

Draft Environmental Impact Report
for the
Mission Bell Mixed-Use Project

PROJECT NO. 2034-CUP, DRX, COA, VTPM
SCH NO. 2019011007

Prepared for:

City of South Pasadena
Planning and Building Department
1414 Mission Street
South Pasadena, California 91030

PREPARED BY:

LOS ANGELES OFFICE
706 S. Hill Street, 11th Floor
Los Angeles, CA 90014



WESTLAKE VILLAGE OFFICE
920 Hampshire Road, Suite A5
Westlake Village, CA 91361

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INTRODUCTION

This document is a Draft Environmental Impact Report (EIR) with respect to the Mission Bell Mixed-Use Project (Project) and has been prepared by the City of South Pasadena (City) to comply with the California Environmental Quality Act (CEQA).

CEQA requires that projects subject to an approval action by a public agency of the State of California, and that are not otherwise exempt or excluded, undergo an environmental review process to identify and evaluate potential impacts. Section 15050 of the CEQA Guidelines states that environmental review shall be conducted by the Lead Agency, defined in CEQA Guidelines Section 15367 as the public agency with principal responsibility for approving a project. The Project is subject to approval actions by the City, which is therefore Lead Agency for CEQA purposes.

In accordance with CEQA Guidelines Section 15123, this section of the Draft EIR provides a brief description of the Project; identifies significant effects and proposed mitigation measures or alternatives that would reduce or avoid those effects; and describes areas of controversy and issues to be resolved.

OVERVIEW OF THE PROPOSED PROJECT

Project Objectives

Section 15124(b) of the CEQA Guidelines states that “the statement of objectives should include the underlying purpose of the project.” The underlying purpose of the Project is to redevelop the site with residential and commercial uses and achieve the following objectives:

- Maximize the development potential for the Project site based on the parameters of the Mission Street Specific Plan.
- Implement the Mission Street Specific Plan objectives for the Project site as follows:
 - a. Preserve, renovate, and reuse the historic building located at 1115 Mission Street through rehabilitation of the building for new uses.
 - b. Contribute to the development of the MSSP Core Area as a pedestrian oriented retail commercial area to include restaurants and specialty retail uses at the ground level and residential uses above.
 - c. Provide parking adequate to serve new uses and Gold Line patrons.
- Create compelling public and private open space with drought resistant landscaping, well-lit and open storefronts, and outdoor seating.
- Contribute to meeting the City’s Regional Housing Needs Assessment (RHNA) goals through the construction of 36 new above moderate-income housing units.

Project Location

The Project site lies within the City of South Pasadena, with associated addresses of 1101, 1107, and 1115 Mission Street. The Project site comprises approximately 0.7 acres of developed disturbed land, which includes commercial uses and a parking lot. The Project site is generally bound by Mission Street to the north, commercial uses to the east and south, and Fairview Avenue to the west.

Project Characteristics

The Project Applicant proposed a two- and three-story mixed-use development located at 1101-1107 Mission Street. The project involves, demolition of the rear portion of the existing building at 1115 Mission Street and construction of a two story residential building, renovation of the remainder of the building at 1115 Mission Street for adaptive reuse as residential and commercial mixed use, construction of a three story residential and commercial retail building on the remainder of the Project site, and construction of two levels of subterranean parking beneath the entire Project site. The Project would consist of 7,394 square feet of commercial retail space along Mission Street and Fairview Avenue frontages and 36 residential units on above and to the rear of commercial uses.

Project Phasing/Construction

Construction would take approximately 27 months and would occur through a phased process of demolition, excavation and grading, and building construction. Construction would begin in 2020 and is expected to complete by mid-2022.

ALTERNATIVES TO THE PROPOSED PROJECT

Section 15126.6(a) of the CEQA Guidelines requires an EIR to “describe the 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 will avoid or substantially lessen any of the significant effects of the Project, and evaluate the comparative merits of the alternatives.” No significant and unavoidable impacts were identified for the proposed Project; all potentially significant impacts could be mitigated to a less-than-significant level. Nonetheless, the City developed and considered a No Project Alternative and a Reduced Density Alternative. The No Project Alternative would avoid the impacts of the Project but would not achieve the objectives of the Project. A Reduced Density Alternative could lessen the impacts but would not avoid the impacts of the Project and would not fully achieve the Project objectives.

AREAS OF KNOWN CONTROVERSY

The State CEQA Guidelines¹ require that a Draft EIR identify areas of controversy known to the Lead Agency, including issues raised by other agencies and the public. The historic status of the building at 1115 Mission Street has been identified as an area of potential controversy and is discussed in **Section 4.2: Cultural Resources**.

ISSUES TO BE RESOLVED

The State CEQA Guidelines² require that an EIR present issues to be resolved by the lead agency. These issues include the choice between alternatives and whether or how to mitigate potentially significant impacts. The major issues to be resolved by the City regarding the proposed Project are whether the proposed Project or an alternative should or should not be approved.

SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

A summary of the environmental impacts associated with implementation of the proposed Project, mitigation measures included to avoid or lessen the severity of potentially significant impacts, and residual impacts, is provided in **Table ES-1: Summary of Project Impacts, Mitigation Measures, and Residual Impacts**.

1 California Public Resources Code, tit. 14, sec. 15123.

2 California Public Resources Code, tit. 14, sec. 15123(b)(3).

**Table ES-1
Summary of Project Impacts, Mitigation Measures, and Residual Impacts**

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Air Quality			
<i>Conflict with or obstruct implementation of the applicable air quality plan?</i>	Less than Significant.	No mitigation measures are necessary.	Less than Significant.
<i>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?</i>	Less than Significant.	No mitigation measures are necessary.	Less than Significant.
<i>Expose sensitive receptors to substantial pollutant concentrations?</i>	Less than Significant.	No mitigation measures are necessary.	Less than Significant.
<i>Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people</i>	Less than Significant.	No mitigation measures are necessary.	Less than Significant.
Cultural Resources			
<i>Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?</i>	Less than Significant.	No mitigation measures are necessary.	Less than Significant.
<i>Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?</i>	Less than Significant.	No mitigation measures are necessary.	Less than Significant.
<i>Disturb any human remains, including those interred outside of formal cemeteries?</i>	Less than Significant.	No mitigation measures are necessary.	Less than Significant.
Energy			
<i>Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of</i>	Less than Significant.	No mitigation measures are necessary	Less than Significant.

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<i>energy resources during construction or operation?</i>			
<i>Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?</i>	Less than Significant.	No mitigation measures are necessary.	Less than Significant.
Land Use and Planning			
<i>Physically divide an established community?</i>	Less than Significant.	No mitigation measures are necessary.	Less than Significant.
<i>Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?</i>	Less than Significant.	No mitigation measures are necessary.	Less than Significant.
Noise			
<i>Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?</i>	Potentially Significant.	<p>MM NOI-1:</p> <p>Implementation of mitigation measure MM NOI-1 would include noise reduction techniques which include implementation of a City approved construction management plan specifying that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state-required noise-attenuation devices; identification of the maximum distance between construction equipment staging areas and occupied residential areas; and a requirement for the use of electric air compressors and similar power tools. Temporary noise barriers can reduce noise level at a minimum of 10 dBA, depending on the performance standard of achieving noise-level reductions. Optimal muffler systems for all equipment and the break in line of sight to a sensitive receptor would reduce construction noise levels by approximately 10 dB or more. Limiting the number of noise-generating, heavy-duty off-</p>	Less than Significant.

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<p>road construction equipment (e.g., backhoes, dozers, excavators, loaders, rollers, etc.) simultaneously used on the Project site within 50 feet of off-site noise-sensitive receptors surrounding the site to no more than one or two pieces of heavy-duty, off-road equipment would further reduce construction noise levels by approximately 10 dBA. A sign, legible at a distance of 50 feet, shall be posted at the Project construction site providing a contact name and a telephone number where residents can inquire about the construction process and register complaints. This sign shall indicate the dates and duration of construction activities. In conjunction with this required posting, a noise disturbance coordinator shall be identified to address construction noise concerns received. The contact name and the telephone number for the noise disturbance coordinator shall be posted on the sign. The coordinator shall be responsible for responding to any local complaints about construction noise and shall notify the City to determine the cause and implement reasonable measures to address the complaint, as deemed acceptable by the City.</p>	
<p><i>Generation of excessive groundborne vibration or groundborne noise levels?</i></p>	<p>Less than Significant.</p>	<p>No mitigation measures are necessary.</p>	<p>Less than Significant.</p>
<p><i>For a project located within the vicinity of a private airstrip or airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose students or staff to excessive noise levels.</i></p>	<p>No impact.</p>	<p>No mitigation measures are necessary.</p>	<p>Less than Significant.</p>

1.0 INTRODUCTION

PURPOSE

This Draft Environmental Impact Report (EIR) has been prepared by the City of South Pasadena (City), in compliance with the California Environmental Quality Act (CEQA), to evaluate the potential environmental effects of the Mission Bell Mixed-Use Project (Project). This Draft EIR contains a project-level environmental review that examines all phases of proposed Project planning, construction, and operation. As defined by Section 15161 of the State CEQA Guidelines, a project-level EIR examines the environmental impacts of a specific development project and focuses primarily on the changes in the environment that would result from the development project.

This Draft EIR evaluates the proposed Project, a mixed use development proposed on an approximately 31,113 square foot site located at 1105-1115 Mission Street which would consist of the demolition of existing buildings, and the construction of two and three-story, mixed-use buildings, rehabilitation of an existing historic building including construction of new commercial and residential uses, and construction of two levels of subterranean parking. Implementation of the proposed Project would provide the City updated and modern facilities to existing and future residents. The Project would consist of 7,394 square feet of commercial space along with 36 residential units and two levels of subterranean parking.

The principal use of this EIR is to provide input into and information about the comprehensive planning analysis undertaken for this proposed Project. This EIR identifies and discusses potential project-specific and cumulative environmental impacts that may occur should the proposed Project be implemented. The intent of this EIR is to (1) be an informational document that serves to inform public agency decision makers and the general public of the potential environmental impacts of the proposed Project; (2) identify possible ways to minimize or avoid any potential significant impacts, either through mitigation or the adoption of alternatives; and (3) disclose to the public required agency approvals.

LEAD AGENCY

The public agency that has the principal responsibility for carrying out or approving a project is designated as the “Lead Agency” under CEQA.

For the proposed Project, the City is the primary approving agency and, therefore, for CEQA purposes is known as the Lead Agency. As such, the City is responsible for ensuring that the EIR satisfies the procedural and substantive requirements of CEQA, and for considering and certifying the adequacy and completeness of the EIR prior to making any decision regarding the proposed Project. During preparation of the EIR,

agencies, organizations, and persons the City believed might have an interest in the proposed Project were specifically contacted.

“Responsible Agency” refers to a public agency that proposes to carry out or approve a project for which the Lead Agency is preparing or has prepared an EIR or Negative Declaration. For purposes of CEQA, the term “Responsible Agency” includes all public agencies other than the Lead Agency having discretionary approval authority over the Project. During the review period following circulation of the Notice of Preparation (NOP), no other public agency identified itself as a Responsible Agency.

“Trustee Agency” refers to a State agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California (e.g., California Department of Fish and Wildlife, State Lands Commission). During the NOP review period, no public agency identified itself as a Trustee Agency.

STANDARDS FOR ADEQUACY

Given the important role of the EIR in this planning and decision-making process, it is essential that the information presented in the EIR be factual, adequate, and complete. The standards for adequacy of an EIR, defined in Section 15151 of the State CEQA Guidelines, are as follows:

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

This EIR has been prepared in accordance with these standards with respect to adequacy under CEQA.

ENVIRONMENTAL REVIEW PROCESS

The CEQA Guidelines define a process for environmental review that includes a series of steps that must be completed prior to the Lead Agency’s taking action on a project.

Project Scoping Process

On January 7, 2019, the City circulated an NOP for review and comment by the public, responsible agencies, and reviewing agencies indicating that an EIR should be prepared for the proposed Project. The 30-day NOP review period ended on February 7, 2019.

During the NOP comment period, written comments were received from five public agencies: the California Native American Heritage Commission, County of Los Angeles Sanitation Districts, California Department of Toxic Substance Control, California Department of Transportation, and South Coast Air Quality Management District.

The NOP and received comments are contained in **Appendix A** of this Draft EIR. Agencies or interested persons who did not respond during the public review period of the NOP will have an opportunity to comment on the EIR during the public review period or during subsequent hearings for EIR approval.

Review and Comment on the Draft Environmental Impact Report

CEQA requires that the Lead Agency provide the public and agencies the opportunity to review and comment on the Draft EIR. The City is providing a 30-day period for review and comment on this Draft EIR, starting July 29, 2019, and ending August 27, 2019.

Copies of this Draft EIR have been sent to the State Clearinghouse, responsible agencies, other agencies that have commented on the NOP, as well as to all interested parties that have requested notice and copies of the Draft EIR. A complete distribution list is included in **Appendix A** of this Draft EIR.

In addition, the Draft EIR is available at the City's website at:

<https://www.southpasadenaca.gov/government/departments/planning-and-building/planning-division>

Interested individuals, organizations, responsible agencies, and other agencies can provide written comments about the Draft EIR addressed to:

Mail: Mr. David Bergman, Interim Director
Planning and Building Dept.
City of South Pasadena
1414 Mission Street
South Pasadena, California 91030
Email: dbergman@southpasadenaca.gov
Fax: (626) 403-7221

After completion of the public review period, a Final EIR will be prepared that includes responses to comments submitted on the Draft EIR and any necessary corrections or additions to the Draft EIR. The Final EIR will be made available to agencies and the public prior to the City's determination on the proposed Project. Once the Final EIR is complete, the City may certify the Final EIR, prepare Findings, and issue a Notice of Determination, the final step in the CEQA process.

ORGANIZATION OF THE EIR

Sections of the Draft EIR are organized as follows:

The **Executive Summary** contains a brief summary of the proposed Project; necessary actions; potential significant effects with proposed mitigation measures; alternatives; areas of controversy known to the Lead Agency, including issues raised by agencies and the public; and issues to be resolved.

Section 1.0: Introduction contains information on the CEQA process and organization of the EIR.

Section 2.0: Project Description presents a detailed description of the proposed Project, including identification of all discretionary actions requiring approval to allow the implementation of the Project.

Section 3.0: Environmental Setting describes the environmental setting of the Project site and surrounding areas, including a brief description of existing land uses and zoning.

Section 4.0: Consideration and Discussion of Environmental Impacts contains analysis of the Project-related impacts, cumulative impacts, and mitigation measures, if necessary, for environmental topics addressed in the EIR.

Section 5.0: Alternatives discusses alternatives to the proposed Project that have been developed and analyzed to provide additional information on ways to avoid or lessen the impacts of the Project.

Section 6.0: Other CEQA Considerations includes discussion of potentially irreversible uses of nonrenewable resources that would result from the Project and growth-inducing impacts.

Section 7.0: Effects Found Not to be Significant includes discussion of potential impacts determined not to be significant.

Section 8.0: Preparers lists persons involved in the preparation of this Draft EIR or who contributed information incorporated into this Draft EIR.

Section 9.0: References lists the principal documents, reports, maps, and other information sources reviewed or referenced in the preparation of this EIR.

Appendices include technical information and other materials used in the preparation of this EIR.

2.0 PROJECT DESCRIPTION

OVERVIEW

The City of South Pasadena, acting as the Lead Agency pursuant to the California Environmental Quality Act (CEQA), has prepared this Draft Environmental Impact Report (Draft EIR) for the proposed Mission Bell Mixed-Use Project (proposed Project) to comply with the requirements of CEQA. As stated in Section 15124 of the CEQA Guidelines, an EIR must include a project description that describes the location and boundaries of the project; a statement of the project objectives sought; a general description of the project's characteristics; and a brief description of the intended uses of the EIR.

PROJECT LOCATION

The proposed Project is located on an approximately 31,113-square-foot site (Project site) within the City of South Pasadena (City). As shown in **Figure 2.0-1: Regional Location Map**, the Project site is within the central portion of the City, approximately 0.24 miles south of State Route 110 (SR 110), 1.4 miles south of Interstate 210 (I-210), 1.81 miles south of Interstate 710 (I-710), and 2.17 miles south of California State Route 134 (SR-134). As shown in **Figure 2.0-2: Project Site Location**, the Project site is bounded by Mission Street to the north, Fairview Avenue to the east, El Centro Street to the south, and Fremont Avenue to the west.

PROJECT OBJECTIVES

Section 15124(b) of the CEQA Guidelines states that “the statement of objectives should include the underlying purpose of the project.” The underlying purpose of the Project is to redevelop the site with residential and commercial uses and achieve the following objectives:

- Maximize the development potential for the Project site based on the parameters of the Mission Street Specific Plan.
- Implement the Mission Street Specific Plan objectives for the Project site as follows:
 - a. Preserve, renovate, and reuse the historic building located at 1115 Mission Street through rehabilitation of the building for new uses.
 - b. Contribute to the development of the MSSP Core Area as a pedestrian oriented retail commercial area to include restaurants and specialty retail uses at the ground level and residential uses above.
 - c. Provide parking adequate to serve new uses and Gold Line patrons.
- Create compelling public and private open space with drought resistant landscaping, well-lit and open storefronts, and outdoor seating.
- Contribute to meeting the City's Regional Housing Needs Assessment (RHNA) goals through the construction of 36 new above moderate-income housing units.



