate with the Police Department as part of the review of significant development projects and General Plan Amendments affecting land use to determine the impact on service demands.	**Consistent.** As part of preparation of this Draft EIR, the Los Angeles Police Department (LAPD) was consulted to help determine what demand the Project could have on LAPD services and any mitigation measures that could be implemented to reduce Project demand. (Refer to response to Section 4.A, Impacts Found to be Less Than Significant, Public Services.)
8-1.3 Encourage design of building and facilities in accordance with principles that minimize opportunities for crime and enhance personal safety.	**Consistent.** The Project developer would be required to design and construct the Project in accordance with "Design Out Crime Guidelines: Crime Prevention Through Environmental Design," published by the LAPD.
Transportation	
10-1.1 Maintain Levels of Service for streets and highways not to exceed LOS "D" for secondary arterials, collector streets, and local streets; not to exceed LOS "E" on Major Highways or in the community's major business districts.	**Consistent.** A traffic impact analysis was prepared for the Project (refer to Section 4.K, Transportation/Traffic) The analysis concluded that the existing transportation facilities are adequate to accommodate the Project's traffic, and no significant impacts related to traffic would occur. Moreover, Project traffic would not degrade the LOS for any secondary arterials, collector streets, local streets; Major Highways.
13-1.4 New development projects should be designed to minimize disturbance to existing flow with proper ingress and egress to parking.	**Consistent.** The Project would include adequate driveway access to prevent vehicle queuing.

Source: Northeast Los Angeles Community Plan.

Zoning Code

The Project site is zoned R1-1 (One-Family Zone, Height District 1), which allows for one single-family home to be constructed on each lot. The proposed single-family residential land uses are allowed under the current zoning, and all aspects of the Project would conform to the LAMC requirements that pertain to development of the Project site. The Project would not conflict with the LAMC. Therefore, no impacts related to conflicts with the LAMC would occur as a result of the Project.

Project Compatibility

The single-family land uses proposed by the Project would be compatible with and would complement existing and future development in the Project area. While the Project would increase the density, scale, and height of development on the Project Site, these changes would not be out of character with the surrounding area, which is an existing single-family neighborhood. In terms of land use type and building height, massing, and scale, the proposed structures would be similar to and compatible with the adjoining single-family homes. As such, the Project would represent an extension and reflection of the surrounding as built environment.

Based on the analysis above, the Project would not substantially or adversely change the existing land use relationships between the Project Site and existing off-site uses, or have a long-term effect of adversely altering a neighborhood or community through ongoing disruption, division, or isolation. Impacts related to land use compatibility would be less than significant

CUMULATIVE IMPACTS

Cumulative land use impacts could occur if any of the related projects would result in incompatible land uses, or result in land uses that are inconsistent with adopted land use plans when combined with the impacts of the Project. As previously stated in Section 3, Environmental Setting, there are six related projects. The related projects generally consist of infill development and redevelopment of existing uses. As with the Project, the related projects would be required to comply with relevant land use policies and regulations. Therefore, as the Project would generally be consistent with applicable land use plans, the Project would not incrementally contribute to cumulative inconsistencies with respect to land use plans. Cumulative impacts with regard to regulatory framework would be less than significant.

The Project would be compatible with the various developments planned throughout the surrounding vicinity, as well as with existing uses in the immediate area. While the Project in combination with the related projects represents a continuing trend of infill development at increased densities, future development inclusive of the Project would also serve to modernize the Project area and provide sufficient infrastructure and amenities to serve the growing population. The six related projects are not expected to fundamentally alter the existing land use relationships in the community, but rather would concentrate development on particular sites and promote a synergy between existing and new uses. Furthermore, as analyzed above, the Project's proposed single family residential use would be compatible

with surrounding land uses. Thus, the Project would not have a cumulatively considerable impact on land use compatibility. As such, the combined land use compatibility impacts associated with the Project's incremental effect and the effects of other related projects would be less than significant.

MITIGATION MEASURES/REGULATORY COMPLIANCE MEASURES/PROJECT DESIGN FEATURES

None required.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts related to land use and planning would be less than significant.

Cumulative impacts would also be less than significant.

4. ENVIRONMENTAL IMPACT ANALYSIS

J. NOISE

INTRODUCTION

The information and analysis in this section is based primarily on the following technical modeling (refer to Appendix G):

- *Noise Technical Modeling, DKA Planning, 2015.*

ENVIRONMENTAL SETTING

Characteristics of Sound

Sound is technically described in terms of its loudness (amplitude) and frequency (pitch). The standard unit of measurement for sound is the decibel (dB). Because the human ear is not equally sensitive to sound at all frequencies, the "A-weighted scale" (dbA) is used to reflect the normal hearing sensitivity range of the human ear. On this scale, the range of human hearing extends from approximately 3 to 140 dBA. Table 4.J-1 provides examples of A-weighted noise levels from common sources.

Table 4.J-1
A-Weighted Decibel Scale

Typical A-Weighted Sound Levels	Sound Level (dBA, L_{eq})
Threshold of Pain	140
Jet Takeoff at 100 Meters	125
Jackhammer at 15 Meters	95
Heavy Diesel Truck at 15 Meters	85
Conversation at 1 Meter	60
Soft Whisper at 2 Meters	35
Source: United States Occupational Safety & Health Administration, Noise and Hearing Conversation Technical Manual, 1999.	

Noise Definitions

Community Noise Equivalent Level (CNEL): CNEL is a noise measurement scale of average sound level during a 24-hour period. CNEL accounts for noise source, distance, single event duration, single event occurrence, frequency, and time of day. Due to increased noise sensitivities during evening and night hours, human reaction to sound between 7:00 p.m. and 10:00 p.m. is as if the sound were actually 5 dBA higher than if it had occurred between 7:00 a.m. and 7:00 p.m. And from 10:00 p.m. to 7:00 a.m., humans perceive sound as if it were 10 dBA higher. Hence, CNEL is obtained by adding an additional 5

dBA to evening-time noise levels between 7:00 p.m. and 10:00 p.m. and 10 dBA to night-hour noise levels between 10:00pm and 7:00am. Because CNEL accounts for human sensitivity to sound, CNEL 24-hour figures are always higher than their corresponding actual 24-hour averages.

Equivalent Noise Level (L_{eq}). Leq is the average noise level on an energy basis for any specific time period. For example, the Leq for one hour is the energy average noise level during that hour. The average noise level is based on the energy content (acoustic energy) of sound. Leq can be thought of as a continuous noise level of a certain period equivalent in energy content to a fluctuating noise level of that same period. Leq is expressed in units of dBA.

Effects of Noise

The degree to which noise can impact the environment ranges from levels that interfere with speech and sleep to levels that can cause adverse health effects. Human response to noise is subjective and can vary from person to person. Factors that influence individual responses include the intensity, frequency, and pattern of noise; the amount of background noise present before the intruding noise; and the nature of work or human activity exposed to the noise source.

Audible Noise Changes

Small perceptible changes in sound level for people with normal hearing sensitivity occur at approximately 3 dBA. Changes of at least 5 dBA can be noticeable and may even cause community reactions. Sound level increases of 10 dBA or greater are perceived as a doubling in loudness and will typically provoke some form of community response.

Noise levels decrease as the distance from the noise source to the receiver increases. For each doubling of distance, noise generated by a stationary noise source, or "point source," will decrease by approximately 6 dBA over hard surfaces (e.g., reflective surfaces such as parking lots or smooth bodies of water) and 7.5 dBA over soft surfaces (e.g., absorptive surfaces such as soft dirt, grass, or scattered bushes and trees). For example, if a point source produces a noise level of 89 dBA at a reference distance of 50 feet, the noise level would be approximately 83 dBA at a distance of 100 feet, 77 dBA at a distance of 200 feet, and so on.

Noise is most audible when traveling by direct line-of-sight, an unobstructed visual path between noise source and receptor. Barriers such as walls or buildings that break line-of-sight between sources and receivers can greatly reduce source noise levels by allowing noise to reach receivers by diffraction only. As a result, sound barriers can reduce source noise levels by up to 20 dBA or more. However, if barriers are not high or long enough to break line-of-sight from sources to receivers, their effectiveness can be greatly reduced.

REGULATORY SETTING

Federal

Noise Standards

There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the Project, which is a private development in the City. With regard to noise exposure and workers, the Office of Safety and Health Administration (OSHA) regulations safeguard the hearing of workers exposed to occupational noise.

State

Noise Standards

The California Department of Health Services (the "DHS") has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. These guidelines for land use and noise exposure compatibility are shown on Table 4.J-2. In addition, Section 65302(f) of the California Government Code requires each county and city in the state to prepare and adopt a comprehensive long-range general plan for its physical development, with Section 65302(g) requiring a noise element to be included in the general plan. The noise element must: (1) identify and appraise noise problems in the community; (2) recognize Office of Noise Control guidelines; and (3) analyze and quantify current and projected noise levels.

City

The LAMC provides two types of noise standards that are relevant to this analysis: 1) construction noise standards, and 2) general noise ordinance standards. The construction noise standards apply only to construction activities, while the general noise ordinance standards apply to noise generated by land use activities.

Table 4.J-2
Community Noise Exposure (CNEL)

Land Use	Normally Acceptable[a]	Conditionally Acceptable[b]	Normally Unacceptable[c]	Clearly Unacceptable[d]
Single-family, Duplex, Mobile Homes	50 - 60	55 - 70	70 - 75	above 75
Multi-Family Homes	50 - 65	60 - 70	70 - 75	above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 - 70	60 - 70	70 - 80	above 80
Transient Lodging – Motels, Hotels	50 - 65	60 - 70	70 - 80	above 75
Auditoriums, Concert Halls, Amphitheaters	---	50 - 70	---	above 70
Sports Arena, Outdoor Spectator Sports	---	50 - 75	---	above 75
Playgrounds, Neighborhood Parks	50 - 70	---	67 - 75	above 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 - 75	---	70 - 80	above 80
Office Buildings, Business and Professional Commercial	50 - 70	67 - 77	above 75	---
Industrial, Manufacturing, Utilities, Agriculture	50 - 75	70 - 80	above 75	---

[a] Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.
[b] Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
[c] Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
[d] Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: Office of Planning and Research, State of California Genera Plan Guidelines, October 2003 (in coordination with the California Department of Health Services); City of Los Angeles, General Plan Noise Element, adopted February 1999.

Construction Noise Standards

LAMC Section 41.40 regulates noise due to construction work. LAMC Section 41.40 prohibits the use of any "power driven drill, riveting machine, excavator or any other machine, tool, device or equipment which makes loud noises to the disturbance of persons occupying sleeping quarters in any dwelling hotel or apartment or other place of residence" between the hours of 9:00 PM and 7:00 AM. Section 41.40 further states that "the operation, repair or servicing of construction equipment and the job-site delivering of construction materials in such areas shall be prohibited" during the hours of 9:00 PM and 7:00 AM. LAMC Section 41.40 also prohibits any construction work, including the operation, repair, or servicing of construction equipment and the job-site delivering of construction materials, within 500 feet of residential buildings before 8:00 AM or after 6:00 PM on Saturday or national holidays or at any time on Sunday.

Within the permitted construction times and distances, there are no noise limits. Construction noise intruding onto property zoned for manufacturing or industrial uses is exempted from the LAMC Section 41.40 standards.

LAMC Section 112.05 states that between the hours of 7:00 AM and 10:00 PM, in any residential zone of the City or within 500 feet thereof, no person shall operate or cause to be operated any powered equipment or powered hand tool that produces a maximum noise level exceeding 75 dB(A) at a distance of 50 feet. This limit applies to construction equipment, including crawler-tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, motor graders, paving machines, off-highway trucks, ditchers, trenchers, compactors, scrapers, wagons, pavement breakers, compressors, and pneumatic or other powered equipment. This limit shall not apply where compliance is technically infeasible. The burden of proving that compliance is technically infeasible shall be on the person or persons charged with any violation of this section. Technical infeasibility shall mean that the noise limit cannot be complied with despite the use of mufflers, shields, sound barriers and/or other noise reduction devices or techniques during the operation of the equipment.

General Noise Ordinance Standards

LAMC Chapter XI, "Noise Regulation," regulates noise from non-transportation noise sources such as commercial or industrial operations, mechanical equipment or residential activities. Although these regulations do not apply to vehicles operating on public rights-of-way, the regulations do apply to noise generated by vehicles on private property, such as truck operations at commercial or industrial facilities. The exact noise standards vary depending on the type of noise source, but the allowable noise levels are generally determined relative to the existing ambient noise levels at the affected location. LAMC Section 111.01 (a) defines the ambient noise as "the composite of noise from all sources near and far in a given environment, exclusive of occasional and transient intrusive noise sources and of the particular noise source or sources to be measured. Ambient noise shall be averaged over a period of at least 15 minutes…" LAMC Section 111.03 provides minimum ambient noise levels for various land uses, as described on Table 4.J-3. In the event that the actual measured ambient level at a subject location is lower than that provided in the table, the level in the table shall be assumed.

Table 4.J-3
City of Los Angeles Minimum Ambient Noise Levels

Zone	Allowable Average Noise Level (L_{eq})	
	Daytime (7 am – 10 pm)	**Nighttime (10 pm – 7 am)**
A1, A2, RA, RE, RS, RD, RW1, RW2, R1, R2, R3, R4, and R5	50 dB(A)	40 dB(A)
P, PB, CR, C1, C1.5, C2, C4, C5, and CM	60 dB(A)	55 dB(A)
M1, MR1, and MR2	60 dB(A)	55 dB(A)
M2 and M3	65 dB(A)	65 dB(A)
Source: LAMC		

At the boundary line between two zones, the allowable noise level of the quieter zone shall be used. The allowable noise levels are then adjusted if certain conditions apply to the alleged offensive noise, as follows:

- For steady tone noise with an audible fundamental frequency or overtones (except for noise emanating from any electrical transformer or gas metering and pressure control equipment existing and installed prior to September 8, 1986) – reduce allowable noise level by 5 dB(A).

- For repeated impulsive noise – reduce allowable noise level by 5 dB(A).

- For noise occurring less than 15 minutes in any period of 60 consecutive minutes between the hours of 7:00 AM and 10:00 PM – increase allowable noise level by 5 dB(A).

The City's noise ordinance is not explicit in defining the length of time over which an average noise level should be assessed. However, based on the noted reference to "60 consecutive minutes," above, it is concluded that the one-hour L_{eq} metric should be used.

Regarding the location at which the noise measurements should be taken, the LAMC states that "except when impractical, the microphone shall be located four to five feet above the ground and ten feet or more from the nearest reflective surface. However, in those cases where another elevation is deemed appropriated, the latter shall be utilized."

LAMC Section 112.02 addresses noise from air conditioning, refrigeration, heating, pumping, and filtering equipment. The section states that such equipment may not generate noise that would exceed the ambient noise level at any adjacent property by more than 5 dB(A).

LAMC Section 114.02 addresses noise from motor driven vehicles (the LAMC only addresses vehicles on private property and does not address vehicles on public highways). The section states that such vehicles may not generate noise that would exceed the ambient noise level at any occupied residential property by more than 5 dB(A).

LAMC Section 114.03 states that "It shall be unlawful for any person, between the hours of 10:00 PM and 7:00 AM of the following day, to load or unload any vehicle, or operate any dollies, carts, forklifts, or other wheeled equipment, which causes any impulsive sound, raucous or unnecessary noise within 200 feet of any residential building."

Vibration

Characteristics of Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Unlike noise, vibration is not a common

environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible. Common sources of vibration include trains, buses, and construction activities.

Vibration Definitions

Vibration events can be quantified by peak particle velocity (PPV), which is a vibration signal's maximum instantaneous peak. PPV is typically measured in inches per second. It can be used to characterize vibration impacts to buildings and humans.

Root mean square (RMS) amplitude is most frequently used when analyzing vibration effects on humans. RMS amplitude is calculated by averaging the squared amplitude of the signal and is typically measured in terms of decibel notation (VdB). Decibel notation compresses the range of numbers required to describe vibration.

Effects of Vibration

Ground-borne vibration levels rarely affect human health. Instead, most people consider ground-borne vibration to be an annoyance that may affect concentration or disturb sleep.

Vibration may also disrupt certain sensitive activities, such as audio recording or medical research. Vibratory movements can directly disrupt such activities, or indirectly impede them by causing audible low-frequency noises or rattling.

More powerful vibrations can even cause building damage by cracking fragile fixtures and plaster coatings, or even compromising foundations.

Perceptible Vibration Changes

Unlike noise, ground-borne vibration is not an environmental issue that most people experience every day. The background vibration velocity level in residential areas is usually 50 RMS or lower, well below the threshold of perception for humans, which is around 65 RMS. Most perceptible indoor vibration is caused by sources within buildings, such as movement of people or slamming of doors. Typical outdoor sources of ground-borne vibration are construction equipment, trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is typically not perceptible.

Relevant Regulations

To counter the effects of ground-borne vibration, the Federal Transit Administration (FTA) has established guidelines that provide thresholds for ground-borne vibration causing human annoyance and/or disruption. The FTA has determined thresholds for a variety of land uses. Individual land-uses may have multiple thresholds depending on the frequency of same-source vibration events that they experience.

The FTA has also established guidelines relating to structural vibration impacts. These guidelines identify various vibration thresholds for building damage.

Because the City has not adopted any thresholds associated with building damage or human annoyance for groundborne vibration impacts, this analysis relies on the aforementioned FTA vibration impact guidelines.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

Appendix G to the CEQA Guidelines

In accordance with Appendix G to the *CEQA Guidelines*, a project would have a significant impact on noise if it would cause any of the following conditions to occur:

(a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

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

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

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

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

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

As discussed in Section 4.A, the Project would not result in impacts related to issues “e” and “f.” Therefore, no further discussion of these issues is required.