FIGURE 2.0-2

PROJECT CHARACTERISTICS

The Project Applicant, Mission Bell Properties LLC (the “Applicant”) is proposing to construct a three-story mixed used building at 1101-1107 Mission Street, rehabilitate the existing historic building at 1115 Mission Street for adaptive reuse as mixed use, demolish a portion of the building at 1115 Mission and construct a two story residential building, and construct two levels of subterranean parking, (the proposed Project or Project) beneath the entire Project site.

The Project site currently consists of three buildings, as shown in **Figure 2.0-3, Existing Conditions**. The Project proposes demolition of two of the three existing buildings located at 1101-1107 Mission Street and construction of a new three story commercial and residential building on the site. The Project also proposes to retain and rehabilitate the two-story portion of 1115 Mission Street commercial and residential use, remove two-thirds of the existing one-story warehouse to the rear of 1115 Mission Street and construct a new two-story multi-family residential building on the parcel. The Proposed Project would consist of 7,394 square feet of commercial space along the Mission Street and Fairview Avenue frontages and 36 residential units on the upper levels and in the interior of the site, as shown in **Figure 2.0-4, Site Plan**.

Parking would be provided in two subterranean levels with a total of 109 parking spaces as shown in **Figure 2.0-5: Basement Floor Plan – B2**, and **Figure 2.0-6: Basement Floor Plan – B1**. The residential buildings would consist of a total of 36 units within approximately 33,281 square feet of area. Residential common areas comprise 4,395 square feet. The residences would be comprised of 24 one-bedroom units and 12 two-bedroom units. The ground floor will feature 9 units, private common areas, a gym, restaurant, and a dining area as shown in **Figure 2.0-7: Ground Floor Plan – L1**. The second-floor features 14 units, as shown in **Figure 2.0-8: Second-Floor Plan – L2**. The third floor contains 13 units, as shown in **Figure 2.0-9: Third-Floor Plan – L3**.

The historical building will consist of 1,441 square feet of commercial retail. The proposed Project would add an additional 5,953 square feet of new commercial space along Mission Street designated for a restaurant or retail uses. In total, the commercial area for the Project will be 7,394 square feet.

The proposed Project would be no more than 40 feet in height, as shown in **Figure 2.0-10: North and West Elevations**, and **Figure 2.0-11: South and East Elevation**. An overview of the Project is shown in **Figure 2.0-12: Concept Rendering**.

Landscaping

The proposed Project includes landscaping and other outdoor improvements in connection with the development of the Project site, as shown in **Figure 2.0-13: Landscaping Plan**. Drought-tolerant and

ornamental landscaping with high-efficiency irrigation features would be placed throughout the Project site to provide shading opportunities and erosion control. The proposed Project would include public and resident courtyards, as well as private balconies for select units.

Parking Facilities and Site Access

The proposed Project would include the development of two levels of subterranean parking providing 109 parking spaces. Primary pedestrian access to the Project site would be provided along Mission Street facing the commercial/retail area. Some street parking is available along Mission Street. Access to the subterranean parking structure would be provided along Fairview Avenue.

Sustainability Components

Various sustainable building design and energy conservation components would be considered in the design, construction, and operation of the proposed Project facilities to meet or exceed the 2017 California Title 24 requirements.¹ Additionally, the Project would comply with the 2017 California Green Building Code. The proposed Project provides for high-performance building design and adds energy conservation measures and alternates to meet a higher goal to enhance the residents experience and reduce the annual utility costs for the reconstructed Project site.

Project Construction

Construction would take approximately 27 months and would occur through a phased process of demolition, excavation and grading, and building construction. Construction would begin in 2020 and is expected to complete by mid-2022.

INTENDED USES OF THIS EIR AND PROJECT APPROVALS

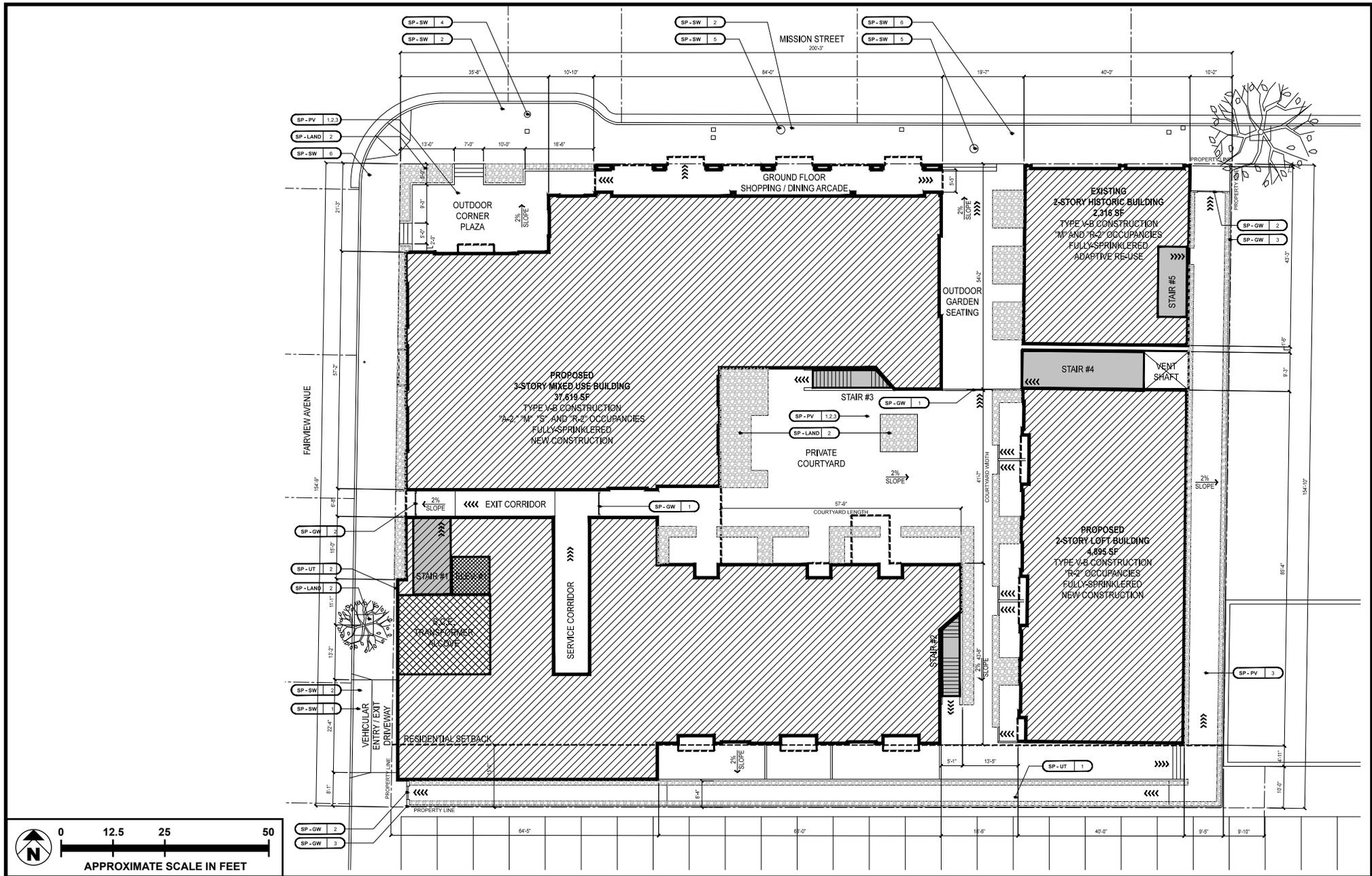
This EIR will serve as the CEQA compliance document for any necessary approvals related to the proposed Project components. The Project requires approval by the City of discretionary approvals including a Conditional Use Permit, Design Review Permit, Certificate of Appropriateness, and a Vesting Tentative Parcel Map.

1 California Building Standards Code, 24 California Code of Regulations (CCR).



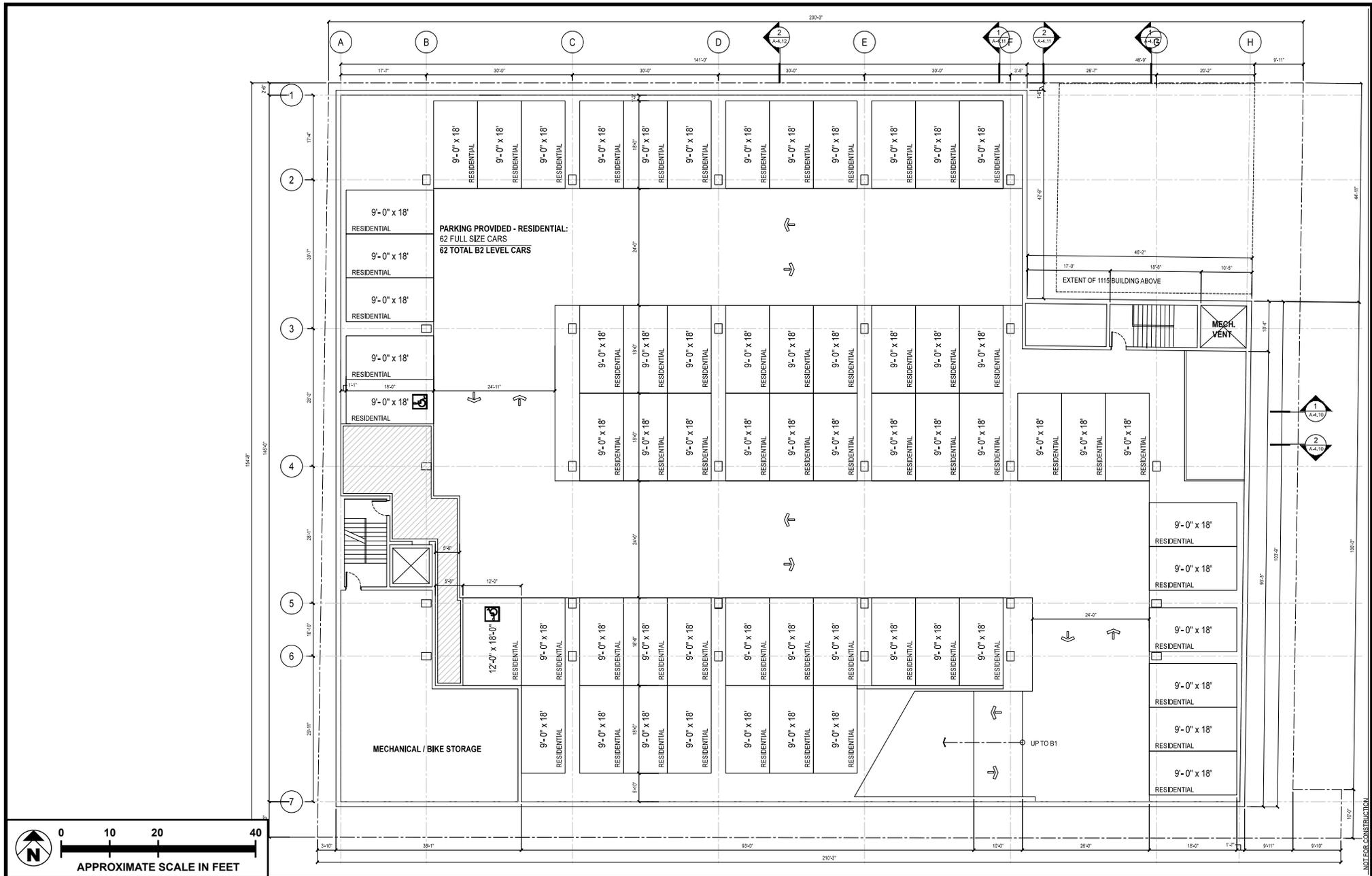
SOURCE: Google Earth - 2019

FIGURE 2.0-3



SOURCE: Workshop Design Collective, Inc. - 2019

FIGURE 2.0-4

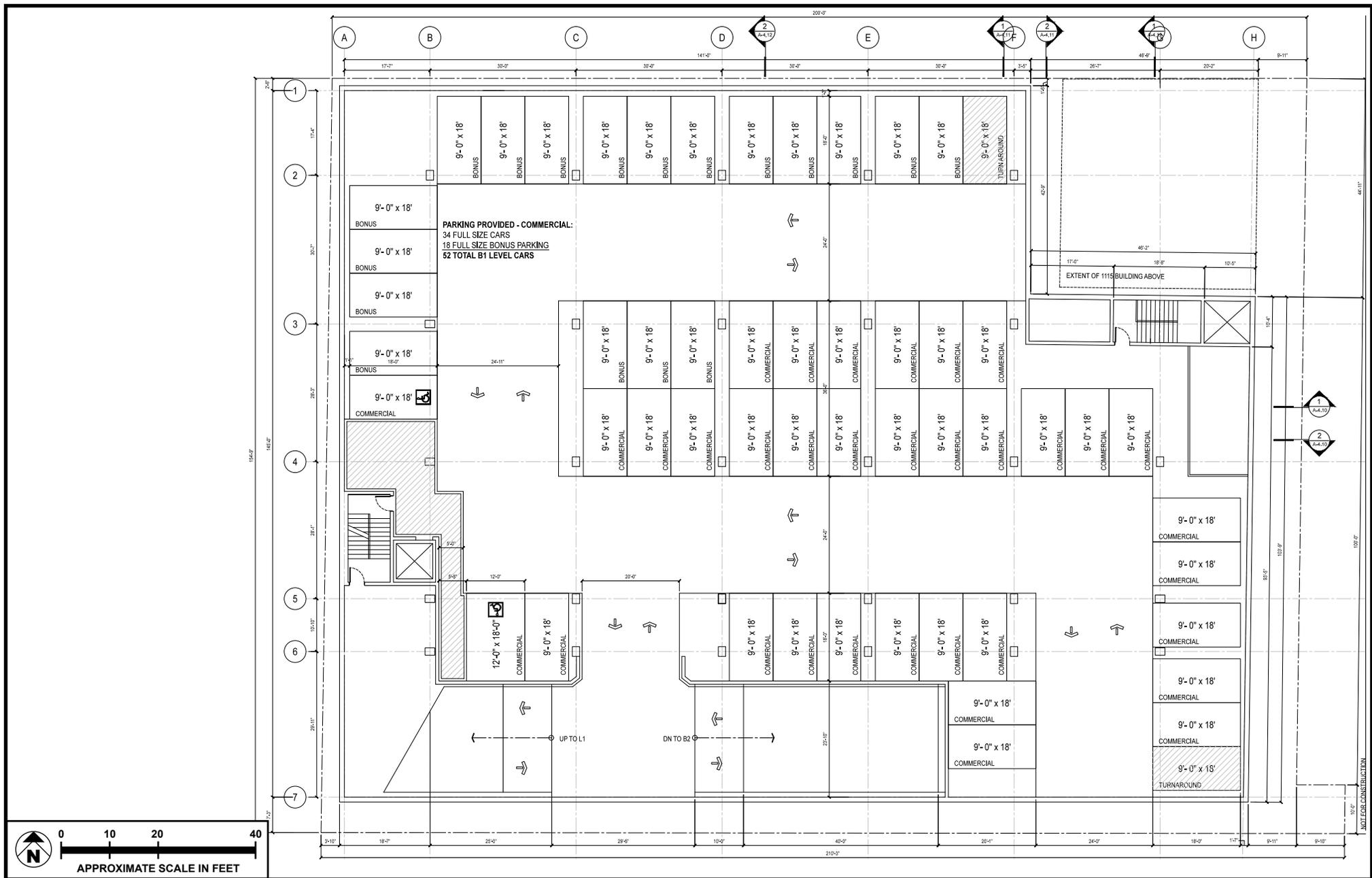


SOURCE: Workshop Design Collective, Inc.- 2019

FIGURE 2.0-5

Meridian
Consultants

Basement Floor Plan – B2

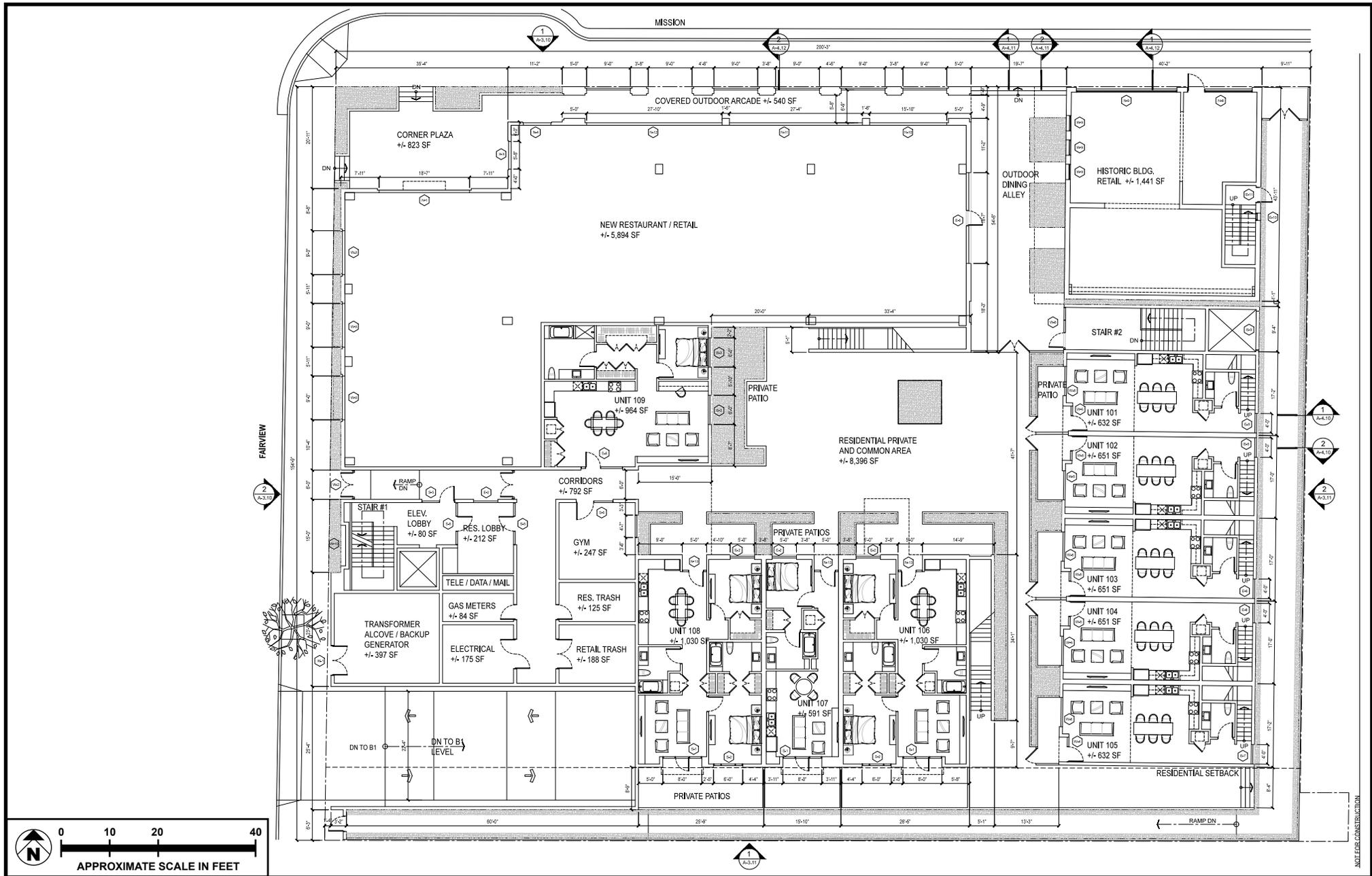


SOURCE: Workshop Design Collective, Inc.- 2019

FIGURE 2.0-6

Meridian
Consultants

Basement Floor Plan – B1



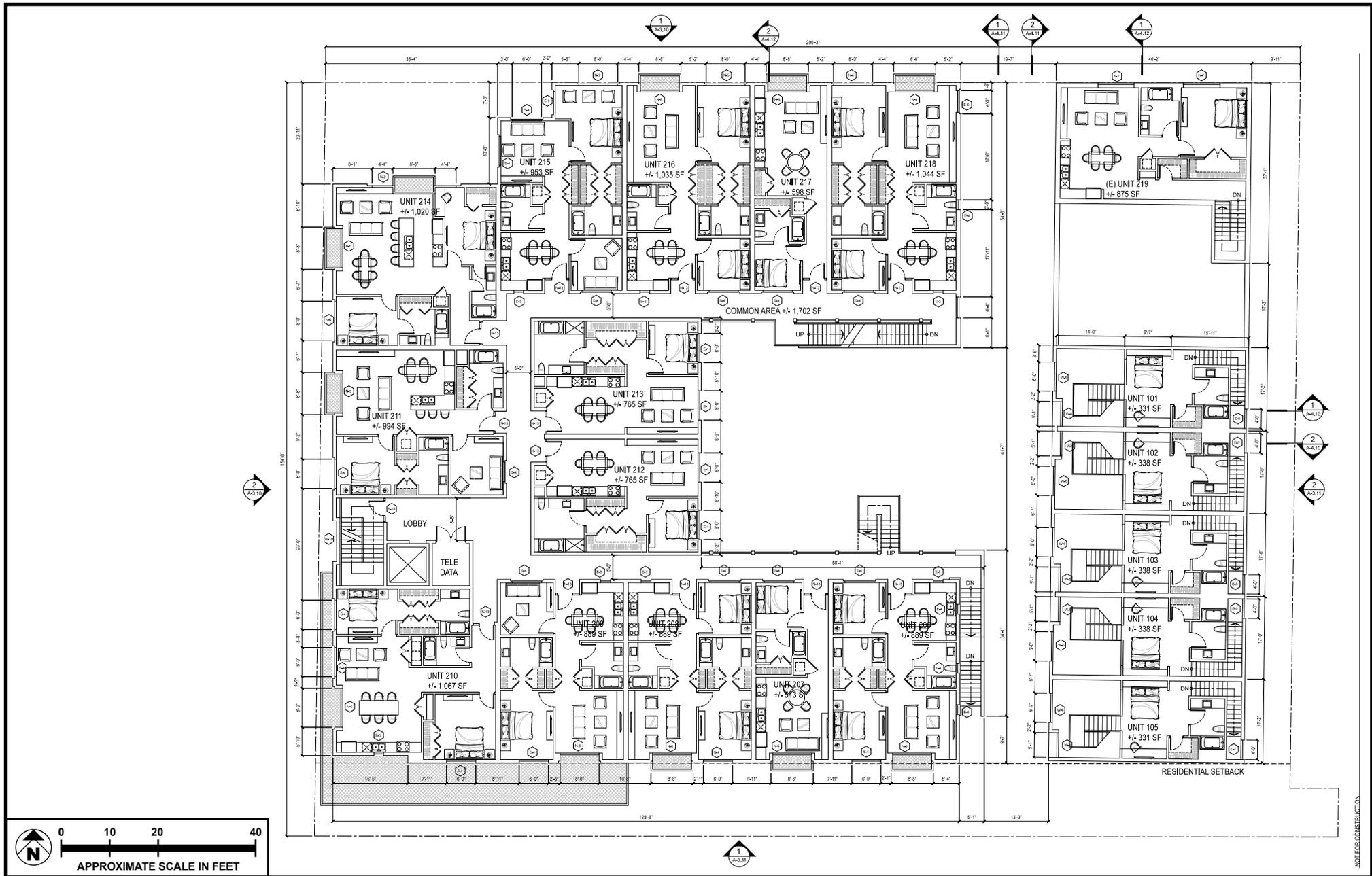
SOURCE: Workshop Design Collective, Inc. - 2019