City of Los Angeles CEQA Thresholds Guide

As set forth in the *L.A. CEQA Thresholds Guide*, a project would normally have a significant impact on noise levels from construction if the following occurs:

(a) Construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA or more at a noise sensitive use;

(b) Construction activities lasting more than ten days in a three-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use; or

(c) Construction activities would exceed the ambient noise level by 5 dBA at a noise sensitive use between the hours of 9:00 PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or anytime on Sunday.[1]

In addition, as set forth in the *L.A. CEQA Thresholds Guide*, a project would normally have a significant impact on noise levels from project operations if the following occurs:

(d) The project causes the ambient noise level measured at the property line of affected uses to increase by 3 dBA in CNEL to or within the "normally unacceptable" or "clearly unacceptable" category, or any 5 dBA or greater noise increase.[2]

City of Los Angeles Municipal Code

In accordance with LAMC, a project would have significant noise impacts if the following were to occur:

(a) The Project causes the ambient noise levels measured at the property line of affected noise-sensitive uses to increase by 5 dBA CNEL or greater; or

(b) Project-related operational (i.e., non-roadway) noise sources such as outdoor building mechanical/electrical equipment, outdoor activities, or parking facilities increase the ambient noise level (L_{eq}) at noise sensitive uses by 5 dBA.

FTA Transit Noise and Vibration Impact Assessment Manual

Table 4.J-4 identifies FTA thresholds for ground-borne vibration causing human annoyance and/or disruption.

[1] *City of Los Angeles L.A. CEQA Thresholds Guide, 2006, page I.1-3.*

[2] *City of Los Angeles L.A. CEQA Thresholds Guide, 2006, page I.2-3.*

Table 4.J-4
Land Use Disruption Vibration Thresholds (VdB)

Land Use	Significance Thresholds (VdB)		
	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Buildings where vibration would interfere with interior operations	65	65	65
Residences and buildings where people normally sleep	72	75	80
Institutional land uses with primarily daytime use	75	78	83
Concert halls, TV studios, and recording studios	65	65	65
Auditoriums and theaters	72	80	80

1 Frequent events are defined as those of the same vibration source that occur more than 70 times per day.
2 Occasional events are defined as those of the same vibration source that occur between 70 and 30 times per day.
3 Infrequent events are defined as those of the same vibration source that occur fewer than 30 times per day

Source: Federal Transit Administration, 2006.

Table 4.J-5 identifies FTA thresholds for ground-borne vibration causing building damage.

Table 4.J-5
Building Damage Vibration Thresholds (PPV)

Building Category	PPV (in/sec)
I. Reinforced-concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

Source: Federal Transit Administration, 2006

Project vibration impacts would be considered to be significant if Project vibration levels would exceed any of the above numerical thresholds.

Existing Conditions

The Project vicinity is characterized by low ambient noise levels, given the location of the residential neighborhood. Further, there is no through traffic given the dead-end for Haverhill Drive, which further minimizes ambient noise levels. To ascertain current ambient noise levels at nearby receptors, DKA Planning took short-term, 15-minute noise readings on April 28, 2015 using a Quest Technologies SoundPro

DL Sound Level Meter.[3] This weekday measurement is assumed to replicate the typical conditions under which weekday construction would occur. Noise measurements were taken at these four locations near the Project site. Ambient noises were generally caused by landscaping activities, with occasional noise from passing vehicles on nearby streets. As shown on Table 4.J-6, ambient noise levels were very low, ranging from 42.1 dBA L_{eq} at 2421 Sundown Drive to 51.5 dBA L_{eq} at 3957 Brilliant Drive.

Table 4.J-6
Existing Ambient Noise Levels

Sensitive Receptor	Distance from Site (feet)	Existing Ambient (dBA, L_{eq})
2438 Haverhill Drive Residence	5	42.9
2421 Sundown Drive Residence	20	42.1
3829 Division Street Residence	20	47.0
3957 Brilliant Drive Residence	15	51.5
Source: DKA Planning, 2015.		

Project Impacts

Construction Noise

During construction, ground clearing, grading, structural, and other noise-generating activities would occur at the Project site between the hours of 7:00 a.m. and 9:00 p.m. in accordance with LAMC Section 41.40. Table 4.J-6 summarizes projected noise levels at nearby sensitive receptors during construction. Land uses on the properties surrounding the Project site are predominantly residential. For purposes of assessing noise impacts, the following nearby sensitive receptors to the Project site were identified:

- Single family homes on Haverhill Drive, directly north of the Project site, with homes as close as 5 feet to the Project site. Measurements were taken at 2438 Haverhill Drive.
- Single family homes on Sundown Drive, directly northwest of the Project site, with homes as close as 20 feet to the Project site. Measurements were taken at 2421 Sundown Drive.
- Single family homes on Division Street, directly east of the Project site, with homes as close as 20 feet to the Project site. Measurements were taken at 3829 Division Street.

[3] *The SoundPro meter complies with the American National Standards Institute (ANSI) and International Electrothnical Commission (IEC) for general environmental noise measurement instrumentation. The meter was equipped with an omni-directional microphone, calibrated before the day's measurements, and set at approximately five feet above the ground. Weather conditions were clear with negligible wind.*

- Single family homes on Brilliant Drive, directly west of the Project site, with homes as close as 15 feet to the Project site. Measurements were taken at 3957 Brilliant Drive.

Table 4.J-7
Estimated Project Construction Noise Levels – Without Mitigation

Sensitive Receptor	Distance from Site (feet)	Maximum Construction Noise Level (dBA)	Existing Ambient (dBA, L_{eq})	New Ambient (dBA, L_{eq})	Increase
2438 Haverhill Drive Residence	5	80.5	42.9	80.5	37.6
2421 Sundown Drive Residence	20	80.5	42.1	80.5	38.4
3829 Division Street Residence	20	79.0	47.0	79.0	32.0
3957 Brilliant Drive Residence	15	79.0	51.5	79.0	27.5

Source: DKA Planning, 2015.

Construction activities would generate noise from construction activities that would vary over the 17 months of activity on- and off-site. This would include on-site equipment such as scrapers, tractors, loaders and smaller equipment such as saws, hammers, and pneumatic tools associated with the Project's construction. There would be secondary noise from construction worker vehicles and vendor deliveries. The Project would result in the following intermittent and temporary construction noise levels:

- Noise levels of up to 80.5 dBA are projected at 2421 Sundown Drive, an increase of 38.4 dBA.
- Noise levels of up to 80.5 dBA are projected at 2438 Haverhill Drive, an increase of 37.6 dBA.
- Noise levels of up to 79.0 dBA are projected at 3957 Brilliant Drive, an increase of 27.5 dBA.
- Noise levels of up to 79.0 dBA are projected at 3829 Division Street, an increase of 32.0 dBA.

Although Mitigation Measures J-2 through J-7 would ensure that construction noise levels do not exceed the 75 dBA threshold pursuant to LAMC Section 112.05, projected noise level increases at all monitored sensitive receptor locations would still exceed the 5.0 dBA thresholds instituted by the City's *CEQA Thresholds Guide* and LAMC. As a result, impacts from on-site construction noise would be significant.

With regard to off-site construction-related noise impacts, up to 1,250 haul truck trips are expected to remove up to 10,000 cubic yards of cut materials from the Project Site, to be transported to nearby landfills by ten-wheeled heavy-duty trucks. During construction of the Project, the proposed fleet of ten haul trucks would add no more than ten trips per hour onto local streets. While such vehicle activity would marginally increase ambient noise levels along local roadways, this would not significantly increase ambient noise levels at sensitive receptors along any Project haul route. Given the traffic volumes of the Project area as detailed in the Project's technical memorandum included in Appendix H, a maximum ten haul trip per hour addition to local roadways would not produce sustained increases of 3.0

dBA or more over an hour or any other monitoring period. As noted in the City's "L.A. CEQA Thresholds Guide," a 3.0 dBA increase in roadway noise levels requires an approximate doubling of roadway traffic volume, assuming travel speed and fleet mix remain constant. Even though haul trucks are louder than most passenger vehicles, their minimal addition to local roadways would not nearly double those road's traffic volumes, let alone augment their traffic to levels capable of producing 3.0 dBA increases. Therefore, noise impacts related to haul trucks would be less than significant.

Operational Noise

During Project operations, the residences would produce both direct noise impacts on the site from residential-related activities, as well as indirect noise impacts from vehicles traveling on local roads to access the site. The direct impacts would include the following:

Mechanical Equipment. Stationary noises associated with building operations, such as ground-level heating, ventilation, and air conditioning (HVAC) systems, would generate noise levels between 50 and 65 dBA at 50 feet.[4] Roof-top mounted equipment typically produces noise levels of up to approximately 56 dBA at 50 feet. This type of equipment often is installed in a fashion that minimizes or eliminates line-of-sight to nearby receptors. Based on the distance from the Project site to nearby receptors, ambient noise levels, and the relatively quiet operation of HVAC systems, increases in ambient noise levels from these on-site noise sources would be inaudible, far below the 5 dBA threshold considered to be a noise violation by the LAMC.

Landscape Maintenance. Noise generated by gas lawnmowers and electric leaf blowers generate about 70 dBA at 5 feet of distance from the source. For each doubling of distance from a point noise source, the sound levels will decrease by 6 dBA or more. These temporary activities will cause short-term increases in noise that would not result in sustained increases in ambient noise levels of 5 dBA or more.

Residential Land Uses. There are a variety of recurrent (e.g., consumer electronics, voices) and non-recurrent activities (e.g., social gatherings) that would elevate ambient noise levels for adjacent residences to differing degrees. The City's noise ordinance provides a means to address nuisance that are created because of such occasional, acute noise events.

Auto-Related Activities. Occupation of proposed residences would introduce recurrent, intermittent noise events, such as door slamming and vehicle engine start-ups. These activities generally produce 60-70 dBA at 50 feet of distance. However, these noise events are infrequent and would not significantly increase ambient noise.

[4] *Los Angeles Department of City Planning, San Pedro Community Plan Draft EIR, August 2012.*

These direct sources of on-site noise would occur seasonally, irregularly, or infrequently, and would not individually or collectively elevate ambient noise levels beyond thresholds prescribed by LAMC. They also would not increase ambient noise by 3.0 dBA CNEL to or within the "normally unacceptable" or "clearly unacceptable" categories set forth in the *L.A. CEQA Thresholds Guide*. Therefore, operational noise impacts would be less than significant.

The majority of operational noise impacts would be caused indirectly by the Project's 305 net new vehicle trips each weekday.[5] However, the addition of Project-related peak hour traffic volumes to local roadways would not double the overall traffic volumes of any studied roadway segment, nor would the level of additional vehicle activity cause ambient noise levels to increase by 3 dBA or more. As a result, mobile-source noise increases would not exceed 3.0 dBA CNEL, and the Project's off-site vehicular impacts would be less than significant.

Groundborne Vibration

Groundborne vibration would be predominantly generated by grading activities, such as those necessitating the usage of large bulldozers and other tractor-type equipment. Other potential types of construction equipment would produce less vibration and have lesser potential impacts on neighboring sensitive receptors. As shown in Table 4.J-8, construction-related PPV levels would exceed the FTA's 0.2 in/sec building damage threshold for non-engineered timber and masonry buildings at 2438 Haverhill Drive. Therefore, the Project's building damage vibration impacts would be considered significant prior to mitigation.

Table 4.J-8
Building Damage Vibration Levels At Off-Site Receptors From Project Construction

Sensitive Uses Offsite	Distance to Project Site (ft.)	Estimated PPV (in/sec)	Significance Threshold (in/sec)	*Significant?*
2438 Haverhill Drive Residence	5	0.995	0.2	Yes
2421 Sundown Drive Residence	20	0.124	0.2	No
3829 Division Street Residence	20	0.124	0.2	No
3957 Brilliant Drive Residence	15	0.191	0.2	No
Source: DKA Planning 2015.				

In terms of human annoyance, project-related construction would exceed FTA residential thresholds at all receptors due to the proximity of residential receptors to the Project, as shown in Table 4.J-9. Therefore, the Project's human annoyance impacts would be considered significant prior to mitigation.

[5] *Associated Transportation Engineers, "Technical Memorandum for the Haverhill Residential Subdivision Project, City of Los Angeles"; 2015.*

Table 4.J-9
Human Annoyance Vibration Levels At Off-Site Receptors From Project Construction

Sensitive Uses Offsite	Distance to Project Site (ft.)	Estimated VdB	Significance Threshold (VdB)	*Significant?*
2438 Haverhill Drive Residence	5	108	72	Yes
2421 Sundown Drive Residence	20	90	72	Yes
3829 Division Street Residence	20	90	72	Yes
3957 Brilliant Drive Residence	15	94	72	Yes
Source: DKA Planning 2015.				

Concerning the off-site travel of haul trucks, the Project's maximum 10 haul trips per hour would not have any significant vibration impacts. Haul trucks would create only infrequent and temporary vibration events at receptors along haul routes. Nevertheless, Mitigation Measure J-7 is recommended to further minimize any potential impacts from these mobile vibration sources.

CUMULATIVE IMPACTS

As noted earlier, on-site construction activities would significantly increase ambient noise levels and at nearby receptors, particularly single-family residences surrounding the Project site. Any other future developments that are built concurrently with the Proposed Project could contribute to temporary cumulative increases in ambient noise levels. Noise from construction of development projects is typically localized and has the potential to affect areas immediately within 500 feet from the construction site. Thus, noise from construction activities for two projects within 1,000 feet of each other can contribute to a cumulative noise impact for receptors located midway between the two construction sites. All related projects are located a substantial distance (a minimum of 5,000 feet) from the Project Site. Therefore, contributions from the Project to the cumulative construction noise impacts would be minimal and impacts would be less than significant.

Ground-borne vibration decreases rapidly with distance. Potential vibration impacts due to construction activities are generally limited to buildings/structures that are located in close proximity of the construction site (i.e., within 50 feet). As indicated above, the nearest related project is approximately 5,000 feet from the Project Site. Therefore, due to the rapid attenuation characteristics of ground-borne vibration, there is no potential for a cumulative construction impact with respect to ground-borne vibration, and cumulative impacts would be less than significant.

With regard to off-site noise from haul trucks, the Proposed Project would have less than significant impacts. Given the locations of other planned future developments, haul routes for these more distant projects would not be expected to converge or intersect with haul routes of the Proposed Project at locations with numerous road-side receptors, especially residential ones. As a result, no cumulative off-site noise increases would occur, and these hauling-related noise impacts would be less than significant.

MITIGATION MEASURES/REGULATORY COMPLIANCE MEASURES/PROJECT DESIGN FEATURES

Regulatory Compliance Measure

J-1 The Project shall comply with the City of Los Angeles Building Regulations Ordinance No. 178048, which requires a construction site notice to be provided that includes the following information: job site address, permit number, name and phone number of the contractor and owner or owner's agent, hours of construction allowed by code or any discretionary approval for the site, and City telephone numbers where violations can be reported. The notice shall be posted and maintained at the construction site prior to the start of construction and displayed in a location that is readily visible to the public.

Mitigation Measures

To mitigate the Project's construction noise impacts, the following mitigation measures are required:

J-2 Two weeks prior to commencement of construction, notification shall be provided to the off-site residential and other sensitive land uses within 500 feet of the Project site that discloses the construction schedule, including the types of activities and equipment that would be used throughout the duration of the construction period.

J-3 Temporary sound barriers capable of achieving a sound attenuation of at least 15 dBA (e.g., construction sound wall with sound blankets), and capable of impeding line-of-sight to adjacent residences, shall be installed.

J-4 All powered construction equipment shall be equipped with exhaust mufflers or other suitable noise reduction devices.

J-5 All construction areas for staging and warming-up equipment shall be located as far as possible from adjacent residences.

J-6 Portable noise sheds for smaller, noisy equipment, such as air compressors, dewatering pumps, and generators shall be provided where feasible.

J-7 A haul route for exporting cut materials from the site to a nearby landfill shall minimize travel on residential streets that are home to sensitive receptors.

To mitigate the Project's groundborne vibration impacts, the following mitigation measures are required:

J-8 Distances greater than those utilized to model the Project's potential vibration impacts shall be maintained to avoid or lessen potential construction-related vibration impacts. Earthmoving

equipment, in particular, shall be operated as far as possible from vibration-sensitive receptors. The distances are as follows:

- 2438 Haverhill Drive residence: 5 feet
- 2421 Sundown Drive residence: 20 feet
- 3829 Division Street residence: 20 feet
- 3957 Brilliant Drive residence: 15 feet

J-9 Less vibration-intensive construction equipment (e.g., rubber-tired bulldozers, rather than large bulldozers with steel tracks) shall be used within 25 feet of neighboring residential buildings.

J-10 Heavily-laden vehicles shall be routed away from vibration-sensitive locations to minimize travel on local residential streets. Construction haul trucks shall avoid driving over potholes and dips when arriving at or leaving the Project Site.

J-11 Construction activities that produce large amounts of groundborne vibration, specifically demolition, excavation, earthmoving, and ground impacting activities, shall be sequenced in such a way so that the vibration sources do not operate simultaneously.

J-12 If a vibration complaint is filed during project construction, monitoring shall be conducted in the vicinity of the area in question. If monitoring exceeds FTA standards for frequent, occasional, or infrequent activities, the contractor shall modify the construction plan to reduce vibration exposure using the methods identified in this mitigation plan.

Project Design Features

J-13 Power construction equipment (including combustion engines), fixed or mobile, shall be equipped with state-of-the-art noise shielding and muffling devices (consistent with manufacturers' standards). All equipment shall be properly maintained to assure that no additional noise, due to worn or improperly maintained parts would be generated.

J-14 Project construction shall not include the use of driven piles systems.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Construction Noise

As shown in Table 4.J-10, with implementation of Regulatory Compliance Measure J-1 and Mitigation Measures J-2 through J-7, construction-related noise level increases would still exceed the 5.0 dBA thresholds prescribed by the *L.A. CEQA Thresholds Guide*. As a result, Project construction noise impacts would be significant and unavoidable.

Table 4.J-10
Estimated Project Construction Noise Levels – With Mitigation

Sensitive Receptor	Distance from Site (feet)	Maximum Construction Noise Level (dBA)	Existing Ambient (dBA, L_{eq})	New Ambient (dBA, L_{eq})	Increase
2438 Haverhill Drive Residence	5	62.5	42.9	62.5	19.6
2421 Sundown Drive Residence	20	62.5	42.1	62.5	20.4
3829 Division Street Residence	20	61.0	47.0	61.2	14.2
3957 Brilliant Drive Residence	15	61.0	51.5	61.5	10.0
Source: DKA Planning, 2015.					

Groundborne Vibration

As shown in Table 4.J-11, with implementation of Mitigation Measures J-8 through J-12, construction-related groundborne vibration levels would not exceed relevant FTA thresholds for building damage.

Table 4.J-11
Building Damage Vibration Levels At Off-Site Receptors From Project Construction – With Mitigation

Sensitive Uses Offsite	Distance to Project Site (ft.)	Estimated PPV (in/sec)	Significance Threshold (in/sec)	*Significant?*
2438 Haverhill Drive Residence	5	0.034	0.2	No
2421 Sundown Drive Residence	20	0.004	0.2	No
3829 Division Street Residence	20	0.004	0.2	No
3957 Brilliant Drive Residence	15	0.006	0.2	No
Source: DKA Planning 2015.				

As shown in Table 4.J-12, with implementation of Mitigation Measures J-8 through J-12, construction-related groundborne vibration levels would exceed the relevant FTA threshold for human annoyance at 2438 Haverhill Drive, but would be reduced to below the FTA threshold at the other three sensitive receptors. Therefore, the Project's temporary impacts with respect to construction vibration would be significant and unavoidable. Even so, it is important to consider that vibrations occurring at a distance of just 10 feet from 2438 Haverhill Drive, rather than the 5-foot distance used in this analysis, would not exceed 72 VdB, the FTA's vibration threshold for construction activities. In this way, vibration levels in excess of this criteria could only be generated within a 5-foot contour band at the edge of the Project Site nearest to 2438 Haverhill Drive. Because of this limitation, the required grading/paving activities that utilize equipment capable of producing the levels of vibration studied in the analysis will only infrequently operate within that 5-foot contour band before moving on to operate in other more distant areas of the Project Site, and 2438 Haverhill Drive would not experience vibrations approaching levels of significance for the vast majority of Project buildout.

Table 4.J-12
Human Annoyance Vibration Levels At Off-Site Receptors
From Project Construction – With Mitigation

Sensitive Uses Offsite	Distance to Project Site (ft.)	Estimated VdB	Significance Threshold (VdB)	*Significant?*
2438 Haverhill Drive Residence	5	79	72	Yes
2421 Sundown Drive Residence	20	61	72	No
3829 Division Street Residence	20	61	72	No
3957 Brilliant Drive Residence	15	65	72	No
Source: DKA Planning 2015.				

Operation

Impacts related to operational noise would be less than significant.

Cumulative Impacts

Impacts related to cumulative construction noise and vibration would be less than significant. Impacts related to cumulative off-site noise from haul trucks would be less than significant.

Impacts related to cumulative operational noise would be less than significant.

4. ENVIRONMENTAL IMPACT ANALYSIS

K. TRANSPORTATION/TRAFFIC

INTRODUCTION

The information and analysis in this section is based primarily on the following reports (refer to Appendix H):

- *Technical Memorandum for the Haverhill Residential Subdivision Project, Associated Transportation Engineers, January 12, 2016.*
- *Construction Impact Analysis for the Haverhill Residential Subdivision Project, Associated Transportation Engineers, March 8, 2016.*

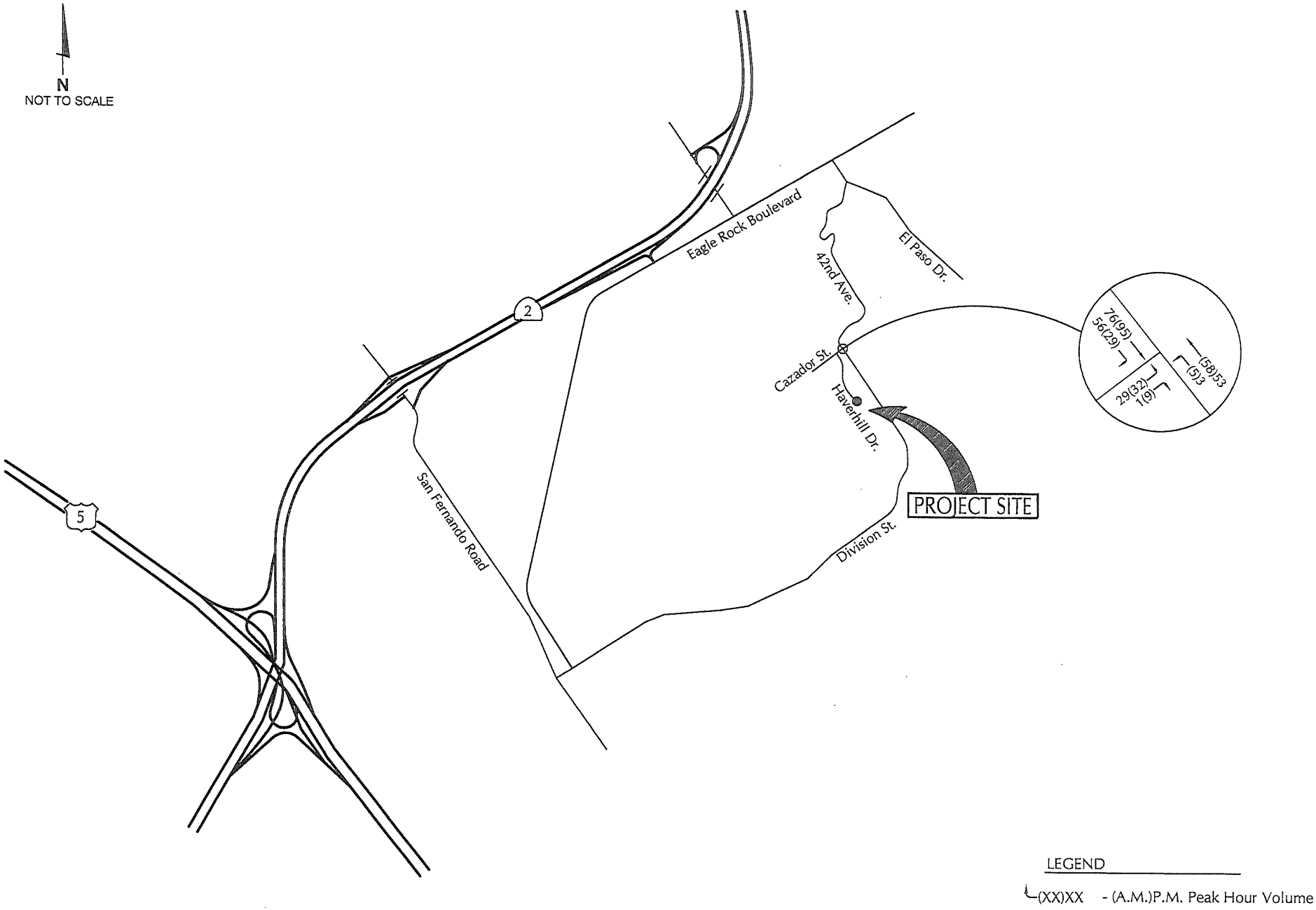
EXISTING CONDITIONS

Background

The Los Angeles Department of Transportation's (LADOT) traffic study requirements state that a technical memorandum is required if a project is forecast to generate 25 – 42 peak-hour trips that would be added to intersections in the vicinity of the project site that operate in the level of service (LOS) E – F range. LADOT indicated that a technical memorandum likely would not be required for the Project, since there are no intersections in the vicinity of the Project site that operate in the LOS E – F range. Nonetheless, ATE prepared the Technical Memorandum for the Project. Based on the trip generation and distribution, ATE determined that Project-generated traffic primarily would use Division Street to access the surrounding arterial street network. Potential impacts to the Division Street/Cazador Street intersection (an all-way stop-sign controlled intersection located just west of the Project site) were assessed in order to determine the magnitude of Project impacts to the surrounding street network. The analysis in this section is based on the Technical Memorandum, which determines the volume-to-capacity (V/C) ratio of the intersection and then assigns a LOS to describe the operating characteristics of the intersection (e.g., traffic flow conditions).

Existing Intersection Operations

Traffic counts were collected at the Division Street/Cazador Street intersection in December 2014. Figure 4.K-1 shows the existing AM and PM peak-hour traffic volumes at the intersection. Existing LOS were calculated for the Division Street/Cazador Street intersection using LADOT methodology. Table 4.K-1 presents the existing peak-hour operations for the intersection.



Source: Associated Transportation Engineers, 2016.

CAJA Environmental Services, LLC

Figure 4.K-1
Existing Traffic Volumes

Table 4.K-1
Existing LOS

Intersection	Control	AM Peak Hour		PM Peak Hour	
		V/C	LOS	V/C	LOS
Division Street/Cazador Street	All-Way Stop	0.166	A	0.159	A
Source: Associated Transportation Engineers, 2016.					

ENVIRONMENTAL IMPACTS

Thresholds of Significance

Appendix G of the CEQA Guidelines

In accordance with Appendix G to the *CEQA Guidelines*, a project would have a significant impact on traffic or transportation if it would cause any of the following conditions to occur:

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

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

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

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

(e) Result in inadequate emergency access; or

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

As discussed in Section 4.A (Impacts Found to be Less Than Significant), the Project would not result in any impacts related to issues “c,” “e,” and “f.” Thus, no further discussion of these issues is required.

City of Los Angeles CEQA Thresholds Guide

In accordance with the *L.A. CEQA Thresholds Guide*, a proposed project would have a significant impact on traffic or transportation if it would exceed the significance thresholds in Table 4.K-2:

Table 4.K-2
LADOT Intersection Significance Thresholds

Intersection Conditions with Project Traffic		Project-related Increase in V/C Ratio
LOS	**V/C**	
C	0.701 - 0.800	Equal to or greater than 0.04
D	0.801 - 0.900	Equal to or greater than 0.02
E, F	> 0.900	Equal to or greater than 0.01
Source: LADOT.		

Project Impacts

Project Trip Generation

Trip generation estimates were calculated for the Project based on the rates presented in the Institute of Transportation Engineers (ITE) Trip Generation Manual. The ITE rates for Single Family Detached Housing (ITE Land Use 210) were used for the analysis. Table 4.K-3 summarizes the trip generation estimates for the Project.

Table 4.K-3
Project Trip Generation

Land Use	Size	ADT		AM Peak		PM Peak	
		Rate	**Trips**	**Rate**	**Trips (a)**	**Rate**	**Trips (a)**
Single Family	32 du	9.52	305	0.75	24 (6/18)	1.00	32 (20/12)
(a) Inbound/Outbound trips shown in parentheses (In/Out) *ADT = Average Daily Trips.* *Source: Associated Transportation Engineers, 2016.*							

Project Trip Distribution

Trip distribution percentages were developed for the Project based on existing traffic patterns observed at the Division Street/Cazador Street intersection. Table 4.K-4 presents the trip distribution pattern developed for the Project. The assignment of Project-added traffic is shown on Figure 4.K-2.

Table 4.K-4
Project Trip Distribution

Origin/Destination	Direction	Percentage
Division Street	North South	90% 10%
	Total	**100%**
Source: Associated Transportation Engineers, 2016.		

Existing + Project Operations

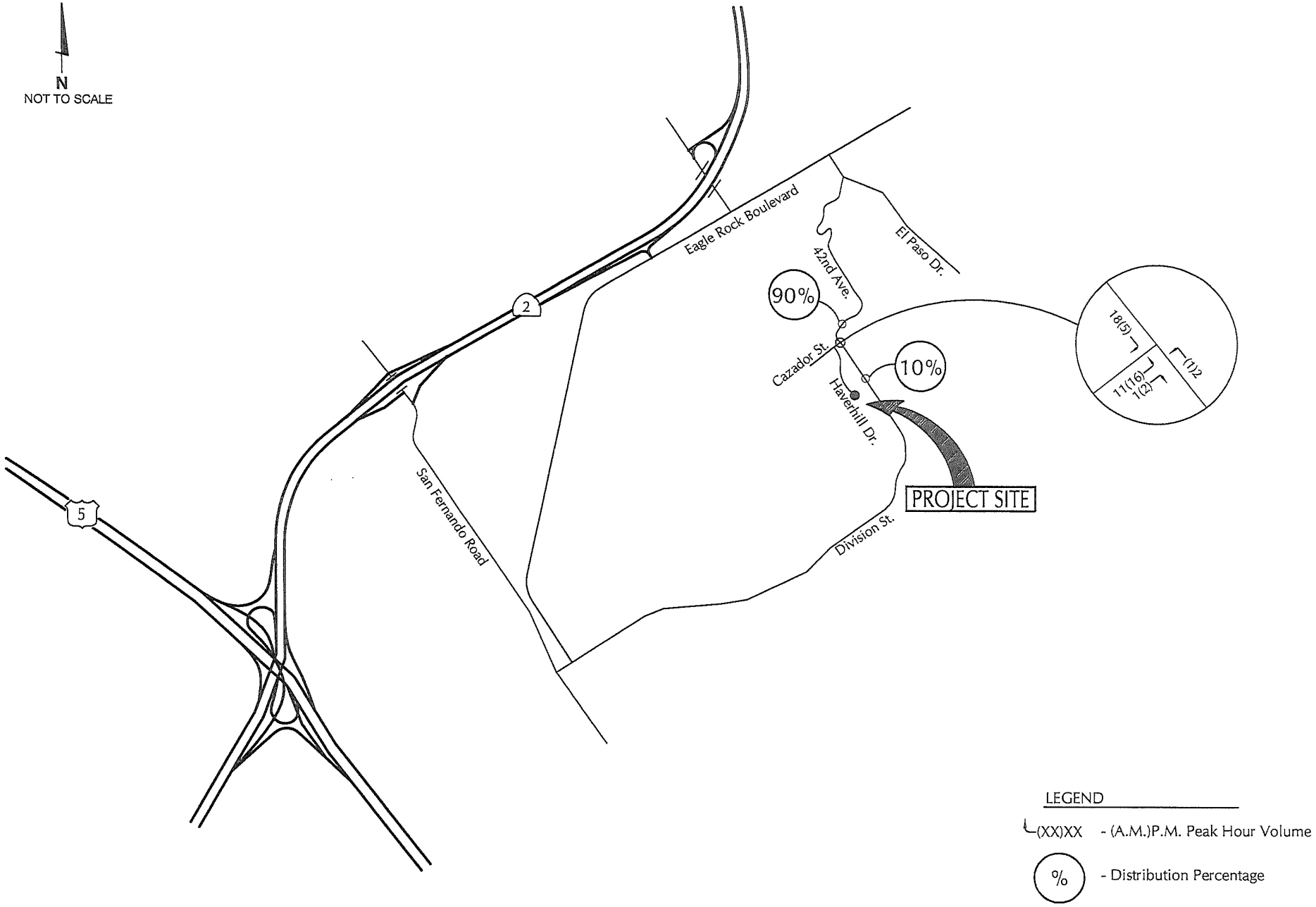
LOS was calculated for the Division Street/Cazador Street intersection assuming the Existing + Project traffic volumes shown on Figure 4.K-3. Tables 4.K-5 and 4.K-6 include a comparison of the Existing and Existing + Project peak-hour LOS for the Division Street/Cazador Street intersection and identify impacts based on the LADOT criteria.

Table 4.K-5
Existing + Project LOS – AM Peak Hour

Intersection	Existing		Existing + Project		Project Trips	Change in V/C	Impact?
	V/C	LOS	V/C	LOS			
Division Street/Cazador Street	0.166	A	0.183	A	24	0.017	No
Source: Associated Transportation Engineers, 2016.							

Table 4.K-6
Existing + Project LOS – PM Peak Hour

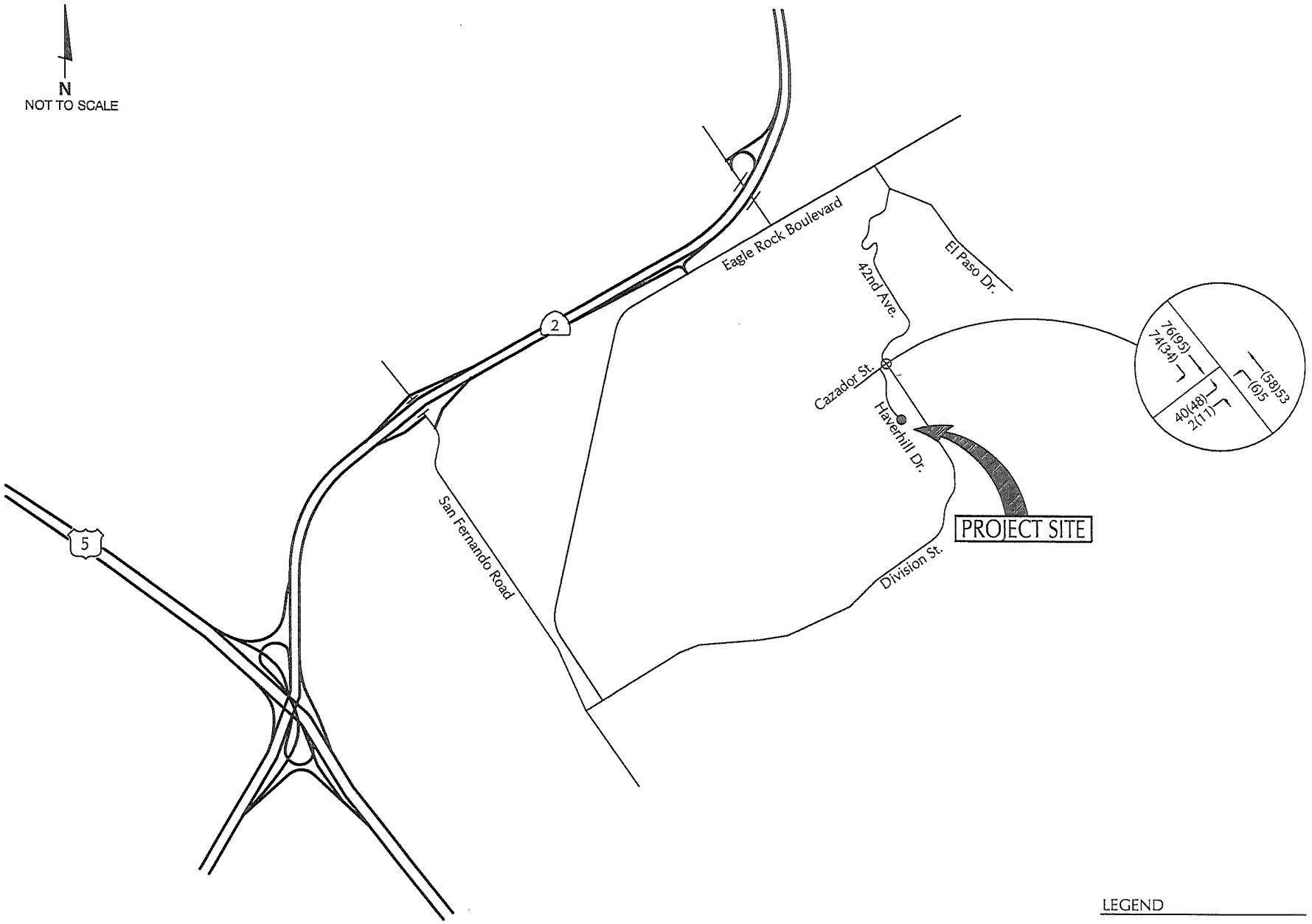
Intersection	Existing		Existing + Project		Project Trips	Change in V/C	Impact?
	V/C	LOS	V/C	LOS			
Division Street/Cazador Street	0.159	A	0.182	A	32	0.023	No
Source: Associated Transportation Engineers, 2016.							