FIGURE 2.0-7



Meridian
Consultants

Ground Floor Plan – L1

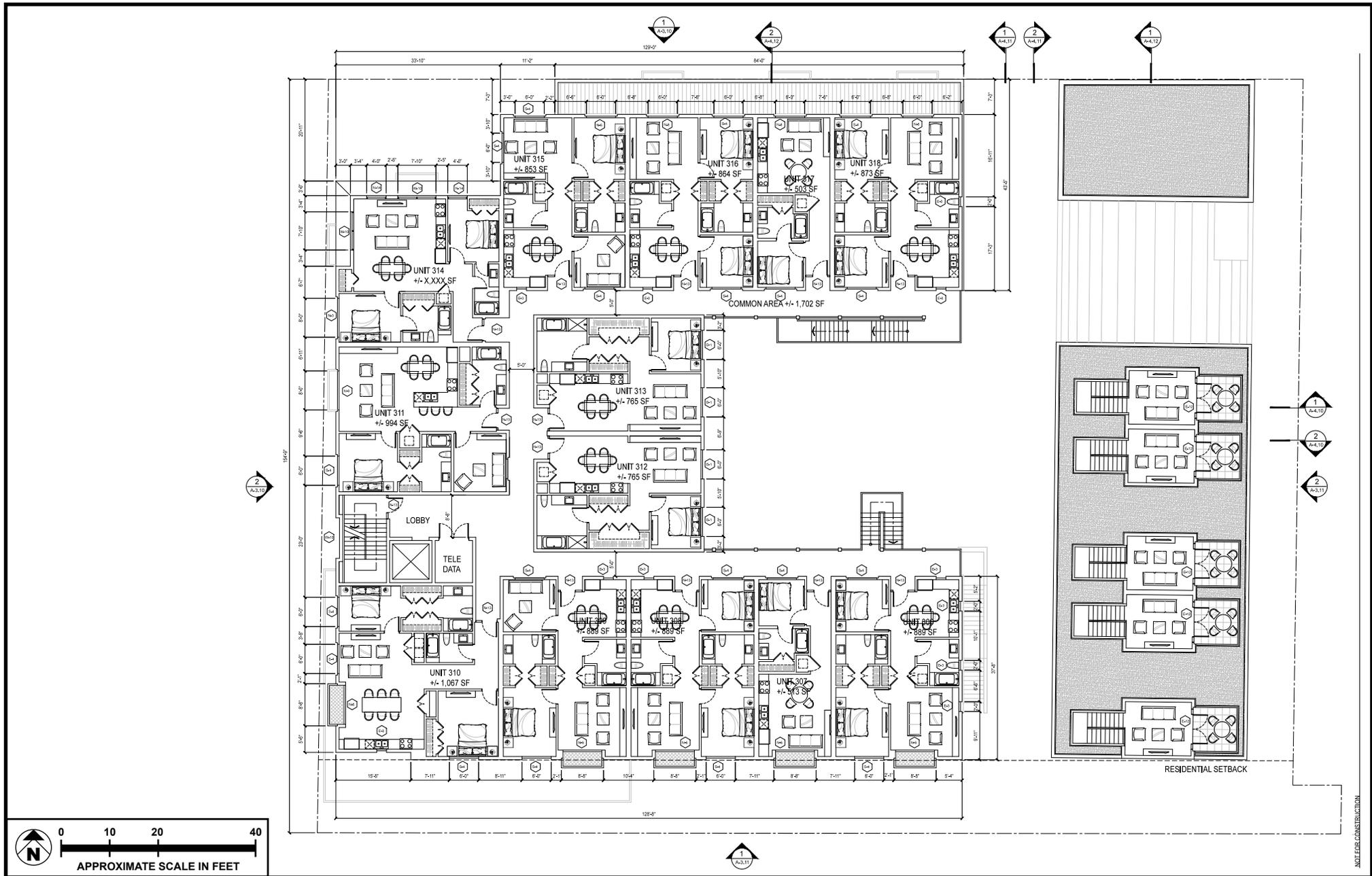


SOURCE: Workshop Design Collective, Inc. - 2019

FIGURE 2.0-8



Second Floor Plan – L2

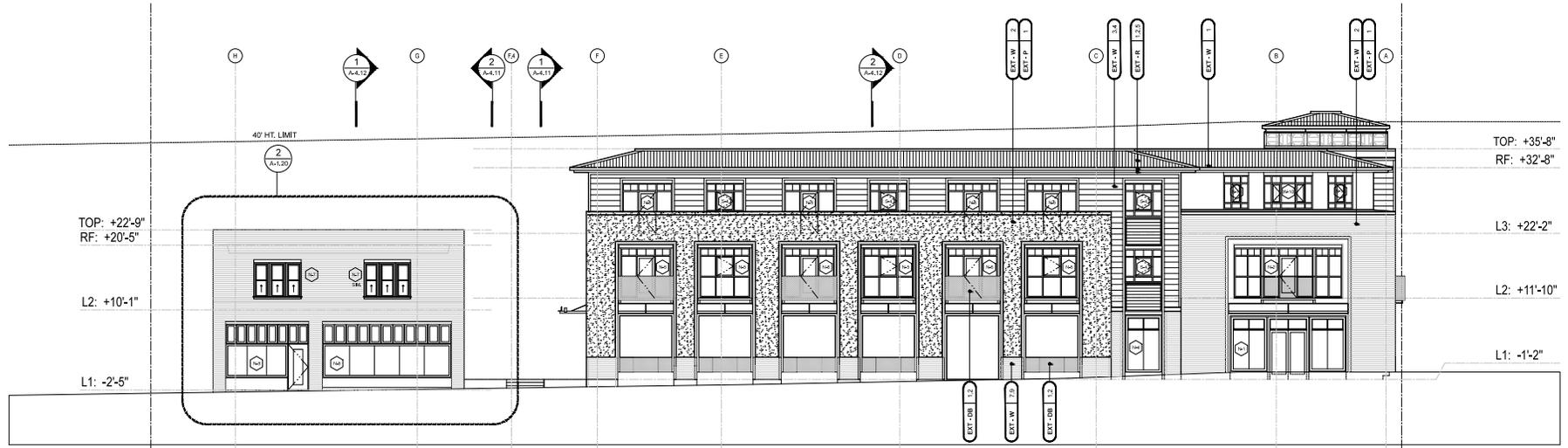


SOURCE: Workshop Design Collective, Inc. - 2019

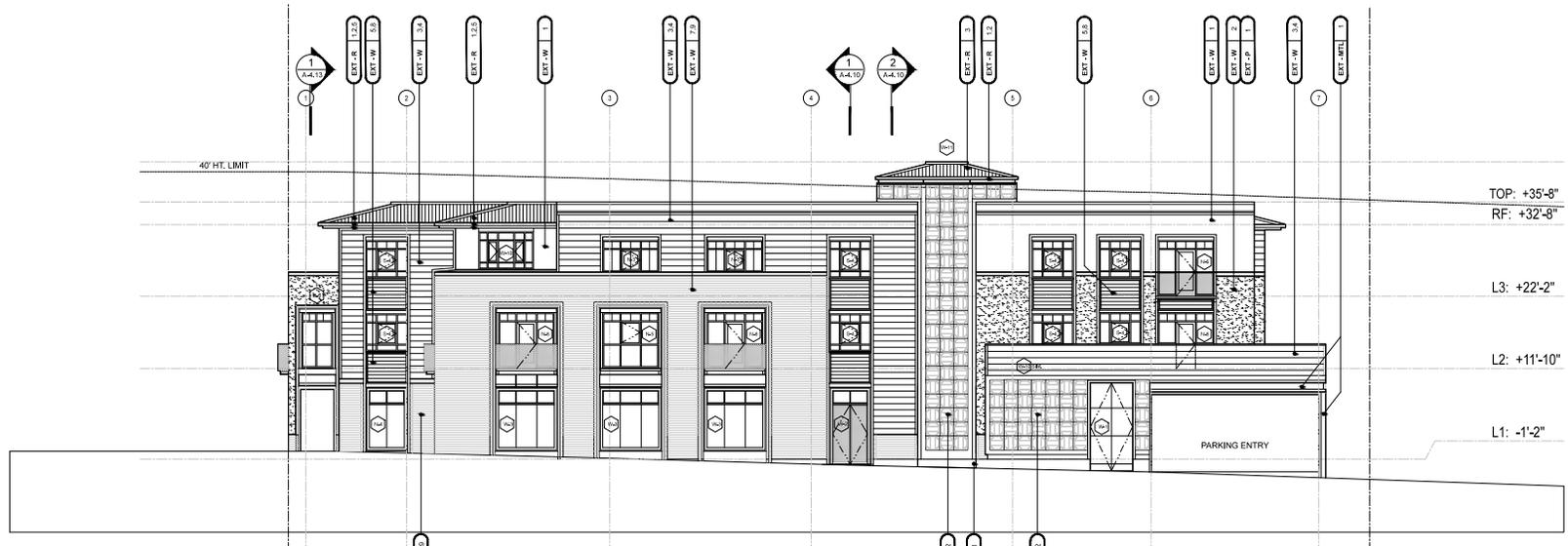
FIGURE 2.0-9



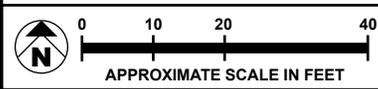
Third Floor Plan – L3



NORTH ELEVATION



WEST ELEVATION



SOURCE: Workshop Design Collective, Inc.- 2019

FIGURE 2.0-10

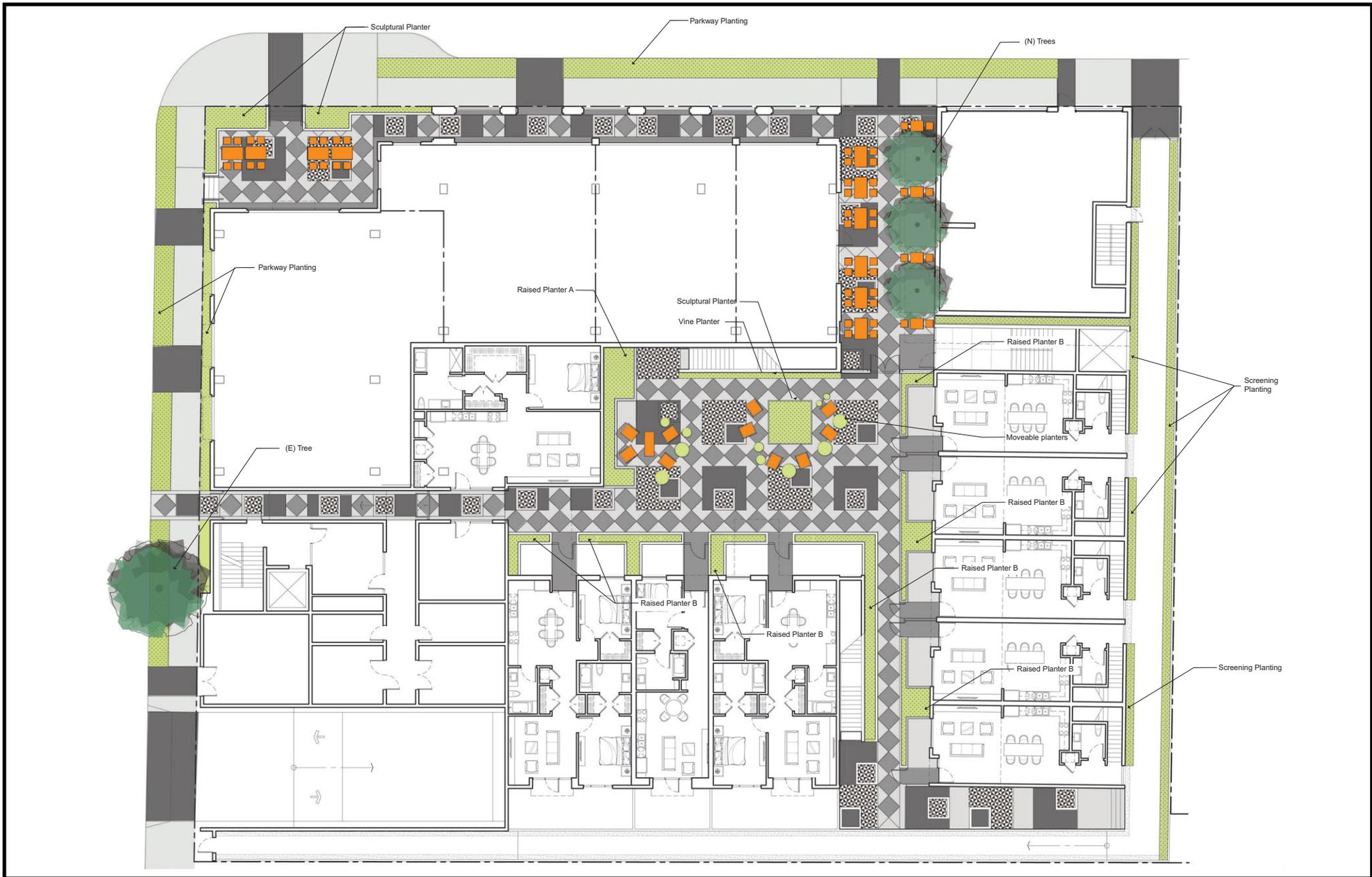
NOT FOR CONSTRUCTION



MISSION AND FAIRVIEW CORNER VIEW

SOURCE: Workshop Design Collective, Inc.- 2019

FIGURE 2.0-12



SOURCE: Workshop Design Collective, Inc.- 2019

FIGURE 2.0-13

3.0 ENVIRONMENTAL SETTING

This section of the EIR provides a general overview of the existing environmental setting of the Project site and surrounding area. The purpose of describing and defining the environmental setting is to define the baseline physical conditions to determine the significance of the environmental impacts that would result from the proposed Project. A listing and description of the related projects considered part of the future conditions in evaluating potential cumulative environmental impacts is also provided.

PROJECT LOCATION

The Project site is located within the City of South Pasadena (City), which is within Los Angeles County. Surrounding communities include the Cities of Los Angeles and Alhambra to the south; Cities of San Marino and San Gabriel to the east; the City of Pasadena to the north; and the City of Los Angeles to the west. Addresses associated with the Project site are 1101, 1107, and 1115 Mission Street. The Project site is bound by Mission Street to the north, Fairview Street to the west, and commercial uses to the east and south.

EXISTING ONSITE USES

The Project site is currently occupied by three buildings: 1115 Mission Street is currently occupied by Amy's Playground; 1107 Mission Street is occupied by La Fiesta Grande restaurant; and 1101 Mission Street is occupied by Divergent Crossfit, a commercial gym.

ACCESS

Vehicular access to the Project site is provided by Mission Street to the north, and Fairview Avenue to the west. The Project area is served by the 176 and 260 bus lines operated by the Los Angeles County Metropolitan Authority (Metro), with stops located at Mission Street and Fremont Avenue, and Mission Street and Fair Oaks Avenue, respectively. State Route 110 (SR 110) is located approximately 1,200 feet north. In addition, the Project site is approximately 600 feet east of the Metro Gold Line South Pasadena station.

LAND USE AND ZONING DESIGNATIONS

The Project site is designated by the City's General Plan as Mission Street Specific Plan (MSSP), and is zoned MSSP Core Area, District A.

CUMULATIVE IMPACT ANALYSIS

In addition to Project-specific impacts, the environmental analysis contained in this EIR examines the potential environmental effects associated with cumulative development. CEQA requires that EIRs discuss cumulative impacts in addition to project-specific impacts. In accordance with CEQA, the discussion of cumulative impacts must reflect the severity of the impacts and the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to a proposed project alone. According to Section 15355 of the State CEQA Guidelines:

“Cumulative impacts” refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Section 15130(a)(l) of the State CEQA Guidelines further states that “a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts.”

Section 15130(a) of the State CEQA Guidelines also requires that EIRs discuss the cumulative impacts of a project when the proposed project's incremental effect is “cumulatively considerable.” When a lead agency is examining a proposed project with an incremental effect that is not cumulatively considerable, it need not consider the effect significant but must briefly describe the basis for its conclusion. If the combined cumulative impact associated with a project's incremental effect and the effects of other projects is not significant, Section 15130(a)(2) of the State CEQA Guidelines requires a brief discussion in the EIR of why a cumulative impact is not significant and why it is not discussed in further detail. Section 15130(a)(3) of the State CEQA Guidelines requires supporting analysis in the EIR if a determination is made that a project's contribution to a significant cumulative impact is rendered less than cumulatively considerable and, therefore, is not significant. CEQA recognizes that the analysis of cumulative impacts need not be as detailed as the analysis of project-related impacts, but instead should “be guided by the standards of practicality and reasonableness” (State CEQA Guidelines Section 15130(b)). The discussion of cumulative impacts in this Draft EIR focuses on whether the impacts of the proposed Project are cumulatively considerable.

To support each significance conclusion, this Draft EIR provides a cumulative impact analysis. Where Project-specific impacts have been identified that, together with the effects of other related projects, could result in cumulatively significant impacts, these potential impacts are documented.

Section 15130(b) of the State CEQA Guidelines defines consideration of either of the following two elements as necessary to provide an adequate discussion of cumulative impacts: “(A) a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) a summary of projections contained in an adopted local, regional, or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect.” In this Draft EIR, a combination of these two methods is used, depending upon the specific environmental issue area being analyzed.

Cumulative study areas are defined based on an analysis of the geographical scope relevant to each particular environmental issue. Therefore, the cumulative study area for each individual environmental impact issue may vary. For example, a cumulative land use impact may only affect the compatibility of uses within the vicinity of the Project site, while a cumulative air quality impact may affect the entire South Coast Air Basin. The specific boundaries and the projected growth within those boundaries for the cumulative study area of each environmental issue are identified in the applicable environmental issue section of this Draft EIR.

For purposes of the traffic analysis, the following related projects were identified.:

- 820 Mission Street, a development proposal consisting of 38 dwelling units and 3,585 square feet of office
- South Pasadena Downtown Revitalization Project, consisting of 201 condominiums; 9,000 square feet of senior housing; 5,029 square feet of general office; and 13,872 square feet of retail and restaurant uses.

Additionally, the City is in the process of updating its General Plan and preparing a new Downtown Specific Plan. Cumulative analysis in this DEIR also considers the growth projections contained in the Southern California Association of Governments (SCAG) and the City’s planning initiatives.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

The purpose of the following sections is to inform decision makers and the public of the type and magnitude of the changes to the existing environment that would result from the proposed Project. The following sections provide detailed discussion of the environmental setting for each topic addressed in this Draft Environmental Impact Report (EIR), the analysis of the potential impacts of the proposed Project, potential cumulative impacts, and measures identified to mitigate these impacts if necessary.

The environmental issues evaluated in this EIR are as follows:

- Air Quality
- Cultural Resources
- Energy
- Land Use and Planning
- Noise

INTRODUCTION

This section of the EIR evaluates potential air quality impacts that will be generated by construction and operation of the proposed Project. The ambient air quality of the local and regional area is provided, along with the federal, State, and local air pollutant regulations. In addition, sources of air emissions near the Project Site are discussed. Plans and policies developed to improve air quality, and regulatory measures are identified. The Air Quality Study for the proposed Project is provided in **Appendix B**.

ENVIRONMENTAL SETTING

Regulatory Framework

Air quality within the South Coast Air Basin (Basin) is addressed through the efforts of various federal, State, regional, and local government agencies. These agencies work jointly as well as individually to improve air quality through legislation, regulations, planning, policy making, enforcement, education, and a variety of programs. The agencies primarily responsible for improving the air quality within the Basin are discussed in the following paragraphs along with their individual responsibilities.

a. Federal

Clean Air Act

The United States Environmental Protection Agency (USEPA) is responsible for the implementation of portions of the Clean Air Act (CAA) of 1970,¹ which regulates certain stationary and mobile sources of air emissions and other requirements. Charged with handling global, international, national, and interstate air pollution issues and policies, the USEPA sets national vehicle and stationary source emission standards; oversees the approval of all State Implementation Plans;² provides research and guidance for air pollution programs; and sets National Ambient Air Quality Standards (NAAQS).³ NAAQS for the seven common air pollutants, Ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead (Pb), are identified in the CAA.

The 1990 amendments to the CAA identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward

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- 1 US Environmental Protection Agency, "Clean Air Act Text," <https://www.epa.gov/clean-air-act-overview/clean-air-act-text>.
 - 2 A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain National Ambient Air Quality Standards.
 - 3 The NAAQS were set to protect public health, including that of sensitive individuals; for this reason, the standards continue to change as more medical research becomes available regarding the health effects of the criteria pollutants. The primary NAAQS define the air quality considered necessary, with an adequate margin of safety, to protect the public health.

attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA that are most applicable to the proposed Project include Title I, Nonattainment Provisions, and Title II, Mobile Source Provisions.

The NAAQS were also amended in July 1997 to include an 8-hour standard for O₃ and to adopt a NAAQS for PM_{2.5}. The NAAQS were amended in September 2006 to include an established methodology for calculating PM_{2.5} and to revoke the annual PM₁₀ threshold. The CAA includes the following deadlines for meeting the NAAQS within the Basin: (1) PM_{2.5} by the year 2014, which has not been met due to extreme drought conditions; and (2) 8-hour O₃ by the year 2023.

b. State

California Clean Air Act

The California Clean Air Act,⁴ signed into law in 1988, requires all areas of the State to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practicable date.⁵ The California Air Resources Board (CARB), a part of the California EPA (CalEPA), is responsible for the coordination and administration of both State and federal air pollution control programs within California. In this capacity, CARB conducts research, sets State ambient air quality standards, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products, and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions and the CAAQS currently in effect for each of the criteria pollutants, as well as for other pollutants recognized by the State. The CAAQS are more stringent than the NAAQS.

Air Quality and Land Use Handbook

CARB published the *Air Quality and Land Use Handbook*⁶ on April 28, 2005, to serve as a general guide for considering health effects associated with siting sensitive receptors proximate to sources of toxic air contaminant (TAC) emissions. The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions.

4 California Air Resources Board (CARB), "California Clean Air Act" (1988), [https://arb.ca.gov/bluebook/bb05/HEA\[14\]16/HEA_\[14\]_16.htm](https://arb.ca.gov/bluebook/bb05/HEA[14]16/HEA_[14]_16.htm).

5 CARB, "CAAQS" (August 10, 2017), <https://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm>.

6 CARB, *Air Quality and Land Use Handbook: A Community Health Perspective* (April 2005), <https://www.arb.ca.gov/ch/handbook.pdf>.

Some examples of CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural road with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 50 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); and (3) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines.

California Motor Vehicle Code

The vehicle programs are a critical component in the State Implementation Plan (SIP) for achieving national ambient air quality standards in the South Coast and San Joaquin Valley.⁷ They are also integral in CARB's Scoping Plan⁸ to achieve the GHG reduction goals that were established through California legislation and Executive Orders.

California Advanced Clean Cars Program

In 2012, CARB adopted the California Advanced Clean Cars (ACC) Program which has regulations and standards that combine the control of criteria pollutants and GHG emissions into a single coordinated set of requirements for vehicle model years 2015 through 2025. ACC ensures the development of environmentally superior passenger cars and other vehicles that would continue to deliver the performance, utility, and safety vehicle owners have come to expect, all while saving the consumer money through significant fuel savings. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (i.e., battery electric and fuel-cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years.⁹

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling (Title 13 of the California Code of Regulations, Section 2485)

The Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling¹⁰ measure includes regulations that pertain to air quality emissions. Specifically, Section 2485 states that during

7 CARB, "California State Implementation Plans" (last reviewed September 21, 2018), <https://www.arb.ca.gov/planning/sip/sip.htm>.

8 CARB, "AB 32 Scoping Plan" (January 8, 2018), <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>.

9 CARB, "The Advanced Clean Cars Program" (January 18, 2018), <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program>.

10 CARB, Section 2485 in Title 13 of the CCR, https://www.arb.ca.gov/msprog/truck-idling/13ccr2485_09022016.pdf.

construction, the idling of all diesel-fueled commercial vehicles weighing more than 10,000 pounds shall be limited to 5 minutes at any location. In addition, Section 93115 in Title 17 of the California Code of Regulations (CCR)¹¹ states that operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

California Air Resources Board (CARB)

CARB Rule 2449, General Requirements for In-Use Off-Road Diesel-Fueled Fleets

Requires off-road diesel vehicles to limit nonessential idling to no more than 5 consecutive minutes.¹²

CARB Rule 2480 Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools

CARB Rule 2480 requires school busses, transit busses, and commercial vehicles (gross vehicle weight greater than 10,001 pounds except for pickup trucks and zero emission vehicles) to limit nonessential idling to no more than 5 consecutive minutes when within 100 feet of a school.¹³

CARB Rule 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

CARB Rule 2485 requires commercial vehicles weighing more than 10,001 pounds to limit nonessential idling to no more than 5 consecutive minutes.¹⁴

California Building Standards Code

2016 California Energy Code (CCR, Title 24, Part 6)

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission in June 1977 and are updated triennially in the California Building Standards Code (CBSC). Title 24, Part 6, requires the design of building shells and building components to conserve energy.¹⁵ The standards are updated periodically to allow for consideration and possible incorporation of new energy-efficient technologies and methods.

11 CARB, *Final Regulation Order: Amendments to the Airborne Toxic Control Measure For Stationary Compression Ignition Engines* (May 19, 2011), <https://www.arb.ca.gov/diesel/documents/FinalReg2011.pdf>.

12 CARB, *Final Regulation Order: Regulation For In-Use Off-Road Diesel-Fueled Fleets*, <https://www.arb.ca.gov/msprog/ordiesel/documents/finalregorder-dec2011.pdf>.

13 CARB, Section 2480 in Title 13 of the CCR, California Administrative Code (December 24, 2010), <https://www.arb.ca.gov/toxics/sbidling/SBVIdling.pdf>.

14 CARB, CARB Rule 2485, https://www.arb.ca.gov/msprog/truck-idling/13ccr2485_09022016.pdf.

15 California Energy Commission, *2016 Building Energy Efficiency Standards For Residential And Nonresidential Buildings* (June 2015), <http://www.energy.ca.gov/2015publications/CEC-400-2015-037/CEC-400-2015-037-CMF.pdf>.

On January 1, 2010, the California Energy Commission adopted the 2008 Non-residential Compliance Manual, while the 2008 Residential Compliance Manual was adopted on December 17, 2008. The 2008 Code provides California with an adequate, reasonably priced, and environmentally sound supply of energy in response to AB 32, acts on the findings from the Integrated Energy Policy Report, and meets the Executive Order in the Green Building Initiative to improve the energy efficiency of nonresidential buildings through aggressive standards.¹⁶

On May 31, 2012, the California Energy Commission adopted the 2013 Building Energy Efficiency Standards, which went into effect on January 1, 2014. Buildings constructed in accordance with the 2013 Building and Energy Efficiency Standards are 25 percent (residential) to 30 percent (nonresidential) more energy efficient than the 2008 standards as a result of better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses.¹⁷

The 2016 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The most significant improvements to nonresidential standards include alignment with the American Society of Heating, Refrigerating, and Air-Conditioning Engineers 90.1 2013 standards, and efficiency for elevators and direct digital controls.¹⁸

California Green Building Code (California Code of Regulations, Title 24, Part 11)

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (CALGreen) was adopted as part of the California Building Standards Code (Title 24).¹⁹ CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011.