Source: Associated Transportation Engineers, 2016.

CAJA Environmental Services, LLC

Figure 4.K-2
Project Trip Distribution and Assignment



Source: Associated Transportation Engineers, 2016.

CAJA Environmental Services, LLC

Figure 4.K-3
Existing Plus Project Traffic Volumes

The data presented on Tables 4.K-5 and 4.K-6 show that the Division Street/Cazador Street intersection is forecast to operate at LOS A during the peak-hour periods under Existing + Project traffic volumes. The Project's traffic additions would not generate significant impacts to the Division Street/Cazador Street intersection based on LADOT criteria.

Opening Year (2018) Intersection Operations

The Project Applicant has indicated that the Project would be fully constructed and open in 2018. Opening year traffic volumes were developed by applying a two percent annual growth factor to the Existing traffic volumes. Table 4.K-7 presents the Opening Year LOS for the Division Street/Cazador Street intersection.

Table 4.K-7
Opening Year (2018) LOS

Intersection	Control	AM Peak Hour		PM Peak Hour	
		V/C	LOS	V/C	LOS
Division Street/Cazador Street	All-Way Stop	0.179	A	0.171	A

Source: Associated Transportation Engineers, 2016.

The data presented on Table 4.K-7 show that the Division Street/Cazador Street intersection is forecast to continue to operate at LOS A during the AM and PM peak-hour periods with Opening Year traffic volumes.

Construction Traffic

The construction phase for the Project would last approximately 17 months. It is estimated that approximately 13,251 cubic yards of material would be exported from the site to a private landfill located in the City of Irwindale. Assuming haul trucks with a 10-cubic yard capacity, up to 66 daily haul trips (66 inbound + 66 outbound) would be required for exporting material over the 20-day excavation period.

The truck haul route would comply with the approved truck routes designated within the City. Haul trucks traveling to and from the Project site would be required to use designated truck routes. It is anticipated that outbound haul trucks would exit the Project site and proceed north on Haverhill Drive; turn right onto Cazador Street; turn left onto Division Street; turn left onto West Avenue 42; turn left onto Scandia Way; turn right onto West Avenue 40; turn left onto Eagle Rock Boulevard; turn onto northbound SR 2; transition to eastbound SR 135; transition to eastbound I-210; exit at Buena Vista Street and proceed south to Avenida Barbosa; and proceed southbound to the Irwindale landfill site.

It is anticipated that inbound haul trucks would depart the landfill site and proceed eastbound on Arrow Highway; transition to I-605 northbound; transition to I-10 westbound; transition to SR 134 westbound; transition to SR 2 southbound; exit at Verdugo Road and proceed southbound; transition to southbound

West Avenue 40; turn left onto Scandia Way; turn right onto West Avenue 42; turn right onto Division Street; turn right onto Cazador Street; and then turn left onto Haverhill Drive and proceed to the Project site.

Project construction would also require delivery of construction materials. It is estimated that a maximum of four delivery truck trips per weekday would occur (one inbound + one outbound for each truck trip). No deliveries are planned on Saturday. In terms of passenger car equivalency (PCE), the 66 haul and four delivery truck trips per day corresponds to 280 PCE trips per day (140 inbound + 140 outbound).[1]

The maximum number of construction workers each day during any phase of construction is estimated at 70 workers. Assuming some level of carpooling among the construction workers, and assuming an average vehicle ridership (AVR) of 1.135 persons per vehicle, there would be a maximum of 124 construction worker trips per day (62 inbound + 62 outbound).

During the weekday, nearly all construction-related trips would occur outside of the peak hours. In general, the hours of construction typically require workers to be on-site before the weekday morning commuter peak period and allow them to leave before the afternoon commuter peak period. Saturday construction activity would occur outside of the typical weekend midday peak period. Therefore, the large majority of construction worker trips would occur outside of the typical weekday commuter per periods and weekend midday peak period.

The City would require the Project Applicant to prepare and implement a Construction Traffic Management Plan (CTMP) for the Project (formally provided as Project Design Feature K-1, below) and would prohibit construction-related vehicles and construction workers from parking on surrounding public streets. As a component of the CTMP, parking for construction workers would be provided within the Project site or at a designated off-site location if off-site parking areas are used, in which case workers would travel to and from the Project site via shuttle bus. Thus, construction workers and vehicles would not reduce the availability of parking spaces on streets surrounding the Project site. Also, no bus stops would be relocated, and no bus lines would be rerouted due to Project construction.

Construction activities associated with the Project would be contained within the Project site and generally would not affect adjacent street access. Delays from additional construction traffic and/or construction activities at locations other than the streets adjacent to the Project site would not be substantial. Certain construction activities, such as roadway improvements, utility relocation or extension,

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[1] *Passenger Car Equivalent (PCE) is the impact that a mode of transport has on traffic variables compared to a single car. The Transportation Research Board (HCM2010 Highway Capacity Manual) identifies a passenger car equivalent factor of 2.0 for trucks (as trucks are larger and less maneuverable than passenger cars),*

and drainage facility reconstruction, could require temporary lane closures, which would in turn temporarily reduce existing street capacity, but such impacts would be short-term in duration.

With implementation of safety procedures and other controls set forth in the CTMP, construction would not create hazards for roadway travelers or bus riders. The impacts of construction activity on the overall transportation system would be temporary in nature and would cause minimal interruption to the regular operation of the facilities surrounding the Project site. Impacts on traffic associated with construction (e.g., an intermittent reduction in street and intersection operating capacity) are typically considered short-term adverse impacts, but not significant. Therefore, Project construction impacts on traffic and parking would be less than significant.

CMP

The traffic impact guidelines of the 2010 Congestion Management Program (CMP) for Los Angeles County require analysis of all CMP arterial monitoring locations where a project could add a total of 50 or more trips during either peak hour. Additionally, all freeway monitoring locations where a project could add 150 or more trips in either direction during the peak hours are to be analyzed. Considering that the largest Project peak-hour trip generation would be 32 trips during the PM peak hour, neither of these thresholds would be exceeded. Therefore, further CMP arterial or freeway analysis is not warranted, and no impacts would occur as a result of the Project.

Design Hazards

A significant impact may occur if a project were to include a new roadway design, introduce a new land use or project features into an area with specific transportation requirements and characteristics that have not been previously experienced in that area, or if project access or other features were designed in such a way as to create hazardous conditions. The Project does not include any sharp curves, dangerous intersections, or incompatible uses. The internal street would be designed in accordance with all applicable requirements. No off-site traffic improvements are proposed or warranted in the area surrounding the Project Site. Therefore, a less than significant impact resulting from hazardous design features would occur.

CUMULATIVE IMPACTS

Cumulative Intersection Operations

Cumulative traffic volumes were developed based on the list of approved and pending projects located within a two-mile radius of the Project Site, plus an adjustment of 2 percent per annum to account for ambient growth. The list of related projects is provided in Table 3-1 in Section 3, Environmental Setting, of this Draft EIR. The cumulative project trip generation calculations are provided in the appendix to the traffic technical memorandum, which is included as Appendix H to this Draft EIR. Figure 4.K-4 presents

the cumulative traffic volumes and Table 4.K-8 presents the cumulative LOS for the Division Street/Cazador Street intersection.

Table 4.K-8
Cumulative LOS

Intersection	Control	AM Peak Hour		PM Peak Hour	
		V/C	LOS	V/C	LOS
Division Street/Cazador Street	All-Way Stop	0.193	A	0.188	A

Source: Associated Transportation Engineers, 2016.

The data presented in Table 4.K-8 show that the Division Street/Cazador Street intersection is forecast to operate at LOS A during the AM and PM peak hour periods with cumulative traffic volumes.

Cumulative + Project Intersection Operations

Levels of service were calculated for the Division Street/Cazador Street intersection assuming the Cumulative + Project traffic volumes shown on Figure 4.K-5. Tables 4.K-9 and 4.K-10 compare the Cumulative and Cumulative + Project peak hour levels of service for the Division Street/Cazador Street intersection and identify impacts based on LADOT criteria.

Table 4.K-9
Future (2018) Conditions + Project LOS – AM Peak Hour

Intersection	Existing		Existing + Project		Project Trips	Change in V/C	Impact?
	V/C	LOS	V/C	LOS			
Division Street/Cazador Street	0.193	A	0.210	A	24	0.017	No

Source: Associated Transportation Engineers, 2016.

Table 4.K-10
Future (2018) Conditions + Project LOS – PM Peak Hour

Intersection	Existing		Existing + Project		Project Trips	Change in V/C	Impact?
	V/C	LOS	V/C	LOS			
Division Street/Cazador Street	0.188	A	0.211	A	32	0.023	No

Source: Associated Transportation Engineers, 2016.

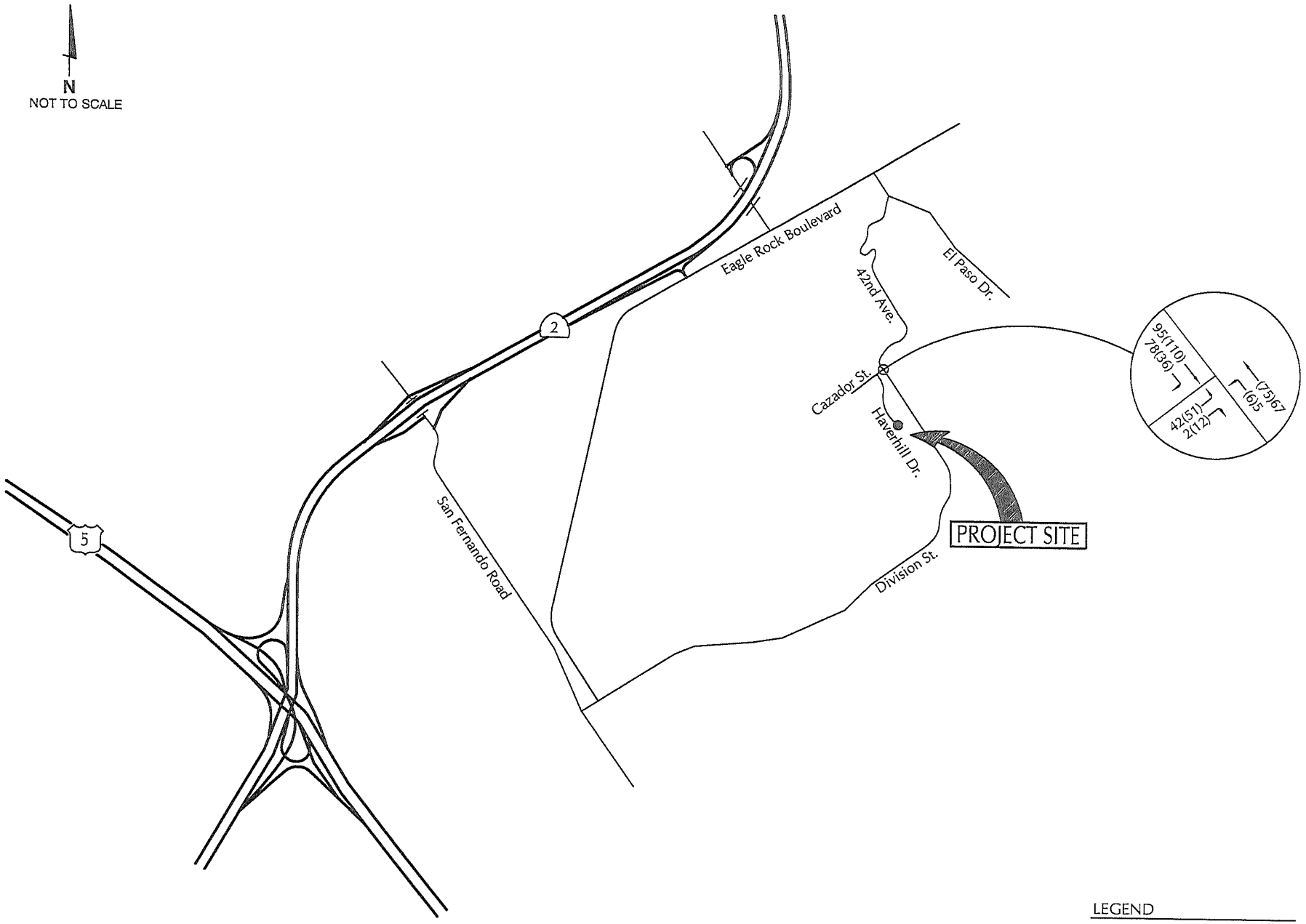
The data presented in Tables 4.K-9 and 4.K-10 show that the Division Street/Cazador Street intersection is forecast to operate at LOS A during the peak hour periods under Cumulative + Project traffic volumes. The Project's traffic additions would not generate significant cumulative impacts to the Division Street/Cazador Street intersection based on LADOT impact criteria.



Source: Associated Transportation Engineers, 2016.

CAJA Environmental Services, LLC

Figure 4.K-4
Cumulative Traffic Volumes



Source: Associated Transportation Engineers, 2016.

CAJA Environmental Services, LLC

Figure 4.K-5
Cumulative Plus Project Traffic Volumes

MITIGATION MEASURES/REGULATORY COMPLIANCE MEASURES/PROJECT DESIGN FEATURES

Mitigation Measures

None required.

Regulatory Compliance Measures

None applicable.

Project Design Feature

K-1 A detailed Construction Traffic Management Plan, including detour plans, haul routes, and staging plans shall be prepared and submitted to the City for review and approval. The Construction Traffic Management Plan shall formalize how construction would be carried out and identify specific actions that shall be required to reduce effects on the surrounding community. The Construction Traffic Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project site, and shall include the following elements as appropriate:

- Prohibition of construction worker parking on adjacent residential streets;
- Provisions to prohibit construction equipment or material deliveries within the public right-of-way;
- Provisions for temporary traffic control during all construction activities adjacent to public right-of-way to improve traffic flow on public roadways (e.g., flag men);
- Scheduling of construction activities to reduce the effect on traffic flow on surrounding arterial streets;
- Rerouting construction trucks to reduce travel on congested streets to the extent feasible;
- Construction-related vehicles shall not park on surrounding public streets;
- Provisions of safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers;
- Provisions to accommodate the equipment;

- Scheduling of construction-related deliveries to reduce travel during commuter peak hours as identified in this study; and

- Obtaining the required permits for truck haul routes from the City prior to issuance of any permit for the Project.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts related to transportation/traffic would be less than significant.

Cumulative impacts would also be less than significant.

5. GENERAL IMPACT CATEGORIES

SUMMARY OF SIGNIFICANT UNAVOIDABLE IMPACTS

Section 15126.2(b) of the State CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided. Specifically, Section 15126.2(b) states:

> *Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described.*

Based on the analysis included in Section 4 (Environmental Impact Analysis) of this Draft EIR, the Project would result in a significant unavoidable environmental impact with respect to construction noise/vibration and aesthetics.

Construction Noise and Vibration

With implementation of Regulatory Compliance Measure J-1 and Mitigation Measures J-2 through J-7, construction-related noise level increases would still exceed the 5.0 dBA thresholds prescribed by the LAMC and the *L.A. CEQA Thresholds Guide*. As a result, Project construction noise impacts would be significant and unavoidable.

With implementation of Mitigation Measures J-8 through J-12, construction-related groundborne vibration levels would exceed the relevant FTA threshold for human annoyance at 2438 Haverhill Drive, but would be reduced to below the FTA threshold at the other three sensitive receptors. Therefore, the Project's temporary impacts with respect to construction vibration would be significant and unavoidable.

Aesthetics

The Project's impact with respect to visual character and views are conservatively considered to be significant and unavoidable until the replacement trees have grown to sufficient maturity.

SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(c) of the State CEQA Guidelines requires a discussion of the use of nonrenewable resources and states that "[i]rretrievable commitments of resources should be evaluated to assure that such current consumption is justified." The types and level of development associated with the Project would consume limited, slowly renewable and non-renewable resources. This consumption would occur during construction of the Project and would continue throughout its operational lifetime. The development of the Project would require a commitment of resources that would include: (1) building materials, (2) fuel and operational materials/resources, and (3) the transportation of goods and people to and from the Project Site.

Construction of the Project would require consumption of resources that cannot be replenished or which may renew slowly as to be considered non-renewable. These resources would include certain types of lumber and other forest products, aggregate materials used in concrete and asphalt (e.g., sand, gravel and stone), metals (e.g., steel, copper and lead), petrochemical construction materials (e.g., plastics) and water. Fossil fuels, such as gasoline and oil, would also be consumed in the use of construction vehicles and equipment. The commitment of resources required for the type and level of proposed development would limit the availability of these resources for future generations for other uses during the operation of the Project. However, this resource consumption would be consistent with growth and anticipated change in the Los Angeles region.

In addition, the Project would be developed in a densely populated urban area and would provide greater density in close proximity to existing retail amenities and jobs, thereby reducing vehicle miles traveled (VMT). This would also potentially reduce, rather than increase, the need for additional infrastructure and commitment of resources.

GROWTH INDUCING IMPACTS OF THE PROJECT

Section 15126.2(d) of the State CEQA Guidelines requires a discussion of the ways in which a proposed project could be growth-inducing. This would include ways in which the project would foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Specifically, section 15126.2(d) of the State CEQA Guidelines states the following:

> *Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may further tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.*

Growth-Inducing Potential

In general terms, a project may foster or encourage population growth in a geographic area if it meets any of the criteria identified below:

- Economic expansion or growth (e.g., changes in revenue base, employment expansion, etc.);
- Removal of an impediment to growth (e.g., establishment of an essential public service or the provision of new access to an area);

- Establishment of a precedent-setting action (e.g., an innovation, a change in zoning, or general plan amendment approval); or

- Development of or encroachment on an isolated or adjacent area of open space (being distinct from an "infill" type of project).

Although the Project would provide new residential uses, it would do so in accordance with an approved tract for the Project Site, and would only necessitate the extension of roads and utility infrastructure to serve the Project. The Project would be developed in a densely populated urban area and would provide greater density around existing retail amenities and jobs. The Project's location would reduce VMT and would potentially reduce, rather than increase, the need for additional infrastructure. Street access and utilities are otherwise fully built-out in the area.

The Project responds to the unmet housing demand in both the Northeast Los Angeles Community Plan Area and the City of Los Angeles as a whole. The Project would help achieve a portion of the household growth forecast for the City of Los Angeles, while, due to its infill location, also being consistent with regional policies to reduce urban sprawl, efficiently utilize existing infrastructure, reduce regional congestion, and improve air quality through the reduction of VMT. Thus, while the Project does propose additional housing units, it would not substantially induce housing growth beyond forecasted levels. Instead, it would serve to meet a portion of housing demand currently forecasted for the City of Los Angeles.

6. ALTERNATIVES TO THE PROJECT

A. INTRODUCTION

The *CEQA Guidelines* require that an EIR include the identification and evaluation of a reasonable range of alternatives that are designed to reduce the significant environmental impacts of the project while still meeting a project's general objectives. The *CEQA Guidelines* also set forth the intent and extent of alternatives analysis to be provided in an EIR. Those considerations are discussed below.

This section compares the various Alternatives to the Project. As discussed in Section 2, Project Description, the Project includes development of 32 single-family homes on 32 subdivided, single-family lots, consistent with approved Tract No. 8943.

Alternatives to the Project

CEQA Guidelines Section 15126.6(a) states the following:

> *An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparable merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the 'rule of reason'.*

Purpose

CEQA Guidelines Section 15126.6(b) states the following:

> *Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment, the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of project objectives, or would be more costly.*

Selection of a Reasonable Range of Alternatives

CEQA Guidelines Section 15126.6(c) states the following:

> *The range of potential alternatives to the project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the*

> *alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.*

Factors that may be taken into account when addressing feasibility and infeasibility are site suitability, economic viability, availability of infrastructure, and technological feasibility.

Alternatives Rejected as Being Infeasible

As described above, Section 15126.6(c) of the CEQA Guidelines requires EIRs to identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process, and briefly explain the reasons underlying the lead agency's determination. One alternative that was considered but was ultimately rejected was a commercial project. This alternative was rejected because such an alternative would not be consistent with the existing zoning or land use designation of the Project Site, nor would it be consistent with the approved tract for the Project Site. Another alternative that was considered was constructing the Project on an alternative site. However, such an alternative would be infeasible because the Project Applicant does not own or control another site of comparable size within the City of Los Angeles. Further, constructing the Project on an alternative site would not result in development consistent with the approved tract for the Project Site. Accordingly, an off-site alternative is not considered in detail in this EIR.

Assumptions and Methodology

The anticipated means for implementation of the alternatives can influence the assessment and/or probability of impacts for those alternatives. For example, a project may have the potential to generate impacts, but considerations in project design may also afford the opportunity to avoid or reduce such impacts. The alternatives analysis is presented as a comparative analysis to the Proposed Project, and assumes that all applicable mitigation measures proposed for the Project would apply to each alternative. Impacts associated with the alternatives are compared to Project-related impacts and are classified as greater, less, or essentially similar to (or comparable to) the level of impacts associated with the Proposed Project.

Level of Detail

The *CEQA Guidelines* do not require the same level of detail in the Alternative analysis as in the analysis of the Proposed Project. *CEQA Guidelines* Section 15126.6(d) reads as follows:

> *The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major*

characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.

Project Objectives

The objectives for the Abode at Glassell Park Project are:

1. Design and develop a project that is functionally compatible with the site conditions, including full utilization of the Project Site, adjacent land uses, and the environment.

2. Provide single-family residential land uses that are consistent with the approved tract, current R-1 zoning, City of Los Angeles General Plan Framework, Northeast Los Angeles Community Plan, and Mt. Washington/Glassell Park Specific Plan.

3. Building homes of sufficient size to meet the changing needs of families, including having sufficient private open space.

4. Maximize housing stock at an infill location that is close to retail amenities and jobs.

5. Construct a development that incorporates high quality design and landscaping, including onsite replacement of walnut trees.

B. ALTERNATIVES ANALYSIS

The Draft EIR analyzes the following alternatives:

Alternative 1: No Project

Alternative 2: Reduced Density

Alternative 3: Alternative Configuration

These Alternatives were included for analysis because of their potential to reduce the significant and unavoidable impacts of the Project, which are as follows:

- **Aesthetics**
    - The Project's impact with respect to visual character and views are conservatively considered to be significant and unavoidable until the replacement trees have grown to sufficient maturity.

- **Noise**

  - Construction-related noise level increases would exceed the 5.0 dBA thresholds prescribed by LAMC and the *L.A. CEQA Thresholds Guide*, and as such, construction noise impacts would be significant and unavoidable.

  - Construction-related vibration increases would exceed the FTA threshold for human annoyance at 2438 Haverhill Drive, and as such, temporary construction-related vibration impacts would be significant and unavoidable.

1. No Project

Alternative 1: No Project

Section 15126.6(e) requires that an EIR include a discussion of a "no project" Alternative, which "is the circumstance under which the project does not proceed." The No Project Alternative ("Alternative 1") assumes that the Project would not be implemented and the Project Site would remain in its existing condition. This Alternative also assumes the development of the related projects.

Aesthetics

Under Alternative 1, the Project Site would remain in its undeveloped state. There would be no potential to create a change in the visual character of the Project Site, block viewsheds, or create new sources of glare and lighting or shade and shadow. Moreover, no walnut trees would be removed under this Alternative. Therefore, this Alternative would have no impact with respect to aesthetics, and would avoid the Project's significant impact that would occur until the replacement trees have grown to sufficient maturity. Because this Alternative would not result in any alteration to the Project site, its contribution to cumulative aesthetics impacts would be less than cumulatively considerable.

Agricultural and Forestry Resources

The Project Site is currently undeveloped. However, the Site does not contain any agricultural or forestry uses. Similar to the Project, Alternative 1 would have no impact to agricultural and forestry resources. As none of the related projects would be developed on land with agricultural and forestry resources, Alternative 1's contribution to cumulative agricultural and forestry resources impacts would also be less than cumulatively considerable.

Air Quality

The Project Site is currently undeveloped and no grading or construction would be required under this Alternative and no new vehicle trips would be generated. In addition, no air pollutant emissions related to grading or construction would be generated under this Alternative. As such, this Alternative would result in no impact with respect to air quality, and impacts would be less than the Project's less than significant air quality impacts. Because this Alternative would not result in any new development or any increase in emissions, its contribution to cumulative air quality impacts would be less than cumulatively considerable.

Biological Resources

The Project Site is currently undeveloped and while it does not contain any special-status species, the Project Site has the potential to contain nesting species. The Project Site also contains approximately 3.44 acres of California walnut woodland and 168 protected trees. As no development would occur under Alternative 1, there would be no potential to impact nesting species, the California walnut woodland, or any protected trees. As such, Alternative 1 would have no impact with respect to biological resources, which is less than the Project's less than significant impacts. Because this Alternative would not result in

any alteration to the Project site, its contribution to cumulative biological resources impacts would be less than cumulatively considerable.

Cultural Resources

As the Project Site is undeveloped, there are no historic resources at the Project Site. As such, there would be no impact to historic resources for this Alternative. Under Alternative 1, no grading or construction would occur, and the Project Site would not be developed with new residential land uses. Therefore, Alternative 1 would not have the potential to encounter unknown buried archaeological and paleontological resources or human remains. Alternative 1 would have no impact to cultural resources, which is less than the Project's less than significant impact (with implementation of mitigation and regulatory compliance measures). Because this Alternative would not result in any alteration to the Project site, its contribution to cumulative cultural resources impacts would be less than cumulatively considerable.

Geology and Soils

Under Alternative 1, no grading or construction would occur, and the Project Site would not be developed with new residential land uses. Thus, no new development would be subject to the geologic issues (such as seismically induced landslides) associated with the Project Site. Alternative 1 would have no impact with respect to geology and soils, which is less than the Project's less than significant impact (with implementation of regulatory compliance measures and project design features). Because this Alternative would not result in any alteration to the Project site or new development, its contribution to cumulative geology and soils impacts would be less than cumulatively considerable.

Greenhouse Gas Emissions

The Project Site is currently undeveloped, no grading or construction would be required under this Alternative, and no new vehicle trips would be generated. This Alternative would not result in increased GHG emissions, as it would not increase electricity and natural gas consumption, vehicle miles traveled (VMT), water use, and solid waste generation and subsequent disposal into landfills. Alternative 1 would result in no impact with respect to GHG emissions, which is less than the Project's less than significant impact. Because this Alternative would not result in any new development or any increase in emissions, its contribution to cumulative greenhouse gas emissions impacts would be less than cumulatively considerable.

Hazards and Hazardous Materials

Under Alternative 1, no construction would occur, and the Project Site would not be developed with new residential land uses. Therefore, Alternative 1 would have a lesser impact with respect to the release of hazards and hazardous materials, emitting hazardous waste within ¼ mile of a school and interference with an emergency plan as compared to the Project, and impacts would also be less than significant. With respect to wildland fires, like the Project, Alternative 1 would be required to comply with the Fire Code, including requirements for vegetation clearance. However, as Alternative 1 would not develop the Site

with structures containing sprinkler systems and ignition-resistant materials, and would not include landscaping with fire-retardant plants, its impacts would be greater than the Project. Because this Alternative would not result in any construction or new development, its contribution to cumulative hazards impacts would be less than cumulatively considerable.

Hydrology and Water Quality

Under Alternative 1, no construction would occur, and the Project Site would remain in its undeveloped state. There would be no change in impacts to water quality, drainage, and runoff as compared to existing conditions. In addition, there would be no housing developed within a 100-year flood plain. Overall, the impacts of this Alternative would be less than the Project's less than significant impacts with respect to hydrology. The quality of water drainage from the Project Site would not improve, as would occur under the Project with implementation of water quality best management practices (BMPs). Therefore, impacts of this Alternative would be greater than the Project's less than significant impacts with respect to water quality but still less than significant. Because this Alternative would not result in any alteration to the Project site, its contribution to cumulative hydrology and water quality impacts would be less than cumulatively considerable.

Land Use and Planning

The Project Site is currently undeveloped. While Alternative 1 would not conflict with the Site's land use or zoning designations, Alternative 1 would also not develop the Site consistent with these designations. Regarding community division, this Alternative would not involve any development that would have the potential to physically divide an established community. Overall, Alternative 1 would result in a less than significant impact with respect to land use and planning, but impacts would be greater than the Project's impacts with regard to compliance with applicable land use plans as the Site would not be developed according to the existing land use and zoning designations or in furtherance of local and regional policies, Because this Alternative would not result in any alteration to the Project site or introduction of new land uses, its contribution to cumulative land use and planning impacts would be less than cumulatively considerable.

Mineral Resources

The Project Site is not located within a City-designated oil field or oil drilling area, or a City-designated Mineral Resource Zone (MRZ-2). Similar to the Project, Alternative 1 would have no impact to mineral resources. Because this Alternative would not result in any alteration to the Project site, its contribution to cumulative mineral resources impacts would be less than cumulatively considerable.

Noise

Under Alternative 1, no construction would occur, and the Project Site would not be developed with new land uses. Thus, no new sources of noise or vibration would be created. Also, no noise-sensitive land uses would be developed at the Project Site. Alternative 1 would therefore have no impact with respect to noise or vibration, while the Project would cause an increase in noise and vibration impacts (at a

significant level for construction noise and vibration and at a less than significant level for operational noise). Therefore, Alternative 1 would avoid the Project's significant and unavoidable construction noise and vibration impacts. Because this Alternative would not result in any construction or new development that would generate noise, its contribution to cumulative noise impacts would be less than cumulatively considerable.

Population, Housing, and Employment

Under Alternative 1, no construction would occur, and the Project Site would not be developed with new residential land uses. The Project Site is currently undeveloped and therefore does not contain any residents or employees. Under Alternative 1, no residential population or housing would be added to the Project Site, and as such, Alternative 1 would have no impact to population and housing. Therefore, the Project would generate more population and housing growth than this Alternative. Because this Alternative would not result in any new development that would affect population, housing, and employment, its impacts would be less than cumulatively considerable.

Public Services

Under Alternative 1, no construction would occur, and the Project Site would not be developed with new residential land uses. The Project Site is currently undeveloped, and no additional demand for public services (namely, fire protection, police protection, schools, park, and libraries) would occur. Alternative 1 would therefore have no impact to public services, which is less than the Project's less than significant impacts. Because this Alternative would not result in any new development that would increase demand on public services, its contribution to cumulative public services impacts would be less than cumulatively considerable.

Traffic and Transportation

The Project Site is currently undeveloped, and under Alternative 1, no construction would occur, and the Project Site would not be developed with new residential land uses. No traffic would be generated and Alternative 1 would therefore have no new intersection impacts and no neighborhood street segment impacts. Overall, this Alternative would result in no impact with respect to traffic, which would be less than the Project's less than significant impacts. Because this Alternative would not result in any new construction or development that would generate new vehicle trips, its contribution to cumulative traffic impacts would be less than cumulatively considerable.

Utilities

Under Alternative 1, no construction would occur, and the Project Site would not be developed with new residential land uses. The Project Site would remain undeveloped, and no additional demand for utilities would occur. The Project would generate and/or demand more wastewater, water, solid waste, electricity, and natural gas when compared to the existing undeveloped condition of the Project Site. Therefore, this Alternative would result in no impact with respect to utilities, which is less than the Project's less than significant impacts. Because this Alternative would not result in any new development that would

increase demand on utilities, its contribution to cumulative utilities impacts would be less than cumulatively considerable.

Relationship of Alternative 1 to the Project Objectives

Alternative 1 maintains the existing undeveloped condition at the Project Site. However, Alternative 1 would not satisfy any of the Project objectives, such as developing additional housing in accordance with approved Tract No. 8943. Specifically, Alternative 1 would not:

- Design and develop a project that is functionally compatible with the site conditions, including full utilization of the Project Site, adjacent land uses, and the environment.
- Provide single-family residential land uses that are consistent with the approved tract, current R-1 zoning, City of Los Angeles General Plan Framework, Northeast Los Angeles Community Plan, and Mt. Washington/Glassell Park Specific Plan.
- Building homes of sufficient size to meet the changing needs of families, including having sufficient private open space.
- Maximize housing stock at an infill location that is close to retail amenities and jobs.
- Construct a development that incorporates high quality design and landscaping, including onsite replacement of walnut trees.

2. Reduced Density

Alternative 2: Reduced Density

Alternative 2 is the Reduced Density Alternative, which would consist of a 25% reduction in the number of single-family homes as compared to the Proposed Project. Specifically, this Alternative would consist of the development of 24 single-family homes. The site plan for Alternative 2 is provided in Figure 6-1, Alternative 2 Site Plan. This Alternative was selected for analysis based on its potential to reduce the Proposed Project's significant construction noise and vibration impacts based on the construction of a smaller project.

Aesthetics

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a reduction of 25% when compared to the Project. Although the number of homes would be reduced under this Alternative, the character of the development would remain the same and the entirety of the Project Site would still be graded and the same number of walnut trees would be removed. Same as the Project, the replacement trees planted would not be as mature as the ones removed, and therefore under Alternative 2, a significant impact would occur until the replacement trees have grown to sufficient maturity, just like the Project. Like the Project, Alternative 2 would be consistent with the visual character of the surrounding single-family homes, and each home under Alternative 2 would be designed and constructed in accordance with the requirements of the Mt. Washington-Glassell Park Specific Plan. Overall, Alternative 2's impacts related to aesthetics would be comparable to those of the Project and, also significant and unavoidable. For the same reasons why the Project's cumulative aesthetics impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative aesthetics impacts would also be less than cumulatively considerable.

Agricultural and Forestry Resources

The Project Site is currently undeveloped and does not contain any agricultural or forestry uses. Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction in the number of homes when compared to the Project. Similar to the Project, Alternative 2 would have no impact to agricultural and forestry resources. For the same reasons why the Project's cumulative agricultural and forestry resources impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative agricultural and forestry resources impacts would also be less than cumulatively considerable.



CAJA Environmental Services, LLC

Figure 6-1
Alternative 2 Site Plan

Air Quality

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction in the number of homes when compared to the Project. While the construction period would likely be reduced in order to construct 24 homes compared to 32 homes, the entirety of the Project Site would still be graded and the same amount and type of construction equipment would be used on a daily basis, so daily emissions would be the same. Alternative 2 would implement the same mitigation and regulatory compliance measures as the Project, and as such, construction of Alternative 2 would result in less than significant construction impacts similar to those of the Project.

Regarding operational emissions, as discussed under "Transportation-Traffic" below, Alternative 2 would generate six fewer AM peak hour trips, eight fewer PM peak hour trips, and 77 fewer daily trips when compared to the Project. Based on the reduction in trips and the reduction in number of homes, Alternative 2's air quality impacts during operation would be reduced when compared to the Project and, also less than significant.