The 2016 CALGreen Code went into effect on January 1, 2017. A number of important updates are included in the 2016 CALGreen Code, such as increased requirements for electrical vehicle charging infrastructure and a new universal waste code section.

16 California Energy Commission, *2008 Building Energy Efficiency Standards for Residential and Nonresidential Buildings* (January 2010), <http://www.energy.ca.gov/2008publications/CEC-400-2008-001/CEC-400-2008-001-CMF.PDF>

17 California Energy Commission, *2013 Building Energy Efficiency Standards for Residential and Nonresidential Buildings* (May 2012), <https://www.energy.ca.gov/2012publications/CEC-400-2012-004/CEC-400-2012-004-CMF-REV2.pdf>.

18 California Energy Commission, *2016 Building Energy Efficiency Standards For Residential And Nonresidential Buildings*.

19 California Buildings Standards Commission, "California Green Buildings Standards Code" (2017), <http://www.bsc.ca.gov/Home/CALGreen.aspx>.

The State and national ambient air quality standards for each of the criteria pollutants and their effects on health are summarized in **Table 4.1-1: Ambient Air Quality Standards**. **Table 4.1-1** also sets forth the State ambient air quality standards and health effects applicable to sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride, even though such pollutants are generally not applicable to the uses within the Project site.

**Table 4.1-1
Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method	Primary	Secondary	Method
O ₃	1 hour	0.09 ppm (180 µg/m ³)	Ultraviolet photometry	—	Same as primary standard	Ultraviolet photometry
	8 hour	0.07 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
PM ₁₀	24 hour	50 µg/m ³	Gravimetric or beta attenuation	150 µg/m ³	Same as primary standard	Inertial separation and gravimetric analysis
	Annual arithmetic mean	20 µg/m ³		—		
PM _{2.5}	24 hours	No separate State standard		35 µg/m ³	Same as primary standard	Inertial separation and gravimetric analysis
	Annual arithmetic mean	12 µg/m ³	Gravimetric or beta attenuation	12 µg/m ³		
CO	8 hours	9.0 ppm (10 mg/m ³)	Nondispersive infrared photometry (NDIR)	9 ppm (10 mg/m ³)	None	NDIR
	1 hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
NO ₂	Annual arithmetic mean	0.03 ppm (57 µg/m ³)	Gas phase chemiluminescence	0.053 ppm (100 µg/m ³)	Same as primary standard	Gas phase chemiluminescence
	1 hour	0.18 ppm (339 µg/m ³)		0.100 ppm (188 µg/m ³)		

Source: California Air Resources Board website at: <https://www.arb.ca.gov/research/aaqs/aaqs2.pdf> (accessed January 2018).

Note: ppm = parts per million.

c. Regional

South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) shares responsibility with CARB for ensuring that all State and federal ambient air quality standards are achieved and maintained over an area of approximately 10,743 square miles. This area includes all of Orange County and Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County.

Air Quality Management Plan

The Project site lies within the jurisdiction of the SCAQMD, and compliance with SCAQMD rules and guidelines is required. SCAQMD is responsible for controlling emissions primarily from stationary sources. SCAQMD maintains air quality monitoring stations throughout the Basin. In coordination with the Southern California Association of Governments (SCAG), SCAQMD is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the Basin. An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as nonattainment of the national and/or California ambient air quality standards.

SCAQMD approved a Final 2016 AQMP on March 3, 2017.²⁰ The 2016 AQMP includes transportation control measures developed by SCAG from the *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016 RTP/SCS), as well as the integrated strategies and measures needed to meet the NAAQS. The 2016 AQMP demonstrates attainment of the 1-hour and 8-hour ozone NAAQS as well as the latest 24-hour and annual PM_{2.5} standards.

Under the Federal CAA, SCAQMD has adopted federal attainment plans for O₃ and PM₁₀. The SCAQMD reviews projects to ensure that they would not (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay the timely attainment of any air quality standard or any required interim emission reductions or other milestones of any federal attainment plan.

Local governments have the authority and responsibility to reduce air pollution through their police power and land use decision-making authority. Specifically, local governments are responsible for the mitigation of emissions resulting from land use decisions and for the implementation of transportation control measures as outlined in the AQMP.²¹ The AQMP assigns local governments certain responsibilities to

20 South Coast Air Quality Management District (SCAQMD), "Final 2016 Air Quality Management Plan" (2016), <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp>.

21 SCAQMD, *CEQA Air Quality Handbook* (April 2003), p. 2-2.

assist the Basin in meeting air quality goals and policies. The General Plans for local governments should include in their Air Quality Elements goals, policies, and implementation measures that provide the regulatory framework needed to assist the Basin in meeting the AQMP's goals and policies. Through capital improvement programs, local governments can fund infrastructure that contributes to improved air quality by requiring such improvements as bus turnouts, energy-efficient streetlights, and synchronized traffic signals.

Criteria Pollutants

Air pollutant emissions within the region are primarily generated by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack at an individual facility. Area sources are widely distributed over a geographic area and are made up of multiple sources, such as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, parking lots, and some consumer products.

Air quality of a region is considered to be in attainment of the NAAQS if the measured ambient air pollutant levels are not exceeded more than once per year, except for O₃, PM₁₀, PM_{2.5}. The NAAQS for O₃, PM₁₀, and PM_{2.5} are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. With respect to the CAAQS, a region's air quality is considered to be in attainment if the measured ambient air pollutant levels for O₃, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and Pb are not exceeded, and all other standards are not equaled or exceeded at any time in any consecutive 3-year period. CARB is the State agency responsible for setting the CAAQS.

A brief description of the criteria pollutants is provided in the following paragraphs, with related health effects summarized in **Table 4.1-2: Common Sources of Health Effects for Criteria Air Pollutants**.

O₃ is a gas formed when volatile organic compounds (VOCs) and oxides of nitrogen (NO_x), both byproducts of internal combustion engine exhaust and other sources, undergo slow photochemical reactions in the presence of sunlight. O₃ concentrations are generally highest during the summer months, when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.

VOCs are compounds composed primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Adverse effects on human health are not caused directly by VOCs, which are not "criteria" pollutants per se, but rather by the reactions of VOCs to form secondary air pollutants, including O₃. VOCs are also referred to as reactive organic compounds (ROCs) or reactive organic gases (ROGs).

**Table 4.1-2
Common Sources of Health Effects for Criteria Air Pollutants**

Pollutants	Sources	Primary Effects
Ozone (O ₃)	Formed when VOC and oxides of nitrogen (NO _x) react in the presence of sunlight; VOC sources include any source that burns fuels (e.g., gasoline, natural gas, wood, oil), solvents, petroleum processing, and storage and pesticides	Breathing difficulties, lung tissue damage, damage to rubber and some plastics
Volatile Organic Compounds (VOC)	Fuel combustion and/or released through evaporation of organic compounds, internal combustion associated with motor vehicle usage is the major source of hydrocarbons, as are architectural coatings	Headaches, dizziness, light-headedness, drowsiness, nausea, and eye and respiratory irritation
Respirable Particulate Matter (PM ₁₀)	Road dust, windblown dust (agriculture), construction and fireplaces; also formed from other pollutants (e.g., acid rain, NO _x , oxides of sulfur [SO _x], organics) and from incomplete combustion of any fuel	Increased respiratory disease, lung damage, cancer, premature death, reduced visibility, surface soiling
Fine Particulate Matter (PM _{2.5})	Fuel combustion in motor vehicles, equipment and industrial sources, residential and agricultural burning; also formed from reaction of other pollutants (e.g., acid rain, NO _x , SO _x , organics)	Increases respiratory disease, lung damage, cancer, premature death, reduced visibility, surface soiling
Carbon Monoxide (CO)	Any source that burns fuel, such as automobiles, trucks, heavy construction equipment, farming equipment, and residential heating	Chest pain in heart patients, headaches, reduced mental alertness
Nitrogen Dioxide (NO ₂)	This would include motor vehicle exhaust; high temperature stationary combustion; atmospheric reactions	Lung irritation and damage
Lead (Pb)	Metal smelters, resource recovery, leaded gasoline, deterioration of lead paint	Learning disabilities, brain and kidney damage
Sulfur Dioxide (SO ₂)	Coal- or oil-burning power plants and industries, refineries, diesel engines	Increases lung disease and breathing problems for asthmatics; reacts in the atmosphere to form acid rain

Source: California Air Resources Board, "ARB Fact Sheet: Air Pollution and Health" (last reviewed December 2, 2009), accessed March 2017, <http://www.arb.ca.gov/research/health/fs/fs1/fs1.htm>.

NO₂ is a reddish-brown, highly reactive gas that is formed in the ambient air through the oxidation of nitric oxide (NO). NO₂ is also a byproduct of fuel combustion. The principle form of NO₂ produced by combustion is NO, but NO reacts quickly to form NO₂, creating the mixture of NO and NO₂ into NO_x. NO₂ acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric

concentrations, however, NO_x is only potentially irritating. NO₂ absorbs blue light, the result of which is a brownish-red cast to the atmosphere and reduced visibility.

CO is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, and because motor vehicles operating at slow speeds are the primary source of CO in the basin, the highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

SO₂ is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of the burning of high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO₂ oxidizes in the atmosphere, it forms sulfates (SO₄).

PM₁₀ consists of extremely small, suspended particles or droplets 10 micrometers (µm) or smaller in diameter. Some sources of PM₁₀, like pollen and windstorms, are naturally occurring. However, in populated areas, most PM₁₀ is caused by road dust, diesel soot, combustion products, the abrasion of tires and brakes, and construction activities.

PM_{2.5} is to fine particulate matter that is 2.5 µm or smaller in size. The sources of PM_{2.5} include fuel combustion from automobiles, power plants, wood burning, industrial processes, and diesel-powered vehicles such as buses and trucks. These fine particles are also formed in the atmosphere when gases such as SO₂, NO_x, and VOCs are transformed in the air by chemical reactions.

Pb occurs in the atmosphere as particulate matter. The combustion of leaded gasoline is the primary source of airborne lead in the Basin. The use of leaded gasoline is no longer permitted for on-road motor vehicles, so most such combustion emissions are associated with off-road vehicles such as race cars that use leaded gasoline. Other sources of Pb include the manufacturing and recycling of batteries, sanding or removal of lead-based paint, ink, ceramics, ammunition, and secondary lead smelters.

TACs are a diverse group of noncriteria air pollutants that can affect human health but for which ambient air quality standards have not been established. This is not because they are fundamentally different from the pollutants discussed above, but because their effects tend to be local rather than regional. TACs are classified as carcinogenic and noncarcinogenic; carcinogenic TACs can cause cancer, and noncarcinogenic TAC can cause acute and chronic impacts to different target organ systems (e.g., eyes, respiratory, reproductive, developmental, nervous, and cardiovascular).

CARB and the California Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified as a TAC in California. Diesel particulate matter (DPM), which is emitted in the exhaust from diesel engines, was listed by the State as a TAC in 1998. DPM has historically been used as a surrogate measure of exposure for all diesel exhaust emissions. DPM consists of fine particles (diameter less than 2.5 µm), including a subgroup of ultrafine particles (diameter less than 0.1 µm). Collectively, these particles have a large surface area, making them an excellent medium for absorbing organics. The visible emissions in diesel exhaust include carbon particles or soot. Diesel exhaust also contains a variety of harmful gases and carcinogens. Exposure to DPM may be a health hazard, particularly to children, whose lungs are still developing, and to the elderly, who may have other health problems. DPM levels and resultant potential health effects may be higher near heavily traveled roadways with substantial truck traffic or near industrial facilities. CARB has determined that of the top 10 inhalation risk contributors, DPM contributes approximately 80 percent of the total potential cancer risk.²²

SCAQMD Rules

The following SCAQMD rules relate to a specific type of operation or source of pollution. Because knowledge of air pollution is constantly growing, these rules and regulations are in a dynamic state and are constantly changing.

Rule 201, Permit to Construct

Rule 201 requires a permit for installation of any equipment which releases air pollutants.²³

Rule 402, Nuisance Odors

Rule 402 prohibits the discharge of odors that cause injury, detriment, nuisance, or annoyance to a considerable number of people.²⁴

Rule 403, Fugitive Dust

Rule 403 requires the use of stringent best available control measures to minimize PM10 emissions during grading and construction activities.²⁵

22 SCAQMD, *Multiple Air Toxics Exposure Study in the South Coast Air Basin: Final Report MATES-IV* (May 2015), <http://www.aqmd.gov/docs/default-source/air-quality/air-toxic-studies/mates-iv/mates-iv-final-draft-report-4-1-15.pdf>.

23 SCAQMD, "Rule 201: Permit to Construct" (amended December 3, 2004), <http://www.aqmd.gov/docs/default-source/rule-book/reg-ii/rule-201.pdf>.

24 SCAQMD, "Rule 402: Nuisance" (adopted May 7, 1976), <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-402.pdf>.

25 SCAQMD, "Rule 403: Fugitive Dust" (amended June 3, 2005), <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf>.

Rule 1113, Architectural Coatings

Rule 1113 requires reductions in the volatile organic compounds (VOCs) content of coatings, with a substantial reduction in the VOC content limit for flat coatings.²⁶

Rule 1186, PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations

Rule 1186 requires control measures to reduce fugitive dust from paved and unpaved roads in addition to livestock operations.²⁷

Rule 1401, New Source Review of Toxic Air Contaminants

Rule 1401 specifies limits for specific maximum individual cancer risk, cancer burden, and noncancer acute and chronic hazard index from new permit units, relocations, or modifications to existing permit units which emit toxic air contaminants.²⁸

Rule 1403, Asbestos Emissions from Demolition/Renovation Activities

Rule 1403 requires the owner or operator of any demolition or renovation activity to have an asbestos survey performed prior to demolition and to provide notification to the SCAQMD prior to commencing demolition activities.²⁹

Existing Conditions***Regional Setting*****South Coast Air Basin**

The City of South Pasadena within the South Coast Air Basin (Basin) which includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. The Basin is in a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean in the southwest quadrant, with high mountains forming the remainder of the perimeter. The general region lies in the semi-permanent, high-pressure zone of the eastern Pacific.

The USEPA and the CARB designate air basins where air pollution levels exceed the State or federal ambient air quality standards as “nonattainment” areas. If standards are met, the area is designated as

26 SCAQMD, “Rule 1113 Architectural Coatings” (amended February 5, 2016), <http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf>.

27 SCAQMD, “Rule 1186: PM10 Emissions From Paved and Unpaved Roads, and Livestock Operations” (amended July 11, 2008), <http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1186.pdf>.

28 SCAQMD, “Rule 1401: New Source Review of Toxic Air Contaminants” (amended September 1, 2017), <http://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1401.pdf>.

29 SCAQMD, “Rule 1403: Asbestos Emissions From Demolition/Renovation Activities” (amended October 5, 2007), <http://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1403.pdf>.

an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, an area is considered “unclassified.” Federal nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards.

Transportation conformity for nonattainment and maintenance areas is required under the federal CAA to ensure federally supported highway and transit projects conform to the SIP. The USEPA approved California’s SIP revisions for attainment of the 1997 8-hour O₃ National AAQS for the Basin in March 2012. Findings for the new 8-hour O₃ emissions budgets for the Basin and consistency with the recently adopted 2016 RTP/SCS were submitted to the USEPA for approval.³⁰

The current attainment designations for the Basin are shown in **Table 4.1-3: South Coast Air Basin Attainment Status**. Under the federal standards, the Basin is currently designated as nonattainment for the ozone, lead, and PM_{2.5} thresholds. Under the State standards the Basin is currently designated as nonattainment for the ozone, PM₁₀, and PM_{2.5} thresholds.

**Table 4.1-3
South Coast Air Basin Attainment Status**

Pollutant	State Status	National Status
Ozone (O ₃)	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Unclassified/Attainment
Nitrogen Dioxide (NO ₂)	Attainment	Unclassified/Attainment
Sulfur Dioxide (SO ₂)	Attainment	Attainment
Lead (Pb)	Attainment	Nonattainment
Respirable Particulate Matter (PM ₁₀)	Nonattainment	Attainment
Fine Particulate Matter (PM _{2.5})	Nonattainment	Nonattainment

Source: CARB, “Area Designations Maps/State and National,” <http://www.arb.ca.gov/desig/adm/adm.htm> (last reviewed October 18, 2017).

30 Southern California Association of Governments (SCAG), *Final 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy [Final 2016 RTP/SCS]* (April 2016), <http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf>.

Source Receptor Areas

SCAQMD has divided its jurisdictional territory of the Basin into 38 Source Receptor Areas (SRAs), most of which have monitoring stations that collect air quality data.³¹ These SRAs are designated to provide a general representation of the local meteorological, terrain, and air quality conditions within the particular geographical area. These geographical areas include urbanized regions, interior valleys, coastal areas, and mountains.

The Project site is located in the West San Gabriel Valley SRA (SRA 8).³² The monitoring station for this area is located at 752 South Wilson Avenue, approximately 1.91 miles northeast of the Project site.³³ This station presently monitors pollutant concentrations of O₃, CO, NO₂, and PM_{2.5}.

Table 4.1-4: Air Quality Monitoring Summary Update lists the ambient pollutant concentrations registered and the violations of State and federal standards that have occurred at the abovementioned monitoring stations from 2014 through 2016, the most recent years for which data are available. As shown, the monitoring stations have registered values above State and federal standards for O₃, the State standard for PM₁₀, and the federal standard for PM_{2.5}. Concentrations of NO₂ have not been exceeded anywhere within the Basin for several years. Values for state SO₂ and PM₁₀ are not presented in the table because the station does not monitor these pollutants.

31 SCAQMD, Map of Monitoring Areas, accessed November 2017, <http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf>.

32 SCAQMD, Map of Monitoring Areas.

33 CARB, Quality Assurance Air Monitoring Site Information, accessed November 2017, https://www.arb.ca.gov/qaweb/site.php?s_arb_code=70112.

**Table 4.1-4
Air Quality Monitoring Summary Update**

Air Pollutant	Averaging Time (Units)	2014	2015	2016
O3	Max 1 hour (ppm)	0.094	0.091	0.098
	Days > CAAQS threshold (0.09 ppm)	0	0	1
	Max 8 hours (ppm)	0.082	0.073	0.071
	Days > CAAQS threshold (0.070 ppm)	4	1	1
	Days > NAAQS threshold (0.070 ppm)	4	1	1
CO	Max 1 hour (ppm)	6.0	4.4	4.4
	Days > CAAQS threshold (20 ppm)	0	0	0
	Days > NAAQS threshold (35 ppm)	0	0	0
	Max 8 hours (ppm)	3.8	3.3	3.9
	Days > CAAQS threshold (9.0 ppm)	0	0	0
	Days > NAAQS threshold (9.0 ppm)	0	0	0
NO2	Max 1 hour (ppb)	68.2	73.6	63.7
	Days > CAAQS threshold (0.18 ppm)	0	0	0
	Days > NAAQS threshold (0.0534 ppm)	0	0	0
PM2.5	State Annual Average ($\mu\text{g}/\text{m}^3$)	N/A	N/A	N/A
	Federal Annual Average ($\mu\text{g}/\text{m}^3$)	N/A	11.7	11.0
	24 hours ($\mu\text{g}/\text{m}^3$)	35.8	41.3	36.3
	Days > CAAQS threshold	N/A	N/A	N/A
	Days > NAAQS threshold ($35 \mu\text{g}/\text{m}^3$)	1	3	1

Sources: California Air Resources Board, Top 4 Summary (2014-2016), <https://www.arb.ca.gov/adam/topfour/topfour1.php>;
CO data found at SCAQMD, Historical Data By Year, <http://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year>.

Notes: > = exceed; CAAQS = California Ambient Air Quality Standard; ppm = parts per million; max = maximum; mean = annual arithmetic mean; NAAQS = National Ambient Air Quality Standard.

Multiple Air Toxics Exposure Study III

In 2000, SCAQMD conducted a study³⁴ on ambient concentrations of TACs and estimated the potential health risks from air toxics. The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,400 in a million. The largest contributor to this risk was diesel exhaust, accounting for 71 percent of the air toxics risk. In 2008, SCAQMD conducted its third update to its study on ambient concentrations of TACs and estimated the potential health risks from air toxics. The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,200 in one million. The largest contributor to this risk was diesel exhaust, accounting for approximately 84 percent of the air toxics risk.³⁵ Excess cancer risk within the District boundaries can range from 175 to 1,850 in a million.³⁶

Topography, Climate, and Meteorology

The Basin is a coastal plain, with connecting broad valleys and low hills that are bounded by the Pacific Ocean to the southwest and by high mountains around the rest of its perimeter. The general region lies in the semi-permanent, high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. Los Angeles County, including the City of South Pasadena, is known to be in a local steppe climate, which is the region between the tropic and polar regions in the middle latitudes associated with cool winters and warm summers. The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds.

The potential for atmospheric pollution in an area depends largely on winds, atmospheric stability, solar radiation, and terrain. The combination of low wind speeds and low inversions produces the greatest concentration of air pollutants. The warm sunny weather in the Basin associated with a persistent high-pressure system is conducive to the formation of O₃ and other oxidative pollutants, commonly referred to as smog. The problem is further aggravated by the surrounding mountains, frequent low inversion heights, and stagnant air conditions. All of these factors act together to trap pollutants in the Basin. On days without inversions or on days when winds average more than 15 miles per hour (mph), smog potential is greatly reduced.

The vertical dispersion of air pollutants in the Basin is hampered by the presence of persistent temperature inversions. High-pressure systems, such as the semi-permanent, high-pressure zone in which the Basin is located, are characterized by an upper layer of dry air that warms as it descends, restricting

34 SCAQMD, *Multiple Air Toxics Exposure Study III Model Estimated Carcinogenic Risk*, map, accessed January 2014, <http://www3.aqmd.gov/webappl/matesiii/>.

35 SCAQMD, *Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES III)*.

36 SCAQMD, *Multiple Air Toxics Exposure Study III Model Estimated Carcinogenic Risk*.

the mobility of cooler, marine-influenced air near the ground surface and resulting in the formation of subsidence inversions. Such inversions restrict the vertical dispersion of air pollutants released into the marine layer and, together with strong sunlight, can produce worst-case conditions for the formation of photochemical smog. The Basin-wide occurrence of inversions at 3,500 feet above mean sea level (amsl) or less averages 191 days per year usually in the summer months with the formation of the marine layer.

Predominant meteorological conditions in the region include light winds and shallow vertical mixing due to low-altitude temperature inversion. Long-term diurnal wind patterns in the general vicinity of the Project site are dominated by higher velocity, on-shore daytime winds of 4 to 12 mph from the southwest. Nocturnal winds exhibit more directional variability and commonly result in low-velocity, on-shore flow at speeds of 2 to 5 mph from the west and southwest, and less commonly in 2 to 20 mph winds from the northwest and east. Nocturnal winds are created when air along the mountain slopes cools and descends into the lower elevations of the Basin toward the ocean. These diurnal and nocturnal wind patterns play an important role in dispersing air pollutants and moderating the temperatures throughout the Basin and the Project vicinity.

Average temperatures in the Project vicinity range from highs in the upper 70s to low 80s Fahrenheit (°F) to lows in the upper 40s to lower 50s °F. The warmest periods tend to be from June to October, with an average temperature above 78°F. The cold season lasts from November to April, with an average temperature below 69°F. Rarely does the temperature fall below 42°F and above 88°F.³⁷

The average annual rainfall for the Project area ranges from 12 to 16 inches. The majority of precipitation occurs from November through March and is usually caused by an upper level trough pattern in the jet stream and low-pressure systems.³⁸ The infrequent summer rainfall consists of periodic and short-term scattered thundershowers dominated by an extension southwest monsoon pattern that extends over the southwestern United States.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases. Residential areas are also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive

37 Western Regional Climate Center, "Downey Fire Station: Period of Record Monthly Climate Summary" (period of record 03/01/1906-09/30/2012), <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca2494>.

38 Western Regional Climate Center, "Downey Fire Station: Period of Record Monthly Climate Summary."

receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, because the majority of the workers tend to stay indoors most of the time. In addition, the workforce is generally the healthiest segment of the population.

Sensitive receptors near the Project site consist of multifamily residential units are located to the south across El Centro Street. The El Centro School is located adjacent to the west across Fairview Avenue. **Figure 4.1-1: Location of Sensitive Receptors**, provides a detailed image of the proximal land uses and identifies the sensitive receptor locations closest to the Project site. These residences represent the nearest sensitive receptors that may be impacted by emissions of air pollutants from Project implementation.

Existing Operational Emissions

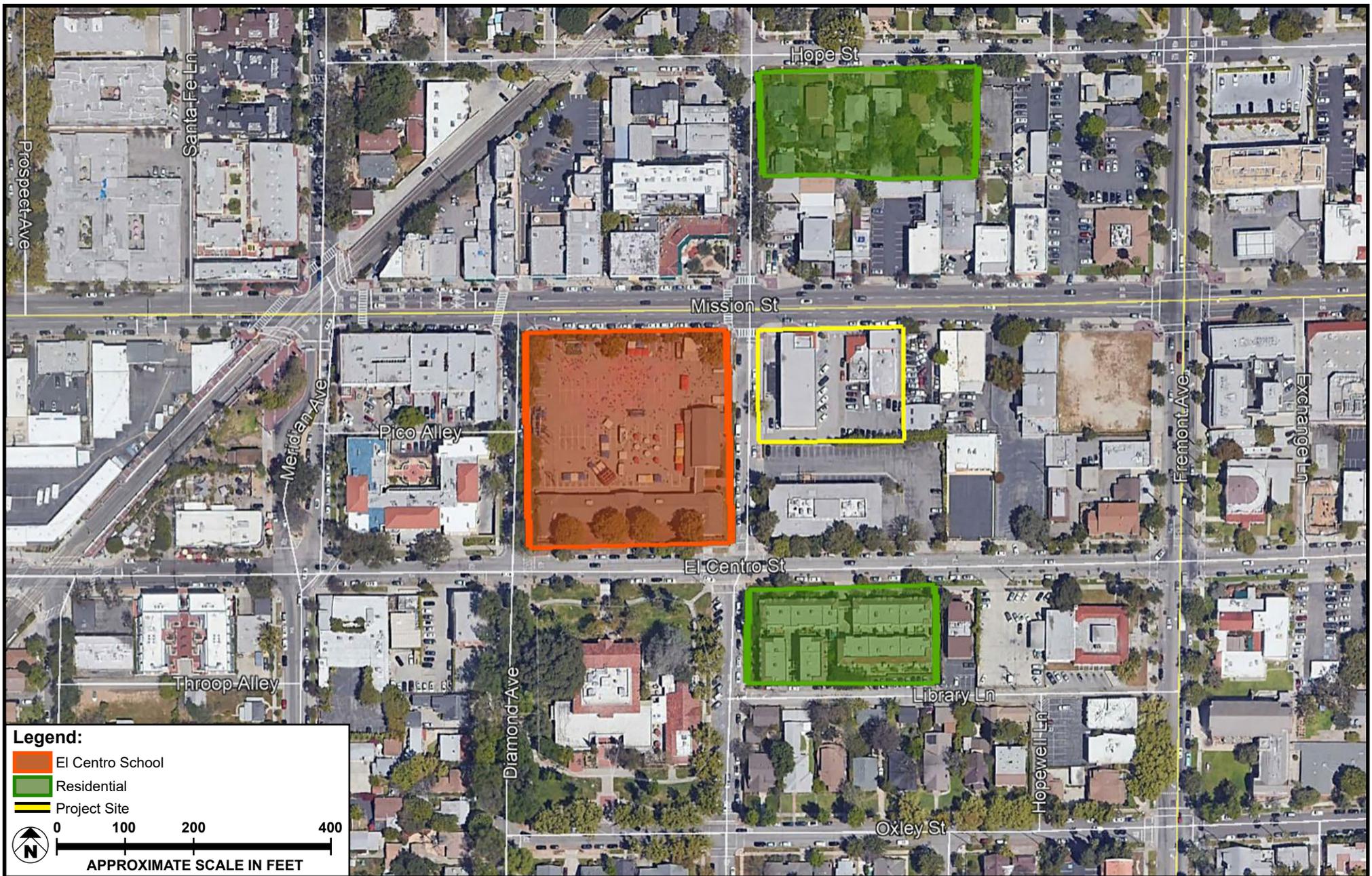
The Project site is currently developed with retail and restaurant uses. The current site usage generates existing vehicle trips and air quality emissions from operations related to these uses. **Table 4.1-5: Existing Operational Air Quality Emissions**, identifies the emissions from the existing uses on site. The most current CARB-approved, SCAQMD-recommended air quality modeling software, the California Emissions Estimator Model (CalEEMod version 2016.3.2), was used to estimate existing air quality operational emissions.

**Table 4.1-5
Existing Operational Air Quality Emissions**

Source	VOC	NOx	CO	SOx	PM10	PM2.5
	pounds/day					
Maximum	1	4	10	<1	2	1

Source: Refer to the data sheets in **Appendix B.2 (Existing Summer)** and **Appendix B.3 (Existing Winter)**.

Note: Totals may not add up exactly due to rounding in the modeling calculations.



SOURCE: Google Earth - 2019; Meridian Consultants - 2019

FIGURE 4.1-1

ENVIRONMENTAL IMPACTS

Methodology

The SCAQMD requires that emissions of air pollutants that will be generated by implementation of a proposed project are quantified and compared to applicable regulatory thresholds. Emissions of CAPs, VOCs, and DPM that will be generated by project implementation were quantified using CalEEMod. Various assumptions are made within the modeling software based on land use type and project scale.

Construction Emissions

General Construction Emissions

Under CEQA, SCAQMD is a commenting agency on air quality within its jurisdiction or impacting its jurisdiction. Under the federal CAA, SCAQMD has adopted federal attainment plans for O₃ and PM₁₀. SCAQMD reviews projects to ensure that they would not: (1) cause or contribute to any new violation of any quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of any federal attainment plan.

The thresholds for determining the significance of impacts are set forth by the SCAQMD for both construction and operational emissions. These thresholds are described below.

Construction Emission Thresholds

The proposed Project will have a significant impact if it exceeds the construction thresholds listed in **Table 4.1-6: Construction Thresholds**.

**Table 4.1-6
Construction Thresholds**

Pollutant	Emissions (pounds/day)
Volatile Organic Compounds (VOCs)	75
Nitrogen dioxide (NO ₂)	100
Carbon monoxide (CO)	550
Sulfur dioxide (SO ₂)	150
Respirable particulate matter (PM ₁₀)	150
Fine particulate matter (PM _{2.5})	55

Construction and Operational Local Significance Thresholds

The local significance thresholds are based on the SCAQMD's *Localized Significance Threshold Methodology for CEQA Evaluations* for short-duration construction activities. The SCAQMD recommends the evaluation of localized air quality impacts to sensitive receptors in the immediate vicinity of the Project site because of construction activities. The SCAQMD provides voluntary guidance on the evaluation of localized air quality impacts to public agencies conducting environmental review of projects located within its jurisdiction. Localized air quality impacts are evaluated by examining the on-site generation of pollutants and their resulting downwind concentrations. For construction, pollutant concentrations are compared to significance thresholds for particulates (PM10 and PM2.5), CO, and NO2. The significance threshold for PM10 represents compliance with SCAQMD Rule 403 (Fugitive Dust). The threshold for PM2.5 is designed to limit emissions and to allow progress toward attainment of the ambient air quality standard. Thresholds for CO and NO2 represent the allowable increase in concentrations above background levels that would not cause or contribute to an exceedance of their respective ambient air quality standards.

The *Localized Significance Threshold (LST) Methodology for CEQA Evaluations* guidance document provides lookup tables of emissions that are based on construction projects of up to 5 acres in size. These LST lookup tables were developed to assist lead agencies with a simple tool for evaluating the impacts from small typical projects. Ambient conditions for the Western San Gabriel Valley area, as recorded in SRA 8 by the SCAQMD, were used for ambient conditions in determining appropriate threshold levels. Thresholds for each criteria pollutant for construction activity and Project operation of a 0.71-acre Project site in SRA 8 are listed in **Table 4.1-7: LST Thresholds**.

**Table 4.1-7
LST Thresholds**

Pollutant	Construction	Operational
	pounds/day	
Nitrogen dioxide (NO2)	61	61
Carbon monoxide (CO)	455	455
Respirable particulate matter (PM10)	3	0.71
Fine particulate matter (PM2.5)	3	1

Notes:

*Based on a distance to sensitive receptors of 25 meters (82 feet). SCAQMD's LST Methodology for CEQA Evaluations guidance document provides that projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters.
LST values for 0.71-acre site.*

Operational Thresholds

Based on the SCAQMD *CEQA Air Quality Handbook*, thresholds for each criteria pollutant for the operations of the proposed Project are provided in **Table 4.1-8: Operational Thresholds**.

**Table 4.1-8
Operational Thresholds**

Pollutant	Operational Emissions (pounds/day)
Volatile Organic Compounds (VOCs)	55
Nitrogen dioxide (NO ₂)	55
Carbon monoxide (CO)	550
Sulfur dioxide (SO ₂)	150
Respirable particulate matter (PM ₁₀)	150
Fine particulate matter (PM _{2.5})	55

Microscale CO Hotspot Thresholds

The significance of localized project impacts depends on whether the project would cause substantial concentrations of CO. A project is considered to have significant impacts if project-related, mobile-source emissions result in an exceedance of the California 1-hour and 8-hour CO standards, which include the following:

- 1-hour = 20 ppm
- 8-hour = 9 ppm

Projects that worsen traffic conditions at signalized intersections to level of service (LOS) E or F, or worsen conditions at intersections that currently operate at LOS E or F, should be further examined.