For reasons similar to why the Project's cumulative air quality impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative air quality impacts would also be less than cumulatively considerable.

Biological Resources

The Project Site is currently undeveloped and while it does not contain any special-status species, the Project Site has the potential to contain nesting species. The Project Site also contains approximately 3.44 acres of California walnut woodland and 168 protected trees. Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction in the number of homes when compared to the Project. However, while the number of homes would be reduced, the same total lot area would be developed, and the individual lots would just be larger. As such, Alternative 2 would have the same potential as the Project to impact nesting species, California walnut woodland, and protected trees, and would implement the same mitigation measures as the Project. With implementation of these mitigation measures, Alternative 2's impacts would be less than significant, and the same as the Project. For the same reasons why the Project's cumulative biological resources impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative biological resources impacts would also be less than cumulatively considerable.

Cultural Resources

As the Project Site is undeveloped, there are no historic resources at the Project Site. As such, there would be no impact to historic resources for this Alternative. Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction in the number of homes when compared to the Project. Nevertheless, Alternative 2 would have the same potential as the Project to encounter unknown buried archaeological and paleontological resources or human remains as the entire site would be graded. Alternative 2 would implement the same mitigation and regulatory compliance measures as the Project, and as such, Alternative 2 would have a less than significant impact with respect

to cultural resources, same as the Project. For the same reasons why the Project's cumulative cultural resources impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative cultural resources impacts would also be less than cumulatively considerable.

Geology and Soils

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction in the number of homes when compared to the Project. However, this Alternative would be located on the same site as the Project Site, which presents the same potential geologic and geotechnical conditions. Moreover, as like the Project, Alternative 2 would grade and develop the entire Project Site. As such, Alternative 2 would be subject to the same geologic issues (such as seismically induced landslides) associated with the Project Site and would implement the same regulatory compliance measures and project design features as the Project. However, because Alternative 2 would develop fewer homes than the Project, fewer residents would be subject to seismic hazards at the Project Site, and as such, would result in reduced impacts when compared to the Project. Alternative 2 would therefore have a less than significant impact with respect to geology and soils, and impacts would be reduced when compared to the Project. For the same reasons why the Project's cumulative geology and soils impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative geology and soils impacts would also be less than cumulatively considerable.

Greenhouse Gas Emissions

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction in the number of homes when compared to the Project. As the entirety of the Project Site would still be graded under Alternative 2, and the same daily construction activities would occur, Alternative 2 is expected to generate GHG emissions during construction similar to the Project. Regarding GHG emissions from Project operation, as discussed under "Transportation-Traffic" and "Utilities" below, Alternative 2 would result in a reduction of daily vehicle trips and would reduce electricity and natural gas consumption, water use, and solid waste generation when compared to the Project. As such, Alternative 2 would result in a reduction in GHG emissions when compared to the Project, and impacts would also be less than significant. For reasons similar to why the Project's cumulative greenhouse gas emissions impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative greenhouse gas emissions impacts would also be less than cumulatively considerable.

Hazards and Hazardous Materials

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction when compared to the Project. Like the Project, Alternative 2 would not require routine transport, use, or disposal of hazardous materials, as Alternative 2 would also develop single-family homes. In addition, as the Project Site has never been developed, no hazardous materials associated with human activity exist at the Project Site that could be exposed during Alternative 2's construction period, and the Project Site is not within a methane hazard zone as delineated by the City. Thus, Alternative 2 would have a less than significant impact with respect to hazards and hazardous materials, same as the Project. For the same reasons why the Project's cumulative hazards impacts are less than cumulatively

considerable, Alternative 2's contribution to cumulative hazards impacts would also be less than cumulatively considerable.

Hydrology and Water Quality

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction when compared to the Project. While fewer homes would be developed, the same total lot area would be developed, and the individual lots would just be larger. In addition, like the Project, Alternative 2 would implement water quality BMPs. Therefore, the impacts of this Alternative would be comparable to the Project's less than significant impacts. For the same reasons why the Project's cumulative hydrology impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative hydrology impacts would also be less than cumulatively considerable.

Land Use and Planning

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction when compared to the Project. Development under Alternative 2 would be consistent with the existing zoning and land use designations for the Project Site, and in furtherance of local and regional plans and policies. However, as it would develop fewer residences on an infill site, it would not fulfill the applicable objectives of local and regional plans and policies to the same extent as the Project. Finally, similar to the Project, this Alternative would not physically divide an established community. Overall, this Alternative would result in a less than significant impact with respect to land use, although impacts would be greater than the Project's impacts with regard to fulfilling the objectives of local and regional plans and policies. For the same reasons why the Project's cumulative land use and planning impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative land use and planning impacts would also be less than cumulatively considerable.

Mineral Resources

The Project Site is not located within a City-designated oil field or oil drilling area, or a City-designated Mineral Resource Zone (MRZ-2). As such, similar to the Project, Alternative 2 would have no impact to mineral resources. For the same reasons why the Project's cumulative mineral resources impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative mineral resources impacts would also be less than cumulatively considerable.

Noise

Construction

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction in the number of homes when compared to the Project. While the construction period would likely be reduced in order to construct 24 homes as compared to 32 homes, the entirety of the Project Site would still be graded and the same daily construction activities would occur, including the use of on-site equipment such as scrapers, tractors, loaders, and smaller equipment such as saws, hammers, and

pneumatic tools. Therefore, Alternative 2 is expected to result in the same construction noise levels at nearby sensitive receptors as the Project. While Alternative 2 would implement the same mitigation and regulatory compliance measures, as well as project design features, the construction-related noise increases would still exceed the 5.0 dBA threshold and impacts would be significant and unavoidable, same as the Project.

Groundborne vibration during construction would be predominantly generated by grading activities, such as those necessitating the use of large bulldozers and other tractor-type equipment. As stated above, while the construction period would likely be reduced in order to construct 24 homes compared to 32 homes, the entirety of the Project Site would still be graded and the same daily construction activities would occur. Therefore, Alternative 2 is expected to result in the same levels of vibration during construction as the Project, and impacts would remain significant and unavoidable under the human annoyance standard with implementation of the same mitigation measures as provided for the Project.

Operation

Like the Project, Alternative 2 would generate noise from mechanical equipment, landscape maintenance, residential land uses, and auto-related activities. However, also like the Project, these direct sources of noise would occur seasonally, irregularly, or infrequently, and would not individually or collectively elevate ambient noise levels beyond thresholds prescribed by the LAMC. The majority of any long-term noise impact would come from vehicles traveling to and from the Project Site. As discussed under "Transportation-Traffic" below, Alternative 2 would reduce the number of AM peak, PM peak, and daily trips when compared to the Project, and would therefore reduce the amount of noise from vehicle trips when compared to the Project. Overall, Alternative 2's operational noise impacts would be less than significant, and slightly reduced when compared to the Project.

For the same reasons why the Project's cumulative noise impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative noise impacts would also be less than cumulatively considerable.

Population, Housing, and Employment

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction when compared to the Project. Based on the 2015 persons-per-household rate (2.74) for the City, Alternative 2 would generate approximately 66 residents, which is a reduction of 22 residents from the Project. Like the Project, Alternative 2 does not propose additional housing units (and associated population) beyond what is permitted under the existing base land use designation and zoning. Thus, Alternative 2's residential population would not represent a substantial or significant growth as compared to projected growth. However, as Alternative 2 would develop fewer single-family homes than the Project, Alternative 2's impacts would be less than the Project's impacts and, also less than significant. For the same reasons why the Project's cumulative population, housing, and employment impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative population, housing, and employment impacts would also be less than cumulatively considerable. Cumulative growth would be within the growth forecasts and like the Project, Alternative 2 would provide a negligible increase.

Public Services

Fire

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction when compared to the Project. As with the Project, general "good housekeeping" procedures employed by the construction contractor under Alternative 2, such as maintaining mechanical equipment and proper storage of flammable materials, would minimize fire hazards during construction. Also like the Project, construction activities under Alternative 2 would have the potential to affect emergency vehicle response times by adding construction traffic to the street network and by potentially necessitating partial lane closures during street improvements and utility installations. However, like the Project, Alternative 2 would implement a Construction Traffic Management Plan (Project Design Feature K-1), which would formalize how construction would be carried out to reduce the effects on the surrounding community. Overall, construction of Alternative 2 would not be expected to increase demand on emergency services to the extent that there would be a need for new or expanded fire facilities. Impacts would be similar to the Project's and also less than significant.

Same as the Project, Alternative 2 would be designed and constructed in accordance with the Los Angeles Fire Code and would be required to include specific measures based on the Project Site's location in a Very High Fire Hazard Severity Zone. In addition, Alternative 2 would be required to coordinate with LAFD to ensure that the Project incorporates all necessary fire prevention measures and that ingress/egress is designed and constructed in conformance to all City requirements. Overall, Alternative 2's impacts would be similar to the Project's impacts and also less than significant. For the same reasons why the Project's cumulative fire protection impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative fire protection impacts would also be less than cumulatively considerable.

Police

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction when compared to the Project. Same as the Project, fencing, and other security measures, as necessary, would be provided at the Project Site under Alterative 2 to ensure that valuable materials (e.g., building supplies, metals such as copper wiring, and construction equipment) are not easily stolen during construction. As with the Project, construction activities under Alternative 2 would have the potential to affect emergency vehicle response times by adding construction traffic to the street network and by potentially necessitating partial lane closures during street improvements and utility installations. However, like the Project, Alternative 2 would implement a Construction Traffic Management Plan (Project Design Feature K-1), which would formalize how construction would be carried out to reduce the effects on the surrounding community. Overall, like the Project, construction of Alternative 2 would not be expected to increase demand on **e**mergency services to the extent that there would be a need for new or expanded police facilities.

Like the Project, Alternative 2 would include standard security measures such as adequate security lighting, controlled residential access, and secure parking facilities (garages). These measures would be approved by LAPD prior to the issuance of building permits. Overall, while Alternative 2 would generate

slightly fewer residents when compared to the Project, it would create a similar demand for police protection services, and like the Project impacts would be less than significant. For the same reasons why the Project's cumulative police impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative police impacts would also be less than cumulatively considerable.

Schools

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction when compared to the Project. As shown in Table 6-1, Alternative 2 - Estimated Student Generation, based on LAUSD demographic analysis, Alternative 2 would generate a total of approximately seven students, including three elementary students, two middle school students, and two high school students. This is a reduction of one student when compared to the Project, and as with the Project the schools serving the Project Site would have adequate capacity to serve Alternative 2's student generation. Same as the Project, Alternative 2 would be subject to California Government Code Section 65995(h), which states that payment of school facilities fees would, by law, mitigate any impacts resulting from a development of a project. As such, Alternative 2 and impacts with respect to schools would be the same as the Project's impacts and, also less than significant. For the same reasons why the Project's cumulative schools impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative schools impacts would also be less than cumulatively considerable.

Table 6-1
Alternative 2 - Estimated Student Generation

Use Type	Amount of Development	School Type	Student Generation Factor [a]	Total Students Generated
Proposed Residential	24 du	Elementary School (K-5)	0.1266/du	3
		Middle School (6-8)	0.0692/du	2
		High School (9-12)	0.0659/du	2
			Alternative 2 Total	**7**

du = dwelling unit *Number of students has been rounded to the nearest whole number.*

[a] *Los Angeles Unified School District, Student Generation Rate Calculation, February 25, 2008.*

Parks and Recreation

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction when compared to the Project. Like the Project, Alternative 2 would pay applicable park and recreation fees and/or a dwelling unit tax that would be used to provide new or enhanced park and recreation facilities. Alternative 2 proposes 24 single-family residential homes, and as such, would be expected to result in a less than significant impact with respect to recreation and park facilities with the payment of applicable fees, same as the Project. For the same reasons why the Project's cumulative parks impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative parks impacts would also be less than cumulatively considerable.

Libraries

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction when compared to the Project. As discussed previously, Alternative 2 would introduce approximately 66 residents to the Project Site, which is a reduction of 22 residents when compared to the Project. In addition, like the Project, Alternative 2 does not propose additional housing units (and associated population) beyond what is permitted under the existing base land use designation and zoning for the Project Site. Therefore, Alternative 2 impacts with respect to libraries would be slightly reduced as compared to the Project and, also less than significant. For the same reasons why the Project's cumulative libraries impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative libraries impacts would also be less than cumulatively considerable.

Transportation-Traffic

As shown in Table 6-2, Alternative 2 is expected to generate 228 daily trips, 18 AM peak hour trips, and 24 PM peak hour trips. Alternative 2's trip generation would be six fewer AM peak hour trips, eight fewer PM peak hour trips, and 77 fewer daily trips when compared to the Project. As discussed in Section 4.K. of this Draft EIR, the intersection of Division Street and Cazador Street would continue to operate at LOS A during the AM and PM peak hour with the addition of Project traffic, and impacts were found to be less than significant. As Alternative 2 results in fewer AM peak, PM peak, and daily trips when compared to the Project, the intersection of Division Street and Cazador Street would continue to operate at LOS A with the addition of Alternative 2 traffic. Overall, Alternative 2's impacts would be less than significant and slightly reduced when compared to the Project.

Table 6-2
Alternative 2 - Trip Generation

Land Use	Size	ADT		AM Peak		PM Peak	
		Rate	Trips	Rate	Trips (a)	Rate	Trips (a)
Single Family	24 du	9.52	228	0.75	18 (5/13)	1.00	24 (15/9)
(a) Inbound/Outbound trips shown in parentheses (In/Out)							
Source: Associated Transportation Engineers, 2015.							

For reasons similar to why the Project's cumulative traffic impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative traffic impacts would also be less than cumulatively considerable.

Utilities and Service Systems

Wastewater

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction when compared to the Project. As shown in Table 6-3, Alternative 2 would result in an increase of 5,520 gpd of wastewater generated at the Project Site. This is a reduction of approximately 1,840 gpd as compared to the Project's wastewater generation of 7,360 gpd. Thus, Alternative 2 would generate less

wastewater than the Project and would, like the Project, result in less than significant impacts to wastewater treatment capacity. Given the excess capacity at Hyperion Treatment Plant (HTP), impacts would be less than significant. Like the Project, as part of the normal building permit process for Alternative 2, the lead agency would confirm and ensure that there is sufficient capacity in the local and trunk lines to accommodate Alternative 2's wastewater flows. As with the Project, if the public sewer has insufficient capacity under Alternative 2, then the Project Applicant would be required to build new sewer lines or upgrade existing lines to a point in the sewer system with sufficient capacity. Overall, the impacts of Alternative 2 would be less than significant and slightly less than the Project's less than significant impacts. For the same reasons why the Project's cumulative wastewater impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative wastewater impacts would also be less than cumulatively considerable.

Table 6-3
Alternative 2 - Wastewater Generation[1]

Residential Land Use	Size	Water Consumption Rate[2]	Total (gallons/day)
Single-Family	24 du	230 gpd/du	5,520

[1] *Source: City of Los Angeles Bureau of Sanitation, Sewer Generation Rates Table, March 20, 2002.*

Water

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction when compared to the Project. As shown in Table 6-4, Alternative 2 would result in an increase of 6,504 gpd of water consumed at the Project Site. This is a reduction of approximately 2,168 gpd as compared to the Project's water consumption of 8,672 gpd. Thus, Alternative 2 would consume less water than the Project. Like the Project, Alternative 2 is consistent with the City's General Plan and is therefore considered to be accounted for in the most recently adopted Urban Water Management Plan. Like the Project, as part of the normal building permit process for Alternative 2, the lead agency would confirm and ensure that there is sufficient capacity in the water supply infrastructure to accommodate Alternative 2's water needs. If a deficiency or service problem is discovered during the permitting process, the Project Applicant would be required to fund the required upgrades to adequately serve Alternative 2. Overall, the impacts of Alternative 2 would be less than significant and slightly less than the Project's less than significant impacts. For the same reasons why the Project's cumulative water impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative water impacts would also be less than cumulatively considerable.

Table 6-4
Alternative 2 - Water Consumption[1]

Residential Land Use	Size	Water Consumption Rate[2]	Total (gallons/day)
Single-Family	24 du	271 gpd/du	6,504

[1] *Source: City of Los Angeles Bureau of Sanitation, Sewer Generation Rates Table, March 20, 2002. Water consumption rates are assumed as 118 percent of the wastewater generation rates.*

Solid Waste

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction when compared to the Project. Alternative 2 is estimated to generate an increase of approximately 240 pounds per day (or 0.12 tons/day) of solid waste. This is a reduction of approximately 80 pounds per day as compared to the Project's solid waste generation of 320 pounds per day. As for the Project, the existing landfill capacity would be able to accommodate Alternative 2's solid waste generation, and impacts would be slightly less than the Project's impacts and, also less than significant. For the same reasons why the Project's cumulative solid waste impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative solid waste impacts would also be less than cumulatively considerable.

Energy Conservation

Electricity

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction when compared to the Project. As shown in Table 6-5, Alternative 2 is estimated to consume approximately 135,036 kw-h of electricity per year at the Project Site. This is a reduction of approximately 45,012 kw-h/yr as compared to the Project's electricity consumption of 180,048 kw-h/yr. Thus, Alternative 2 would consume less electricity than the Project, and impacts would also be less than significant. For the same reasons why the Project's cumulative electricity impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative electricity impacts would also be less than cumulatively considerable.

Table 6-5
Alternative 2 - Estimated Electricity Demand

Land Use	Size	Electricity Rates	Total (kw-h/yr)
Residential	24 du	5,626.50 kw-h / DU	135,036
		Total	**135,036**

kw-h = kilowatt-hour; yr = year
Source: SCAQMD Air Quality Handbook, 1993, Table A9-11-A Electricity Usage Rate
The LADWP does not provide or comment on generation rates to provide an estimate of demand. In addition, the Los Angeles City Planning Department has consistently accepted use of the SCAQMD rates in its EIRs.