Health Risk Thresholds

A health risk assessment is required by the SCAQMD when a project would require the use of chemical compounds that have been identified in SCAQMD Rule 1401, placed on CARB's air toxics list pursuant to AB 1807, or placed on the USEPA's National Emissions Standards for Hazardous Air Pollutants. Residential, commercial, and office uses do not use substantial quantities of toxic air contaminants (TACs), as such thresholds are typically applied to new industrial projects. Although not officially adopted by SCAQMD, the following thresholds are commonly used to determine air quality land-use compatibility of a project with major sources of TACs within 1,000 feet of a sensitive receptor:

- Maximum Incremental Cancer Risk: greater than or equal to 10 in 1 million; and
- Hazard Index (project increment): greater than or equal to 1.0

Consistency with Applicable Air Quality Plans

Section 15125 of the State *CEQA Guidelines* requires an analysis of project consistency with applicable governmental plans and policies. In accordance with the SCAQMD *CEQA Air Quality Handbook*, the following criteria were used to evaluate the proposed Project's consistency with SCAQMD and SCAG regional plans and policies, including the AQMP:

- Will the project result in any of the following:
 - Increase the frequency or severity of existing air quality violations?
 - Cause or contribute to new air quality violations?
 - Delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP?
- Will the project exceed the assumptions utilized in preparing the AQMP?
 - Is the project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based?
 - Does the project include air quality mitigation measures?
 - To what extent is project development consistent with the AQMP land use policies?

Cumulative Threshold

SCAQMD recommends that a project be considered to result in a cumulatively considerable impact to air quality if any construction-related emissions and operational emissions from individual development projects exceed the mass daily emissions thresholds for individual projects.³⁹

The 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.

A project is also considered to result in a cumulatively considerable contribution to significant impacts if the population and employment projections for the project exceed the rate of growth defined in SCAQMD's AQMP.

Operation Emissions

Operational emissions generated by both stationary and mobile sources would result from normal day-to-day activities of the Project site. Source emissions would be generated by the consumption of natural

³⁹ *White Paper on Regulatory Options for Addressing Cumulative Impacts from Air Pollution Emissions*, SCAQMD Board Meeting, Agenda No. 29 (September 5, 2003), Appendix D, p. D-3.

gas and landscape maintenance. Mobile emissions would be generated by the motor vehicles traveling to and from the Project site.

Project-generated, regional area and mobile-source emissions of criteria air pollutants and ozone precursors were also modeled using the CalEEMod computer program. CalEEMod allows land use selections that include project location specifics and trip generation rates. CalEEMod accounts for area-source emissions from the use of natural gas, landscape maintenance equipment, and consumer products and from mobile-source emissions associated with vehicle trip generation.

The analysis of daily operational emissions associated with the proposed Project have been prepared using the data and methodologies identified in SCAQMD's *CEQA Air Quality Handbook*⁴⁰ and current motor vehicle emission factors in CalEEMod. Trip rates for these land uses were obtained from the traffic impact study for the proposed Project (**Appendix G**).

Thresholds of Significance

To assist in determining whether the proposed Project would have a significant effect on the environment, the District finds the proposed Project may be deemed to have a significant impact related to air quality if it would:

- Threshold AQ-1: Conflict with or obstruct implementation of the applicable air quality plan.**
- Threshold AQ-2: 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.**
- Threshold AQ-3: Expose sensitive receptors to substantial pollutant concentrations.**
- Threshold AQ-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.**

Please refer to **Section 7.0: Effects Found Not to Be Significant** for an evaluation of those topics that were determined to be less than significant or have no impact and do not require further analysis in the EIR.

40 SCAQMD, *CEQA Air Quality Handbook* (November 1993).

Project Impact Analysis

Threshold AQ-1: Conflict with or obstruct implementation of the applicable air quality plan

Consistency with AQMP

The Basin is designated by the USEPA and State as nonattainment for ozone and PM_{2.5}. SCAQMD developed regional emissions thresholds, as shown in **Table 4.1-10** and **Table 4.1-11** below, to determine whether a project would contribute to air pollutant violations. If a project exceeds the regional air pollutant thresholds, then it would significantly contribute to air quality violations in the Basin.

As shown in **Table 4.1-10** below, temporary emissions associated with construction of the proposed Project would fall below SCAQMD thresholds for VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}.

As shown in **Table 4.1-11** below, long-term emissions associated with the proposed Project would not exceed SCAQMD thresholds for VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}.

The proposed Project's maximum potential NO_x, CO, PM₁₀, and PM_{2.5} daily emissions during construction and operation were analyzed to determine potential effects on localized concentrations and to determine if there is a potential for such emissions to cause or affect a violation of an applicable ambient air quality standard. As shown in **Table 4.1-11** below, NO_x, CO, PM₁₀, and PM_{2.5} emissions would not exceed the SCAQMD LST.

The proposed Project is also located in an urban area that would reduce vehicle trips and VMT due to the urban infill characteristic and proximity to public transit stops. These measures and features are consistent with existing recommendations to reduce air emissions. As such, it would not conflict with the AQMP. Impacts would be less than significant.

Consistency with 2016 RTP/SCS

The proposed Project is consistent with regional strategies to reduce passenger VMT to achieve the per capita GHG emissions reduction targets of SB 375 for the SCAG region. The Project site is within a high-quality transit area and is adequately served by existing public transit (i.e., Metro Gold Line and local bus lines). The South Pasadena Station Metro Gold Line station is located approximately 0.13 miles to the west on the corner of Meridian Avenue between Mission Street and El Centro Street. Consequently, the proposed Project would not conflict with the strategies with the 2016 RTP/SCS to reduce per capita passenger vehicle GHG emissions. As such, it would not conflict with the 2016 RTP/SCS. Impacts would be less than significant.

Threshold AQ-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.

Emissions of air pollutants and GHGs were estimated for construction and operation of the proposed Project. In California, the California Air Pollution Control Officer's Association (CAPCOA) recommends the use of CalEEMod to calculate and organize emissions data for new development projects. CalEEMod is a program that relies on project-specific information pertaining to geographic setting, utility service provision, construction scheduling and equipment inventory, and operational design features to generate estimates of air pollutant and GHG emissions.

Information needed to parameterize the proposed Project in CalEEMod was obtained from the construction engineer and the Project architect. Construction of the proposed Project is anticipated to begin early 2020 and mid-2022, when the proposed Project will become operational. **Table 4.1-9: Project Construction Schedule**, provides the dates and durations of each of the activities that will take place during construction, as well as a brief description of the scope of work. These dates represent approximations based on the general Project timeline and are subject to change pending unpredictable circumstances that may arise.

As part of the proposed Project, the following practices are included:

- The pursuit of already established sustainable best management practices, such as the WELL Building Standard certification, will be utilized throughout the Project site.
- Water conservation features such as installation of low-flow toilets, low-flow shower heads, low-flow kitchen faucets, low-flow bathroom faucets, and water-efficient irrigation systems will be used within the Project site.

Construction traffic is generated by the hauling of exported soil, vendor deliveries of construction materials, and construction worker daily trips to the Project site. Each phase of construction would result in varying levels of intensity and number of construction personnel. The construction workforce would consist of approximately 10 worker trips per day during demolition; 5 worker trips per day and 2,963 total hauling trips⁴¹ during grading; 50 worker trips per day and 13 total vendor trips during building construction; 18 worker trips per day during paving; and 10 worker trips per day during architectural coating.

41 Export of 23,700 cubic yards of soil. Export of material is assumed to have an arrival trip in an empty truck and loaded departure truck.

**Table 4.1-9
Project Construction Schedule**

Construction Activity	Start Date	End Date	Duration (Days)	Description
Demolition	1/01/2020	1/11/2020	8	Clearing of debris (9,480 square feet) and preparation for grading.
Grading	1/12/2020	4/4/2020	60	Export of 23,700 cubic yards of dirt.
Building Construction	4/5/2020	4/8/2022	525	Construction of foundations and structures for apartment buildings and parking garage.
Architectural Coating	2/4/2022	4/8/2022	46	Application of architectural coatings to building materials and parking facilities.
Paving	3/4/2022	4/8/2022	26	Paving of asphalt surfaces.

^a Architectural coating will be taking place intermittently throughout building construction. Refer to **Appendix B.4** through **B.6**, Section 3.0 Construction Detail.

An assessment of air pollutant and GHG emissions was prepared utilizing the construction schedule in **Table 4.1-9** and design features obtained from the Project architect. It was assumed that all heavy-duty diesel equipment engines would meet Tier 3 standards in accordance with CARB fleet requirements. **Table 4.8-10: Project Construction Diesel Equipment Inventory**, displays the construction equipment that would be required for each activity described in **Table 4.1-9**. It was assumed that all construction activities would adhere to the SCAQMD Rule 403 for Fugitive Dust and 1113 for Architectural Coatings.

Construction

Maximum daily emissions of air pollutants during construction and operation of the proposed Project were calculated using CalEEMod. **Table 4.1-11: Maximum Construction Emissions**, identifies daily emissions that are estimated for peak construction days for each construction year. Based on the modeling, construction of the proposed Project would not exceed regional VOC, NOx, CO, SOx, PM10, and PM2.5 concentration thresholds. All Criteria Air Pollutants would be below SCAQMD construction thresholds. Construction of the proposed Project would not generate any significant environmental impacts associated with air quality compliance.

**Table 4.1-10
Project Construction Diesel Equipment Inventory**

Phase	Off-Road Equipment Type	Amount	Daily Hours	Horsepower [HP] (Load Factor)
Demolition	Concrete/Industrial Saws	1	8	81 (0.73)
	Rubber Tired Dozers	1	1	247 (0.4)
	Tractors/Loaders/Backhoes	2	6	97 (0.37)
Grading	Excavators	1	8	158 (0.38)
	Rubber Tired Dozers	1	1	247 (0.40)
Building Construction	Forklifts	2	6	89 (0.2)
	Tractors/Loaders/Backhoes	2	8	97 (0.37)
Architectural Coating	Air Compressors	1	6	78 (0.48)
Paving	Cement and Mortar Mixers	4	6	9 (0.56)
	Pavers	1	7	125 (0.42)
	Rollers	1	7	80 (0.38)
	Tractors/Loaders/Backhoes	1	7	97 (0.37)

Refer to **Appendix B.4 through B.6, Section 3.0 Construction Detail** for equipment inventory information.

**Table 4.1-11
Maximum Construction Emissions**

Source	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	pounds/day					
Unmitigated Maximum	8	18	18	<1	2	1
SCAQMD Mass Daily Threshold	75	100	550	150	150	55
Threshold exceeded?	No	No	No	No	No	No

Source: CalEEMod

CO = carbon monoxide; NO_x = nitrogen oxides; PM₁₀ = particulate matter less than 10 microns; PM_{2.5} = particulate matter less than 2.5 microns; VOC = volatile organic gas; SO_x = sulfur oxides.

Refer to **Appendix B.5 (Proposed Summer) through B.6 (Proposed Winter)**, Sections 3.2 through 3.7 for maximum on-site plus off-site emissions during both the summer and winter seasons.

Operation

The results presented in **Table 4.1-12: Maximum Operational Emissions** are compared to the SCAQMD-established operational significance thresholds. Operational emissions will result primarily from passenger vehicles traveling to and from the Project site. As shown in **Table 4.1-12**, the operational emissions would not exceed the regional VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} concentration thresholds.

Table 4.1-12
Maximum Operational Emissions

Source	VOC	NO _x	CO	SO _x	PM ₁₀	PM 2.5
	pounds/day					
Area	1	1	3	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	1	3	9	<1	3	1
Total	2	4	12	<1	3	1
<i>Existing</i>	<i>1</i>	<i>4</i>	<i>10</i>	<i><1</i>	<i>2</i>	<i>1</i>
Net Total	1	<1	2	<1	1	<1
SCAQMD Mass Daily Threshold	55	55	550	150	150	55
Threshold exceeded?	No	No	No	No	No	No

Source: CalEEMod Version 2016.3.1.

Totals in table may not appear to add exactly due to rounding in the computer model calculations.

Refer to **Appendix B.5 (Proposed Summer)** through **B.6 (Proposed Winter)**, Section 2.2 for maximum operational emissions during both the summer and winter seasons.

(-) = results are negligible.

Localized Significance Thresholds

The result of the LST analysis are provided in **Table 4.1-13: LST Threshold and Maximum Project Emissions**. These estimates assume the maximum area that would be disturbed during construction on any given day during Project buildout. Construction would comply with the SCAQMD's Rule 403 (Fugitive Dust), which requires watering of the site during dust-generating construction activities, stabilizing disturbed areas with water or chemical stabilizers, and preventing track-out dust from construction vehicles. As shown in **Table 4.1-13** below, emissions would not exceed the localized significance construction and operational thresholds.

**Table 4.1-13
Localized Construction and Operational Emissions**

Source	NOx	CO	PM10	PM2.5
	On-Site Emissions (pounds/day)			
Construction				
Total maximum emissions	8	8	2	1
LST threshold	61	455	3	3
Threshold Exceeded?	No	No	No	No
Operational				
Project area/energy emissions	1	3	<0.1	<0.1
Existing area/energy emissions	0.1	0.1	<0.1	<0.1
Net total area/energy emissions	1	3	<0.1	<0.1
LST threshold	61	455	0.71	1
Threshold Exceeded?	No	No	No	No

Totals in table may not appear to add exactly due to rounding in the computer model calculations.

CO = carbon monoxide; NOx = nitrogen oxide; PM10 = particulate matter less than 10 microns; PM2.5 = particulate matter less than 2.5 microns.

*Refer to **Appendix B.5 (Proposed Summer)** through **B.6 (Proposed Winter)**, Sections 3.2 through 3.7 for maximum on-site emissions during both the summer and winter seasons.*

The proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment under an applicable federal or state ambient air quality standard. As such, impacts would be less than significant.

Threshold AQ-3: Expose sensitive receptors to substantial pollutant concentrations?

Localized Significance Thresholds

The result of the LST analysis are provided in **Table 4.1-14: Maximum Construction Emissions** and **Table 4.1-15: Maximum Operational Emissions**. These estimates assume the maximum area that would be disturbed during construction on any given day during Project buildout. Construction would comply with the SCAQMD's Rule 403 (Fugitive Dust), which requires watering of the site during dust-generating construction activities, stabilizing disturbed areas with water or chemical stabilizers, and preventing track-out dust from construction vehicles. As shown in **Table 4.1-14** and **Table 4.1-15** below, emissions would not exceed the localized significance construction and operational thresholds. As such, impacts would be less than significant.

**Table 4.1-14
Maximum Construction Emissions**

Source	VOC	NOx	CO	SOx	PM10	PM2.5
	pounds/day					
Unmitigated Maximum	8	18	18	<1	2	1
SCAQMD Mass Daily Threshold	75	100	550	150	150	55
Threshold exceeded?	No	No	No	No	No	No

Source: CalEEMod

CO = carbon monoxide; NOx = nitrogen oxides; PM10 = particulate matter less than 10 microns; PM2.5 = particulate matter less than 2.5 microns; VOC = volatile organic gas; SOx = sulfur oxides.

Refer to **Appendix A.5 (Proposed Summer)** through **A.6 (Proposed Winter)**, Sections 3.2 through 3.7 for maximum on-site plus off-site emissions during both the summer and winter seasons.

**Table 4.1-15
Maximum Operational Emissions**

Source	VOC	NOx	CO	SOx	PM10	PM 2.5
	pounds/day					
Area	1	1	3	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	1	3	9	<1	3	1
Total	2	4	12	<1	3	1
<i>Existing</i>	<i>1</i>	<i>4</i>	<i>10</i>	<i><1</i>	<i>2</i>	<i>1</i>
Net Total	1	<1	2	<1	1	<1
SCAQMD Mass Daily Threshold	55	55	550	150	150	55
Threshold exceeded?	No	No	No	No	No	No

Source: CalEEMod Version 2016.3.1.

Totals in table may not appear to add exactly due to rounding in the computer model calculations.

Refer to **Appendix A.5 (Proposed Summer)** through **A.6 (Proposed Winter)**, Section 2.2 for maximum operational emissions during both the summer and winter seasons.

(-) = results are negligible.

Threshold AQ-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

As shown in **Table 16**, the construction of the proposed Project would result in emissions below the LSTs. According to SCAQMD, while almost any source may emit objectionable odors, some land uses will be more likely to produce odors because of their operation. Land uses that are more likely to produce odors include agriculture, chemical plants, composting operations, dairies, fiberglass molding, landfills, refineries, rendering plants, rail yards, and wastewater treatment plants. The proposed Project does not contain any active manufacturing activities and would not convert current agricultural land to residential land uses. Therefore, objectionable odors would not be emitted by the residential uses.

Any unforeseen odors generated by the proposed Project will be controlled in accordance with SCAQMD Rule 402. Rule 402 prohibits the discharge of air contaminants that cause “injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.”⁴² Failure to comply with Rule 402 could subject the offending facility to possible fines and/or operational limitations in an approved odor control or odor abatement plan. As such, impacts would be less than significant.

CUMULATIVE IMPACTS

Cumulative

Development of the proposed Project in conjunction with the related projects in the vicinity of the Project site would result in an increase in construction and operational emissions in an already urbanized area of the City of South Pasadena. However, cumulative air quality impacts from construction, based on SCAQMD guidelines, are not analyzed in a manner similar to project-specific air quality impacts. Instead, the SCAQMD recommends that a project’s potential contribution to cumulative impacts should be assessed utilizing the same significance criteria as those for project-specific impacts. According to the SCAQMD, individual development projects that generate construction or operational emissions that exceed the SCAQMD-recommended daily regional or localized thresholds for project-specific impacts would also cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment.