Natural Gas

Under Alternative 2, the Project Site would be developed with 24 single-family homes, which is a 25% reduction when compared to the Project. As shown in Table 6-6, Alternative 2 is estimated to consume approximately 96,276 cubic feet of natural gas per month at the Project Site. This is a reduction of approximately 32,092 cf/mo less natural gas than the Project's natural gas consumption of 128,368 cf/mo. Thus, Alternative 2 would consume less natural gas than the Project, and impacts would also be less than

significant. For the same reasons why the Project's cumulative natural gas impacts are less than cumulatively considerable, Alternative 2's contribution to cumulative natural gas impacts would also be less than cumulatively considerable.

Table 6-6
Alternative 2 - Estimated Natural Gas Demand

Land Use	Size	Natural Gas Rates	Total (cf/mo)
Residential	24 du	4,011.5 cf / DU	96,276
		Total	**96,276**

cf = cubic feet; mo = month
Source: SCAQMD Air Quality Handbook, 1993, Appendix 9, Table A9-12-A, Natural Gas Usage Rate
The SCG does not provide or comment on generation rates to provide an estimate of demand. In addition, the Los Angeles City Planning Department has consistently accepted use of the SCAQMD rates in its EIRs.

Relationship of Alternative 2 to the Project Objectives

Compared to the Project, Alternative 2 does not maximize the development potential at the Site. While Alternative 2 does provide additional housing stock at an infill location close to retail amenities and jobs, it does not maximize this opportunity, as it does not develop single-family residential uses to the extent permitted under the approved tract. Overall, Alternative 2 would meet most of the Project objectives, but to a lesser degree than the Project.

3. Project - Reconfigured

Alternative 3: Project Reconfigured

Alternative 3 is the Project Reconfigured Alternative. Like the Project, this Alternative would consist of the development of 32 homes on the Project Site. However, Alternative 3 would be developed with a different configuration. Namely, seven homes would be eliminated along Haverhill Way and these homes would instead be constructed on the remaining portion of the Project Site, meaning that the individual lots for each of the 32 homes would be smaller than the individual lots included as part of the Project and would include proportionately less private open space. As such, a smaller portion of the Project Site would be graded when compared to the Project. However, the road and retaining walls on Haverhill Way would still be constructed. The site plan for this Alternative is provided in Figure 6-2, Alternative 3 Site Plan. This Alternative was selected for analysis based on its potential to reduce the Proposed Project's significant aesthetic impacts based on a smaller grading area and the removal of fewer trees. (Alternative 3 would result in the removal of one fewer protected tree and six fewer significant trees when compared to the Project).

Aesthetics

While the configuration of this Alternative would be different than the Project, like the Project, this Alternative would develop 32 single-family homes. This Alternative eliminates seven homes on Haverhill Way, which means that the remaining development is denser when compared to the Project and also that fewer walnut trees would be removed. Like the Project, Alternative 3 would implement Mitigation Measures D-2 through D-4, which require the planting of replacement trees. However, like the Project, Alternative 3 would also result in significant visual character and view impacts until the replacement trees have grown to sufficient maturity. The character of the development under Alternative 3 would be the same and under the Project and would therefore be consistent with the visual character of the surrounding single-family residential development. Overall, because Alternative 3 would remove fewer trees than the Project and result in less disturbance of the Project Site, Alternative 3's visual character and view impacts would be less than the Project's but still significant and unavoidable. As Alternative 3 would utilize the same lighting fixtures as the Project and the homes would have a similar overall height and massing, light and glare impacts under this alternative would be similar to those of the Project and also less than significant. For the same reasons why the Project's cumulative aesthetics impacts are less than cumulatively considerable, Alternative 3's contribution to cumulative aesthetics impacts would also be less than cumulatively considerable.



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Figure 6-2
Alternative 3 Site Plan

Agricultural and Forestry Resources

The Project Site is currently undeveloped and does not contain any agricultural or forestry uses. Like the Project, Alternative 3 would develop 32 single-family homes at the Project Site, albeit in a different configuration. Therefore, similar to the Project, Alternative 3 would have no impact to agricultural and forestry resources. For the same reasons why the Project's cumulative agricultural and forestry resources impacts are less than cumulatively considerable, Alternative 3's contribution to cumulative agricultural and forestry resources impacts would also be less than cumulatively considerable.

Air Quality

While the configuration of this Alternative would be different than the Project, like the Project, this Alternative would develop 32 single-family homes. This Alternative would involve less grading than the Project but would use the same type and amount of construction equipment on a daily basis, so daily emissions would be the same. Therefore, Alternative 3 would result in the same less than significant construction and operational impacts as the Project (with implementation of the same mitigation measures). Alternative 3 would implement the same mitigation and regulatory compliance measures as the Project, and as such, construction of Alternative 3 would result in less than significant construction impacts similar to those of the Project.

Regarding operational emissions, as discussed under "Transportation-Traffic" below, Alternative 3 would generate the same number of daily, AM, and PM peak hour trips as the Project. Like the Project, Alternative would develop 32 single-family homes. Therefore, Alternative 3's operational air quality would be the same as the Project's and, also less than significant.

For the same reasons similar to why the Project's cumulative air quality impacts are less than cumulatively considerable, Alternative 3's contribution to cumulative air quality impacts would also be less than cumulatively considerable.

Biological Resources

The Project Site is currently undeveloped and while it does not contain any special-status species, the Project Site has the potential to contain nesting species. The Project Site also contains approximately 3.44 acres of California walnut woodland and 168 protected trees. Under Alternative 3, the Project Site would be developed with 32 single-family homes, like the Project, albeit in a different configuration. Alternative 3 does not include the seven homes on Haverhill Way, which would avoid the removal of one protected tree and six significant trees. As such, Alternative 3 would result in reduced impacts to the California walnut woodland acreage and the protected trees. In addition, Alternative 3 would implement the same mitigation measures as the Project. With implementation of these mitigation measures, Alternative 3's impacts would be less than significant, and reduced when compared to the Project. For the same reasons why the Project's cumulative biological resources impacts are less than cumulatively considerable, Alternative 3's contribution to cumulative biological resources impacts would also be less than cumulatively considerable.

Cultural Resources

As the Project Site is undeveloped, there are no historic resources at the Project Site. As such, there would be no impact to historic resources for this Alternative. When compared to the Project, a smaller portion of the Project Site would be disturbed under Alternative 3. As such, Alternative 3 would result in a lesser potential than the Project to encounter unknown buried archaeological and paleontological resources or human remains. Nevertheless, Alternative 3 would implement the same mitigation and regulatory compliance measures as the Project. Overall, Alternative 3 would have a less than significant impact with respect to cultural resources, but impacts would be reduced when compared to the Project. For the same reasons why the Project's cumulative cultural resources impacts are less than cumulatively considerable, Alternative 3's contribution to cumulative cultural resources impacts would also be less than cumulatively considerable.

Geology and Soils

Alternative 3, like the Project, would develop 32 single-family homes at the Project Site, albeit in a different configuration. Nevertheless, geologic impacts are site-specific. Therefore, regardless of the type or configuration of development that would occur, the Project Site presents the same potential geologic and geotechnical conditions. Any development (including development under Alternative 3) would be subject to the same geotechnical considerations and would be required to occur in conformance with the City's building code standards. As such, Alternative 3 would be subject to the same geologic issues (such as seismically induced landslides) associated with the Project Site and would implement the same regulatory compliance measures and project design features as the Project. However, when compared to the Project, a smaller portion of the Project Site would be graded under Alternative 3. Alternative 3 would therefore have a less than significant impact with respect to geology and soils, and impacts would be reduced when compared to the Project due to less grading of slopes. For the same reasons why the Project's cumulative geology and soils impacts are less than cumulatively considerable, Alternative 3's contribution to cumulative geology and soils impacts would also be less than cumulatively considerable.

Greenhouse Gas Emissions

While the configuration of this Alternative would be different than the Project, Alternative 3, like the Project, would develop 32 single-family homes. However, when compared to the Project, a smaller portion of the Project Site would be graded under Alternative 3, and therefore, construction impacts would be incrementally reduced. During operation, Alternative 3 would be expected to increase electricity and natural gas consumption, water use, solid waste generation, and VMT in the same manner as the Project. As such, this Alternative would create fewer GHG emissions during construction and the same amount of GHG emissions as the Project during operation, and impacts would be less than significant. For the same reasons why the Project's cumulative greenhouse gas emissions impacts are less than cumulatively considerable, Alternative 3's contribution to cumulative greenhouse gas emissions impacts would also be less than cumulatively considerable.

Hazards and Hazardous Materials

While the configuration of this Alternative would be different than the Project, Alternative 3, like the Project, would develop 32 single-family homes. Like the Project, Alternative 3 would not require routine transport, use, or disposal of hazardous materials. In addition, as the Project Site has never been developed, no hazardous materials associated with human activity exist at the Project Site that could be exposed during Alternative 3's construction period and the Project Site is not within a methane hazard zone as delineated by the City. Thus, Alternative 3 would have a less than significant impact with respect to the release of hazards and hazardous materials, emitting hazardous waste within ¼ mile of a school and interference with an emergency plan, same as the Project. With respect to wildland fires, like the Project, Alternative 3 would be required to comply with the Fire Code, including requirements for vegetation clearance. However, Alternative 3 would not develop a portion of the Site with structures containing sprinkler systems and ignition-resistant materials, and would not include as much landscaping with fire-retardant plants. Therefore, Alternative 3's impacts with respect to wildland fires would be greater than the Project but still less than significant. For the same reasons why the Project's cumulative hazards impacts are less than cumulatively considerable, Alternative 3's contribution to cumulative hazards impacts would also be less than cumulatively considerable.

Hydrology and Water Quality

While the configuration of this Alternative would be different than the Project, Alternative 3, like the Project, would develop 32 single-family homes. This Alternative eliminates seven homes on Haverhill Way and instead moves them to a different portion of the Project Site. Alternative 3 would implement similar water quality BMPs as the Project. However, when compared to the Project, a smaller portion of the Project Site would be graded under Alternative 3, and therefore, impacts would be reduced with respect to water quality, runoff, and drainage. Overall, the impacts of this Alternative would be reduced when compared to the Project's less than significant impacts. For the same reasons why the Project's cumulative hydrology impacts are less than cumulatively considerable, Alternative 3's contribution to cumulative hydrology impacts would also be less than cumulatively considerable.

Land Use and Planning

While the configuration of this Alternative would be different than the Project, Alternative 3, like the Project, would develop 32 single-family homes consistent with the existing zoning and land use designations for the Project Site. Like the Project, development under Alternative 3 would provide needed housing on an infill site in furtherance of local and regional policies. Finally, similar to the Project, this Alternative would not physically divide an established community. Overall, this Alternative would result in impacts which are, with respect to land use, similar to the Project's, and the impacts would also be less than significant. For the same reasons why the Project's cumulative land use and planning impacts are less than cumulatively considerable, Alternative 3's contribution to cumulative land use and planning impacts would also be less than cumulatively considerable.

Mineral Resources

The Project Site is not located within a City-designated oil field or oil drilling area, or a City-designated Mineral Resource Zone (MRZ-2). As such, similar to the Project, Alternative 3 would have no impact to mineral resources. For the same reasons why the Project's cumulative mineral resources impacts are less than cumulatively considerable, Alternative 3's contribution to cumulative mineral resources impacts would also be less than cumulatively considerable.

Noise

Construction

While the configuration of this Alternative would be different than the Project, Alternative 3, like the Project, would develop 32 single-family homes. Although Alternative 3 would eliminate seven homes on Haverhill Way and move them to the remaining portion of the Project Site, Alternative 3 would still include construction of the road and retaining walls. The same daily construction activities would occur, including the use of on-site equipment such as scrapers, tractors, loaders, and smaller equipment such as saws, hammers, and pneumatic tools. Therefore, Alternative 3 is expected to result in the same construction noise levels at nearby sensitive receptors as the Project, although Alternative 3 may impact fewer receptors (such as the single-family homes to the east of the Project Site) based on the removal of the homes on Haverhill Way. While Alternative 3 would implement the same mitigation and regulatory compliance measures, as well as project design features, the construction-related noise increases would still exceed the 5.0 dBA threshold and impacts would be significant and unavoidable, although slightly reduced when compared to the Project based on impacts to fewer receptors.

Groundborne vibration during construction would be predominantly generated by grading activities, such as those necessitating the use of large bulldozers and other tractor-type equipment. When compared to the Project, a smaller portion of the Project Site would be graded under Alternative 3, and therefore, Alternative 3 would be expected to generate less vibration during construction. However, the distance from vibration-generating activities to the receptor at 2438 Haverhill Drive would remain unchanged, and therefore the Project's temporary construction vibration impacts would remain be significant and unavoidable under the human annoyance standard even with implementation of the same mitigation measures as provided for the Project.

Operation

Like the Project, Alternative 3 would generate noise from mechanical equipment, landscape maintenance, residential land uses, and auto-related activities. However, also like the Project, these direct sources of noise would occur seasonally, irregularly, or infrequently, and would not individually or collectively elevate ambient noise levels beyond thresholds prescribed by the LAMC. The majority of any long-term noise impact would come from vehicles traveling to and from the Project Site. Alternative 3 would result in the same number of daily trips to and from the Project Site as the Project, and therefore, impacts from mobile source noise would be the same as the Project and less than significant. Overall, Alternative 3's operational noise impacts would be less than significant, and the same as the Project.

For the same reasons why the Project's cumulative noise impacts are less than cumulatively considerable, Alternative 3's contribution to cumulative noise impacts would also be less than cumulatively considerable.

Population, Housing, and Employment

While the configuration of this Alternative would be different than the Project, Alternative 3, like the Project, would develop 32 single-family homes. The Project was estimated to result in the generation of approximately 88 residents. Alternative 3 would result in the same population generation, and would also provide the same number of single-family residential units (32). Like the Project, the population and housing growth would be within growth forecasts, and impacts would be less than significant. For the same reasons why the Project's cumulative population, housing, and employment impacts are less than cumulatively considerable, Alternative 3's contribution to cumulative population, housing, and employment impacts would also be less than cumulatively considerable.

Public Services

While the configuration of this Alternative would be different than the Project, Alternative 3, like the Project, would develop 32 single-family homes. Therefore, this Alternative would result in the same population generation as the Project, and as such, would create the same demand for police protection. With respect to fire protection, Alternative 3 could result in increased demand based on the ungraded slope on Haverhill Way, which may necessitate fire protection services due to an increased risk of wildfires. As Alternative 3 would include the same number of single-family residential units as the Project (32), it would also generate the same number of students as the Project who would attend LAUSD schools, and place the same demand on parks and recreational facilities and libraries. Alternative 3 would implement the same standard City requirements as the Project. Overall, the impacts would be less than significant and the same as the Project, although impacts with respect to fire protection would be increased when compared to the Project, based on the ungraded slope on Haverhill Way. For the same reasons why the Project's cumulative public services impacts are less than cumulatively considerable, Alternative 3's contribution to cumulative public services impacts would also be less than cumulatively considerable.

Traffic and Transportation

While the configuration of this Alternative would be different than the Project, Alternative 3, like the Project, would develop 32 single-family homes. In addition, ingress and egress would remain the same as for the Project. Therefore, this Alternative would result in the same trip generation and less than significant impacts as the Project (including construction and intersection impacts). For reasons similar to why the Project's cumulative traffic impacts are cumulatively considerable, Alternative 3's contribution to cumulative traffic impacts would also be cumulatively considerable.

Utilities

While the configuration of this Alternative would be different than the Project, Alternative 3, like the Project, would develop 32 single-family homes. Therefore, Alternative 3 would generate the same amount of wastewater and solid waste; would demand the same amount of water, electricity, and natural gas as the Project; and impacts would be less than significant and the same as the Project's impacts. For the same reasons why the Project's cumulative utilities impacts are less than cumulatively considerable, Alternative 3's contribution to cumulative utilities impacts would also be less than cumulatively considerable.

Relationship of Alternative 3 to the Project Objectives

Like the Project, Alternative 3 includes development of the Project Site with 32 single-family homes, although in a different configuration. As part of Alternative 3, seven homes along Haverhill Way have been removed and the remaining portion of the Project Site is denser to account for all 32 homes. Therefore, this Alternative would develop the Site is accordance with applicable land use regulations and would maximize housing stock at an infill location that is close to retail amenities and jobs. As a result, this Alternative would meet the following objectives to the same extent as the Project:

- Maximize housing stock at an infill location that is close to retail amenities and jobs.
- Construct a development that incorporates high quality design and landscaping, including onsite replacement of walnut trees.

However, as this Alternative avoids development on a portion of Haverhill Way, it does not develop a project that is as functionally compatible with the Site conditions as the Proposed Project. Moreover, as the lots would be smaller, this Alternative would not meet the Project objective to build homes that are of sufficient size to meet the changing needs of families, including having sufficient private open space, to the same extent as the Project. Further, Alternative 3 would be less compatible with the approved tract when compared to the Project, as it does not provide development on the lots that were previously approved, and instead provides development on smaller lots covering only a portion of the Project Site. In addition, this Alternative does not avoid or meaningfully reduce any of the Project's significant impacts (construction noise and vibration, and views and visual character).

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an EIR alternatives analysis include designation of an "environmentally superior" alternative. Based on the analysis presented in this section, Alternative 1: No Project would result in the greatest reduction in Project impacts and would be the environmentally superior alternative. However, CEQA also requires that if the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives (*CEQA Guidelines*, Section 15126.6[e][2]).

As discussed in detail in this section, the level of significance for many of the environmental impacts under the Project would be similar to the Alternatives presented, with implementation of the same or similar mitigation measures as identified in this Draft EIR for the Project. The severity of the impacts, however, fluctuates between the Project and each Alternative presented. Several impact categories (for example: geology and soils) are "site dependent" and would occur under any reasonable development of the Project Site. Other impact categories (for example: Noise and Transportation/Traffic) are "project-specific" (related to project size and land use) and could be reduced/avoided by the alternatives that generally have less development.

Based on the discussion provided in this section, neither Alternative 2 nor Alternative 3 would eliminate the significant and unavoidable construction noise and vibration impacts or visual character and view impacts. However, Alternative 3 would reduce the severity of these impacts when compared to the Project, although Alternative 3's impact with respect to construction noise and vibration and visual character and views would also still be significant and unavoidable. Also, Alternative 3 would result in greater impacts with respect to wildfires and fire protection services. Nonetheless, Alternative 3 would be the Environmentally Superior Alternative.

Table 6-7
Alternatives Comparison Table

Impact Area	Proposed Project	Alternative 1	Alternative 2	Alternative 3
Aesthetics				
Visual Character	**SIG/U**	Reduced	Similar	Reduced
Views	**SIG/U**	Reduced	Similar	Reduced
Light and Glare	LTS	Reduced	Reduced	Similar
Shade/Shadow	LTS	Reduced	Reduced	Similar
Agricultural and Forestry Resources	NI	Similar	Similar	Similar
Air Quality				
Construction	LTS	Reduced	Similar	Similar
Operation	LTS	Reduced	Reduced	Similar
Biological Resources				
Special Status Species	LTS	Reduced	Similar	Similar
Riparian Habitat	LTS	Reduced	Similar	Similar
Wetlands	LTS	Reduced	Similar	Similar

Impact Area	Proposed Project	Alternative 1	Alternative 2	Alternative 3
Wildlife Corridors	LTS	Reduced	Similar	Similar
Local Policies	LTS	Reduced	Similar	Reduced
Habitat Conservation Plan	NI	Similar	Similar	Similar
Cultural Resources				
Historic	NI	Similar	Similar	Similar
Archaeological	LTS	Reduced	Similar	Reduced
Paleontological	LTS	Reduced	Similar	Reduced
Human Remains	LTS	Reduced	Similar	Reduced
Geology and Soils				
Rupture of Known Earthquake Fault	NI	Reduced	Similar	Similar
Strong Seismic Ground Shaking	LTS	Reduced	Reduced	Similar
Ground Failure, Liquefaction	LTS	Reduced	Similar	Similar
Landslides	LTS	Reduced	Similar	Similar
Soil Erosion	LTS	Reduced	Similar	Reduced
Unstable Geologic Unit	LTS	Reduced	Similar	Similar
Expansive Soils and Soil Stability	NI	Reduced	Similar	Similar
Incapable of supporting Septic Tanks	NI	Reduced	Similar	Similar
Greenhouse Gases	LTS	Reduced	Reduced	Reduced
Hazards/Hazardous Materials				
Release of Hazardous Materials	LTS	Reduced	Similar	Similar
Within One-Quarter Mile of School	LTS	Reduced	Similar	Similar
Within Two Miles of a Public Airport	NI	Similar	Similar	Similar
Within Vicinity of Private Airstrip	NI	Similar	Similar	Similar
Interfere with Emergency Plan	LTS	Reduced	Similar	Similar
Listed on Hazardous Materials Sites	NI	Similar	Similar	Similar
Wildland Fires	LTS	Greater	Similar	Greater
Hydrology and Water Quality				
Water Quality	LTS	Greater	Similar	Reduced
Groundwater	LTS	Similar	Similar	Similar
Drainage	LTS	Similar	Similar	Reduced
Runoff	LTS	Similar	Similar	Reduced
Flooding	NI	Similar	Similar	Similar
Land Use and Planning	LTS	Greater	Greater	Similar
Mineral Resources	NI	Similar	Similar	Similar
Noise				
Construction Noise	**SIG/U**	Reduced	Similar	Reduced
Construction Vibration	**SIG/U**	Reduced	Similar	Reduced
Operation	LTS	Reduced	Reduced	Similar
Population/Housing				
Displace Housing	NI	Similar	Similar	Similar
Displace People	NI	Similar	Similar	Similar
Population growth	LTS	Reduced	Reduced	Similar
Public Services				

Impact Area	Proposed Project	Alternative 1	Alternative 2	Alternative 3
Fire	LTS	Reduced	Reduced	Greater
Police	LTS	Reduced	Reduced	Similar
Schools	LTS	Reduced	Reduced	Similar
Parks	NI	Reduced	Reduced	Similar
Libraries	LTS	Reduced	Reduced	Similar
Traffic/Transportation				
Intersection Impacts	LTS	Reduced	Reduced	Similar
Utilities				
Water	LTS	Reduced	Reduced	Similar
Wastewater	LTS	Reduced	Reduced	Similar
Solid Waste	LTS	Reduced	Reduced	Similar
Electricity	LTS	Reduced	Reduced	Similar
Natural Gas	LTS	Reduced	Reduced	Similar

Notes:
NI = No Impact
LTS = Less Than Significant
SIG/U = Significant and Unavoidable

7. PREPARERS OF THE EIR

Lead Agency	**City of Los Angeles** Department of City Planning 200 N. Spring Street, Room 750, Los Angeles, CA 90012 Srimal Hewawitharana, Environmental Specialist II
Environmental Consultant	**CAJA Environmental Services, LLC** 11990 San Vicente Boulevard, Suite 250, Los Angeles, CA 90049 Chris Joseph, President Stacie Henderson, Senior Project Manager Kerrie Nicholson, Senior Project Manager Sherrie Cruz, Senior Graphics Specialist
Project Applicant	**Glassell Park, LLC** 23622 Calabasas Road, Suite 220, Calabasas, CA 91302
Architect	**KTGY Group, Inc.** 12555 West Jefferson Boulevard, Suite 100, Los Angeles, CA 90066
Air Quality, GHG, Noise	**DKA Planning** 1513 W. Sepulveda Boulevard, Suite D, Torrance, CA 90501 Douglas Kim
Biology	**Rincon Consultants, Inc.** 180 North Ashwood Avenue, Ventura, CA 93003
Cultural Resources	**Paleo Solutions, Inc.** 911 South Primrose Avenue, Unit N, Monrovia, CA 91016
Geotechnical	**Sassan Geosciences, Inc.** 1290 North Lake Avenue, Suite 204, Pasadena, CA 91104
Hydrology	**Unite Civil, Inc.** 30141 Agoura Road, Suite 215, Agoura Hills, CA 91301
Traffic	**Associated Transportation Engineers** 100 North Hope Avenue, Suite 4, Santa Barbara, CA 93110
Tree Report	**Carlberg Associates** 80 West Sierra Madre Boulevard #241, Sierra Madre, CA, 91024

8. ACRONYMS AND ABBREVIATIONS

Acronym	Definition
AAM	Annual Arithmetic Mean
AB	Assembly Bill
ACM	Asbestos-Containing Materials
Act	Urban Water Management Planning Act
ADT	Average Daily Trips
AEP	Association of Environmental Professionals
AFUE	Annual Fuel Utilization Ratio
AFY	Acre Feet Per Year
ALS	Advanced Life Support
Amsl	Above Mean Sea Level
ANSI	American National Standard Institute
APN	Assessor Parcel Number
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
Asl	Above sea level
AST	Aboveground Storage Tank
ASTM	American Society for Testing Materials
ATCS	Adaptive Traffic Control System
ATSAC	Automated Traffic Surveillance and Control System
AVR	Average Vehicle Ridership
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
Basin	South Coast Air Basin
Basin Plan	Regional Water Quality Control Board's water quality control plan

BAU	Business As Usual
Bay-Delta	Sacramento-San Joaquin Delta
Bcf	Billion Cubic Feet
Bgs	Below Ground Surface
BIOS	Biogeographic Information and Observation System
BMP	Best Management Practice
BOS	City of Los Angeles Bureau of Sanitation
BRA	Biological Resource Area
BTU	British Thermal Unit
Building Code	City of Los Angeles Building Code
C&D	Construction and Demolition
CAA	California Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
Cal-EPA	California Environmental Protection Agency
Cal-OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CalGreen	California Green Building Standards Code
California Register	California Register of Historical Resources
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CAT	California Climate Action Team
CBC	California Building Code
CCAA	California Clean Air Act

CCAR	California Climate Action Registry
CCR	California Code of Regulations
CC&Rs	Conditions, Covenants & Restrictions
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CDMG	California Division of Mines and Geology
CDPH	California Department of Public Health
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
Cf	Cubic Feet
Cfs	Cubic Feet per Second
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH4	Methane
CHP	Combined Heating and Cooling
CII	Commercial/Industrial/Institutional
CiSWMPP	City Solid Waste Management Policy Plan
City	City of Los Angeles
CIWMB	California Integrated Waste Management Board
CMA	Critical Movement Analysis
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level

CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_{2e}	Carbon Dioxide equivalent
COHb	Carboxyhemoglobin
Compass Growth Vision	Southern California 2004 Compass Blueprint Growth Vision
Compass Blueprint Report	Southern California 2004 Compass Blueprint Growth Vision
County	Los Angeles County
CP	Community Plan
CPAs	Community Planning Areas
CPC	City of Los Angeles Planning Commission
CPR	California Public Resources Code
CPTED Guidelines	City of Los Angeles Crime Prevention Through Environmental Design Guidelines
CRA	Community Redevelopment Agency
CSSA	Collection System Settlement Agreement
CTCs	County Transportation Commissions
CTL	CTL Environmental Services
CTMP	Construction Traffic Management Plan
CWA	Federal Clean Water Act
Cy	Cubic yards
d/D	Sewer floor of depth to sewer diameter
dB	Decibel
dBA or dB(A)	A-Weighted Decibel
DDT	Dichlorodiphenyltrichloroethane
DEIR	Draft Environmental Impact Report

DHS	California Department of Health Services
DOF	Department of Finance
DOSH	Department of Occupational Safety and Health
DPM	Diesel Exhaust Particulate Matter
Draft EIR	Draft Environmental Impact Report
DTSC	Department of Toxic Substances Control
DTWRP	Donald Tillman Water Reclamation Plant
Du	Dwelling Unit
EE	Energy Efficient
EER	Energy Efficiency Ratio
EF	Energy Factor
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act
EMFAC	CARB's Emission Factors
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
FAR	Floor Area Ratio
FED	Functional Equivalent Document
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
Fire Code	City of Los Angeles' Fire Code
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
FPPP	Fire Protection and Prevention Plan

Fps	Feet per Second
FRA	Federal Railroad Administration
Framework Element	Framework Element of the General Plan
FSC	Federal Species of Concern
FTA	Federal Transit Administration
G	Gravity
General Dewatering Permit	General National Pollutant Discharge Elimination System Permit and General Waste Discharge Requirements governing construction-related dewatering discharges
General Plan	General Plan of the City of Los Angeles
GHGs	Greenhouse Gases
Gpd	Gallons per day
Gpm	Gallons Per Minute
GSF	Gross Square Feet
GWPs	Global Warming Potentials
HAZNET	Hazardous Waste Information System
HCD	Housing and Community Development Department
HCM	Historic-Cultural Monument
HFCs	Hydrofluoracarbons
HHW	Household Hazardous Waste
HPOZ	Historic-Preservation Overlay Zones
HQTA	High Quality Transit Area
HSPF	Heating Seasonal Performance Factor
HSWA	Hazardous and Solid Waste Act
HTP	Hyperion Treatment Plant
HTS	Hyperion Treatment System

HVAC	Heating, Ventilation, Air Conditioning, and Cooling
HWCL	Hazardous Waste Control Law
I	Interstate
IBC	International Building Code
IGR	Intergovernmental Review
in/sec	Inch Per Second
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resources Plan
ITE	Institute of Transportation Engineers
Km	Kilometer
Kw	Kilowatt
kw-h	Kilowatt Hour
L.A.	City of Los Angeles
L.A. CEQA Thresholds Guide	City of Los Angeles CEQA Thresholds Guide
LA Green Plan	Green LA, An Action Plan to Lead the Nation in Fighting Global Warming
LAA	Los Angeles Aqueduct
LAAFP	Los Angeles Aqueduct Filtration Plant
LABS	Los Angeles Bureau of Sanitation
LACFD	Los Angeles County Fire Department
LADBS	City of Los Angeles Department of Building and Safety
LADOT	Los Angeles Department of Transportation
LADRP	Los Angeles Department of Recreation and Parks
LADWP	City of Los Angeles Department of Water and Power
LAFD	City of Los Angeles Fire Department
LAFHM	City of Los Angeles Flood Hazard Map

LAGBC	Los Angeles Green Building Code
LAGWRP	Los Angeles-Glendale Water Reclamation Plant
LAMC	City of Los Angeles Municipal Code
LAPD	Los Angeles Police Department
LAPL	Los Angeles Public Library
LARWQCB	Los Angeles Regional Water Quality Control Board
LAUSD	Los Angeles Unified School District
LBP	Lead-Based Paint
LCFS	Low Carbon Fuel Standards
LEED	Leadership in Energy and Environmental Design
Leq	Equivalent Noise Level
LID	Low Impact Development
LOS	Level of Service
LSTs	Localized Significance Thresholds
LUSTs	Leaking Underground Storage Tanks
M	Meter
M&RP	Monitoring and Reporting Plan
Manual	County of Los Angeles' Manual for the Standard Urban Stormwater Mitigation Plan
MATES III	Multiple Air Toxics Exposure Study
MATES IV	Multiple Air Toxics Exposure Study IV
MBTA	Migratory Bird Treaty Act
MCE	Maximum Considered Earthquake
MCLs	Maximum Contaminant Levels
METRO	Metropolitan Service District
Metro	Los Angeles County Metropolitan Transportation Authority

Mgd	Million Gallons Per Day
Mi	Miles
MTCO2e	Metric Tons of CO2e ?
MMTCO2e	Million Metric Tons of CO2e
Mo	Month
Monument	Historic-Cultural Monument
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organizations
MS4	Municipal separate storm sewer system
M&RP	Monitoring & Reporting Plan
MSW	Municipal Solid Waste
MTY	Metric Tons Per Year
Mw	Megawatt
mw-h	Megawatt Hour
MWD	Metropolitan Water District
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NAT	No Action Taken
NESHAP	National Emission Standards for Hazards Air Pollutants
NFIP	National Flood Insurance Program
NHTSA	National Highway Traffic Safety Administration
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NOI	Notice of Intent

NOP	Notice of Preparation
NOT	Notice of Termination
NOx	Nitrogen Oxide
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
O&M Program	California Operations and Maintenance Program
O_3	Ozone
OAL	California Office of Administrative Law
OHP	Office of Historic Preservation
OHWM	Ordinary High Water Mark
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
Pb	Lead
PCBs	Polychlorinated Biphenyls
PCE	Passenger Car Equivalent
PDFs	Project Design Features
PF-1XL	Public Facility Zoning
PFCs	Perfluorocarbons
PIPP	Public Information and Participation Program
PM	Particulate Matter
PM_{10}	Respirable Particulate Matter
$PM_{2.5}$	Fine Particulate Matter
Ppd	Pounds Per Day
Ppm	Parts Per Million

PPV	Peak Particle Velocity
PRC	Public Resources Code
Primary Standards	National Primary Drinking Water Regulations
PRP	Public Recreation Plan
Psf	Pounds Per Square Foot
PSI	Pounds Per Square Inch
PST	Pacific Standard Time
PUC	Public Utilities Commission
RCP	Regional Comprehensive Plan
RCP	Reinforced Concrete Pipe
RCPG	Regional Comprehensive Plan and Guide
RCRA	Federal Resource Conservation and Recovery Act
RECs	Recognized Environmental Conditions
RFS	Renewable Fuel Standard
RGA	Rules of General Application
RHNA	Regional Housing Needs Assessment
Rm	Room
RMS	Root Mean Square
ROG	Reactive Organic Gas
RPS	Renewable Portfolio Standards
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
S.A.F.E.	Solvents/Automotive/Flammable/Electronics
Safety Element	Safety Element of the City of Los Angeles General Plan
SARA	Superfund Amendment and Reauthorization Act

SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCG	Southern California Gas Company
SCS	Sustainable Community Strategy
SDWA	Safe Drinking Water Act
SEA	Significant Ecological Area
Secondary Standards	National Secondary Drinking Water Regulations
SEER	Seasonal Energy Efficiency Ratio
Sf	Square Feet or Square Foot
SF_6	Sulfur Hexafluoride
SFHA	Special Flood Hazard Areas
SHMA	Seismic Hazard Mapping Act
SHS	State Highway System
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SO_4	Sulfate
SOPA	Society of Professional Archaeologists
Sox	Sulfur Oxide
Sf	Square Feet or Square Foot
SF_6	Sulfur Hexafluoride
SQMP	Stormwater Quality Management Plan
SR	State Route
SRAs	Source Receptor Areas
SRCRD	Solid Resources Citywide Recycling Division

SRRE	Source Reduction and Recycling Element
SSMP	Sewer System Management Plan
STC	Sound Transmission Coefficient
STIP	State Transportation Improvement Program
Strategic Plan	Los Angeles Public Library Strategic Plan
SUD	Supplemental Use District
SUSMP	Standard Urban Stormwater Mitigation Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	Toxic Air Contaminants
TAP	Technical Assistance Program
TAZ	Transportation Analysis Zones
TDM	Transportation Demand Management
TIMP	Transportation Improvement Mitigation Program
TMDL	Total Maximum Daily Loads
TOD	Transit Oriented District
Tpd	Tons Per Day
TSCA	Toxic Substances Control Act
UBC	Uniform Building Code
UNFCCC	United Nations' Framework Convention on Climate Change
US	United States
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGBC	United States Green Building Council

USGS	United States Geological Survey
UST	Underground Storage Tank
UWMP	Urban Water Management Plan
V/C	Volume-To-Capacity Ratio
VC	Vitrified Clay
VdB	Velocity in Decibels
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
VPD	Vehicles Per Day
VPH	Vehicles Per Hour
WCI	Western Regional Climate Action Initiative
WDR	General Waste Discharge Requirements
WFP	Wastewater Facilities Plan
WMAs	Watershed Management Areas
WMCs	Watershed Management Committees
WPD	Watershed Protection Division
WQCMPUR	Water Quality Compliance Master Plan for Urban Runoff
WSA	Water Supply Assessment
Yr	Year
ZI	Zoning Information
ZIMAS	City of Los Angeles Zoning Information and Map System
Zoning Code	City of Los Angeles Planning and Zoning Code
$\mu g/m^3$	Micrograms Per Cubic Meter