With the implementation of Regulatory Compliance Measures for the proposed Project, which includes SCAQMD Rule 403—Fugitive Dust and Rule 1113—Architectural Coating, , the proposed Project’s

42 South Coast Air Quality Management District, “Rule 402—Nuisance,” <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-402.pdf>.

construction and operational emissions are not expected to significantly contribute to cumulative emissions for VOC, NOx, CO, PM10, and PM2.5. As such, the proposed Project's contribution to cumulative air quality emissions in combination with the related projects would not be cumulatively considerable.

As set forth previously, the proposed Project would not jeopardize the attainment of air quality standards in the 2012 AQMP for the South Coast Air Basin and the Los Angeles County portion of the Basin. As such, the proposed Project would not have a cumulatively considerable contribution to a potential conflict with, or obstruction of, the implementation of the AQMP regional reduction plans.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Air quality impacts would be less than significant.

4.2 CULTURAL RESOURCES

INTRODUCTION

This section of the Draft EIR examines the potential for the proposed Project's to result in impacts to cultural resources, including archaeological, paleontological, and historic resources. This section relies on information from the *Historical Resources Assessment and CEQA Impacts Analysis for CFT Mission Bell Center Mixed Use Project* (Historical Report), dated July 13, 2017, by Environmental Science Associates (ESA) provided as **Appendix C** to this Draft EIR.²²

ENVIRONMENTAL SETTING

Regulatory Framework

Historic resources fall within the jurisdiction of several levels of government. Federal laws provide the framework for the identification and, in certain instances, protection of historic resources. Additionally, states and local jurisdictions play active roles in the identification, documentation, and protection of such resources within their communities. The primary federal and State laws governing and affecting preservation of historic resources of national, State, regional, and local significance are the National Historic Preservation Act (NHPA) of 1966, as amended; the California Environmental Quality Act (CEQA); and the California Register of Historical Resources (California Register), Public Resources Code (PRC) 5024. As archaeological resources are also considered historic, regulations applicable to historic resources are also applicable to archaeological resources and are discussed and analyzed in this section. Descriptions of these relevant laws and regulations are presented below.

a. Federal

Archaeological Resources Protection Act

The intent of the Archaeological Resources Protection Act of 1979 (ARPA) is to ensure preservation and protection of archaeological resources on public and Native American lands.¹ ARPA places primary emphasis upon a Federal permitting process in order to control the disturbance and investigation of archaeological sites on these lands. In addition, ARPA's protective provisions are enforced by civil penalties for violation of the Act.

Under this regulation, the term "archaeological resources" include but are not limited to:

1 16 United States Code (USC). sec. 470aa–470mm, Archaeological Resources Protection Act of 1979, Public Law (PL) 96-95, as amended.

pottery, basketry, bottles, weapons, weapon projectiles, tools, structures or portions of structures, pit houses, rock paintings, rock carvings, intaglios, graves, human skeletal materials, or any portion or piece of any of the foregoing items. Nonfossilized and fossilized paleontological specimens, or any portion or piece thereof, shall not be considered archaeological resources, under the regulations under this paragraph, unless found in an archaeological context. No item shall be treated as an archaeological resource under regulations under this paragraph unless such item is at least 100 years of age.²

ARPA mandates consultation procedures before initiation of archaeological research on Native American lands or involving Native American archaeological resources. Section 4(c) requires Native American tribes be notified of possible harm to, or destruction of, sites having religious or cultural significance to that group. The Federal land manager must notify affected tribes before issuing the permit for archaeological work. Section (g)(2) specifies that permits to excavate or remove archaeological resources from Indian lands require consent of the Native American or Native American tribe owning or having jurisdiction over such lands. The permit, it is also stipulated, must include such terms and conditions as may be requested by the affected Native Americans.

Concerning the custody of archaeological resources, ARPA stipulates that any exchange or ultimate disposition of archaeological resources excavated or removed from Native American lands must be subject to the consent of the Native American or Native American tribe that owns or has jurisdiction over such lands.

Paleontological Resources Preservation Act

In 2009, the Paleontological Resources Preservation Act (PRPA) became law when President Barack Obama signed the Omnibus Public Land Management Act of 2009, Public Law 111-011.³ The PRPA requires the secretaries of the interior and agriculture to manage and protect paleontological resources on federal land using scientific principles and expertise. The PRPA includes specific provisions addressing management of these resources by federal agencies. It provides authority for the protection of paleontological resources on federal lands, including criminal and civil penalties for fossil theft and vandalism. The PRPA only applies to federal lands and does not affect private lands.

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- 2 16 USC sec. 470aa–470mm, Archaeological Resources Protection Act of 1979, Public Law 96-95, as amended, sec. 3, accessed July 2018, available at https://www.nps.gov/subjects/historicpreservation/upload/NPS_FHPL_book_online.pdf.
 - 3 PL 111-011, tit. VI, subtit. D on Paleontological Resources Preservation (known by its popular name, the Paleontological Resources Preservation Act) (123 Stat. 1172; 16 USC 470aaa).

National Historic Preservation Act

The 1966 NHPA authorized formation of the National Register of Historic Places (National Register) and coordinates public and private efforts to identify, evaluate, and protect the nation's historic and archaeological resources. Buildings, districts, sites, and structures may be eligible for listing in the National Register if they possess significance at the national, State, or local level in American history, culture, architecture, or archaeology and, in general, are more than 50 years old. Significance is measured against the following established criteria (National Register Bulletin 16):

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

Section 106 (Protection of Historic Properties) of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties. A Section 106 Review refers to the federal review process designed to ensure that historic properties are considered during federal project planning and implementation. The Advisory Council on Historic Preservation (ACHP), an independent federal agency, administers the review process, with assistance from the State Historic Preservation Offices (SHPOs). If any impacts are identified, the agency undergoing the project must identify the appropriate SHPO to consult with during the process.

The ACHP includes requirements for consultation with Native American tribes when federal agencies are undertaking an activity that could cause harm to a historic resource or a potential historic resource under Title 36 of the Code of Federal Regulations, Part 800, Protection of Historic Properties, which became effective January 11, 2001.

National Register of Historic Places

The National Register was established by the NHPA, as “an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment.”⁴ The National Register recognizes properties that are significant at the national, State, and/or local levels.

4 36 Code of Federal Regulations (CFR), pt. 60.2.

To be eligible for listing in the National Register, a property must be at least 50 years of age (unless the property is of “exceptional importance”) and possess significance in American history and culture, architecture, or archaeology. A property of potential significance must meet one or more of the following four established criteria: (a) Associated with events that have made a significant contribution to the broad patterns of our history; or (b) Associated with the lives of persons significant in our past; or (c) Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or (d) Potential to yield information important in prehistory or history.⁵

b. State

California Public Resources Code

Archaeological, paleontological, and historical sites are protected pursuant to a wide variety of State policies and regulations enumerated under the PRC. In addition, cultural and paleontological resources are recognized as a nonrenewable resource and, therefore, receive protection under the PRC and CEQA.

As part of the determination made pursuant to PRC Section 21080.1, the lead agency shall determine whether the project may have a significant effect on archaeological resources (PRC Section 21083.2). PRC Section 21083.2(b) provides the following guidance on how to mitigate or avoid the significant effects that a project may have on unique archeological resources, stating:

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment, in no order of preference, may include, but are not limited to, any of the following:

1. *Planning construction to avoid archaeological sites.*
2. *Deeding archaeological sites into permanent conservation easements.*
3. *Capping or covering archaeological sites with a layer of soil before building on the sites.*
4. *Planning parks, greenspace, or other open space to incorporate archaeological sites.*

5 36 CFR, pt. 60.4.

As defined within PRC Section 21083.2(g), “unique archaeological resource” means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

As defined in PRC Section 21083.2(h), “nonunique archaeological resource” means an archaeological artifact, object, or site that does not meet the criteria in subdivision (g). A nonunique archaeological resource need be given no further consideration other than the simple recording of its existence by the lead agency, if it so elects. Pursuant to PRC Section 21083.2(i), as part of conditions imposed for mitigation, a lead agency may make provisions for archaeological sites accidentally discovered during construction. These provisions may include an immediate evaluation of the find. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow recovering an archaeological sample or to employ one of the avoidance measures may be required under the provisions set forth in this section. Construction work may continue on other parts of the building site while archaeological mitigation takes place.

If additional archaeological resources are discovered during excavation, grading, or construction activities, work shall cease in the area of the find until a qualified archaeologist has evaluated the find in accordance with federal, State, and local guidelines, including those set forth in PRC Section 21083.2.

Personnel of the proposed Project shall not collect or move any archaeological materials and associated materials. Construction activity may continue unimpeded on other portions of the Project Site. The found deposits would be treated in accordance with federal, State, and local guidelines, including those set forth in PRC Section 21083.2.

- Distinctive features, finishes, and construction techniques or examples of skilled craftsmanship which characterize an historic property shall be preserved.
- Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive historic feature, the new feature shall match the old in design, color, texture, and other visual qualities, and where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

- Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
- Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
- New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
- New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

State regulations mandate protection of paleontological resources on public lands, and CEQA requires evaluation of impacts to paleontological sites. Paleontological resources are also subject to certain State regulations for historical resources. Appendix G of the CEQA Guidelines provides guidance relative to significant impacts on paleontological resources, indicating that a project would have a significant impact on paleontological resources if it were to disturb or destroy a unique paleontological resource or site or unique geologic feature. Section 5097.5 of the PRC specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, California Penal Code Section 622.5 sets the penalties for the unlawful damage or removal of paleontological resources.

California Register of Historical Resources

The California Register is the authoritative guide to the State's significant archaeological and historical resources. It closely follows the eligibility criteria of the National Register but deals with State- and local-level resources. The California Register serves to identify, evaluate, register, and protect California's historical resources. For purposes of CEQA, a historical resource is any building, site, structure, object, or historic district listed in or eligible for listing in the California Register (Public Resources Code, Section 21084.1). As stated in the PRC, a resource is considered eligible for listing in the California Register if it meets any of the following criteria:

- a) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.*
- b) Is associated with the lives of persons important in our past.*
- c) Embodies the distinctive characteristics of type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.*

- d) *Has yielded, or may be likely to yield, information important in prehistory or history [Public Resources Code Section 5024.1(c)].*

Historical resources meeting one or more of the criteria listed above are eligible for listing in the California Register. In addition to significance, resources must have integrity for a period of significance—the date or span of time within which significant events transpired or significant individuals made important contributions. Important archaeological resources are required to be at least 50 years old to be considered. “Integrity is the authenticity of a historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance.” Simply put, resources must “retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance.”⁶

CEQA also requires the lead agency to consider whether there is a significant effect on unique archaeological resources that are not eligible for listing in the California Register. As defined in CEQA, a unique archaeological resource is:

an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. *Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.*
2. *Has a special and particular quality such as being the oldest of its type or the best available example of its type.*
3. *Is directly associated with a scientifically recognized important prehistoric or historic event or person.*

If an archaeological resource is found eligible for listing in the California Register, then it is considered under CEQA to be a historic resource that needs to be protected. This may also apply to unique archaeological resources. If a historic resource may be impacted by activity, under CEQA, avoidance and preservation in place is the preferred alternative. If that is not possible, then a data recovery plan will need to be created and enacted to lessen impacts to the environment to a less than significant level. If the archaeological resource is not eligible for listing in the California Register, and it is not a unique archaeological resource, then no further action is required to protect or mitigate possible impacts to it.

6 Secretary of the Interior's Standards and Guidelines, Archeology and Historic preservation. 1983.

California Environmental Quality Act

CEQA and the CEQA Guidelines have specific provisions relating to the evaluation of a project's impact on historical and unique archaeological resources.

PRC Section 21084.1 and Section 15064.5 of the CEQA Guidelines together establish the prevailing test for determining whether a resource can or must be considered a historical resource under CEQA. First, a resource is considered a historical resource for purposes of CEQA if it is listed or "deemed eligible for listing" in the California Register by the State Historical Resources Commission (SHRC).⁷ Second, it will be considered a historical resource, based on a presumption of significance, if it is either (1) listed in a local register of historic resources as defined in PRC Section 5010.1.4, or (2) identified in a local survey of historic resources meeting the criteria set forth in PRC Section 5024.1.5. If a resource meets either of these criteria, the lead agency must treat the resource as historically significant unless the "preponderance of the evidence" indicates that the resource is not historically significant. Third, a lead agency may find a resource to be a historical resource even though it is not formally listed in the California Register, listed in a local register, or identified in a local survey.⁸ Any such determination must be based on substantial evidence in light of the whole record.

CEQA also provides further guidance with respect to historical resources of an archeological nature and unique archaeological resources. A unique archeological resource is defined in PRC Section 21083.2(g) as:

[A]n archaeological artifact, object or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: (1) contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information, (2) has a special and particular quality such as being the oldest of its type or best available example of its type, and (3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

According to the CEQA Guidelines Section 15064.5(b): "A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." This section of the guidelines defines historical resources as including both the built environment and archaeological resources.

7 PRC sec. 21084.1 and 15064.5

8 PRC sec. 21084.1; sec. 15064.5(a)(3)(4)

A substantial adverse change is defined in the CEQA Guidelines Section 15064.5(4)(b)(1), as “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.” The significance of an historical resource is materially impaired, according to the CEQA Guidelines Section 15064.5(4)(b)(2), when a project:

- A. *Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or*
- B. *Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of the evidence that the resource is not historically or culturally significant; or*
- C. *Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.*

The CEQA Guidelines provide that “generally,” a project that follows the Secretary’s Standards “shall be considered as mitigated to a level of less than a significant impact on the historical resource.”

At the same time, however, a failure to precisely conform to the Secretary’s Standards in all respects does not necessarily mean that a project necessarily has a significant adverse impact on historical resources. There are circumstances where a project impacting historical resources may fail to conform to the Secretary’s Standards, and yet the lead agency can conclude based on substantial evidence that the overall impact is insignificant because the project does not “materially impair” the historical resource within the meaning of Section 15064.5(b).

CEQA Guidelines Section 15064.5 subsection (c) addresses impacts on archaeological sites. That section provides as follows:

- (1) *When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subsection (a).*
- (2) *If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.*
- (3) *If an archaeological site does not meet the criteria defined in subsection (a) but does meet the definition of a unique archaeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of Section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.*

For historical resources of an archaeological nature, “preservation in place is the preferred manner of mitigating impacts to archaeological sites.”⁹ “When recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken.” In practice, the California Office of Historic Preservation (OHP) has consistently determined that excavation, coupled with implementation of a data recovery plan, does not result in a significant environmental impact on a historical resource of an archaeological nature.

If a project would cause “damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state....To the extent that unique archaeological resources are not left in an undisturbed state, mitigation measures shall be required as provided in this subdivision.”¹⁰ CEQA Guidelines Section 15064.5(f) provides that “a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction.”

CEQA Guidelines Section 15064.5(d) specifies a process for evaluating human remains, and this issue is identified on the CEQA Checklist as an issue for evaluation in environmental documents. In addition, the

⁹ CEQA Guidelines sec. 15126.4(b)(3)(A).

¹⁰ PRC sec. 21083.2(b) and (c)

CEQA Checklist identifies the presence of paleontological resources as an environmental concern that needs to be considered.

State Health and Safety Code

If human remains are encountered unexpectedly during implementation of a project, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98.¹¹

If the remains are determined to be of Native American descent, the following procedure must be observed:

- a) The immediate vicinity must be secured according to generally accepted cultural or archaeological standards or practices.
- b) The coroner has 24 hours to notify the Native American Heritage Commission (NAHC).
- c) The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). The MLD may, with the permission of the Project Applicant, inspect the site of the discovery of the Native American remains and may recommend means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods.
- d) The MLD shall complete their inspection and make their recommendation within 48 hours of being granted access by the Project Applicant to inspect the discovery. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials. The area must not be damaged or disturbed by further development activity until the Applicant has discussed and conferred with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.
- e) If the Project Applicant or his or her authorized representative rejects the recommendation of the MLD, the Project Applicant or MLD may request mediation per Subdivision (k) of PRC Section 5097.94.
- f) If the NAHC is unable to identify an MLD, or the MLD identified fails to make a recommendation, or the mediation provided for in Subdivision (k) of PRC Section 5097.94, if invoked, fails to provide reasonable treatment, then the human remains and items associated with Native American human remains must be interred with appropriate dignity on the property in a location not subject to further and future subsurface disturbance.

¹¹ California Health and Safety Code, sec. 7050.5 and 5097.98

c. Local

City of South Pasadena

General Plan

The General Plan serves as a blueprint for planning and development in the City and indicates the community's vision for the future.

The Historic Preservation Element is intended to help fuse the preservation and protection of historic resources into long-term land-use, economic, and social planning. Through the following broad goals, it provides continuity and guides the actions of City Departments and commissions in preserving and protecting South Pasadena's historic landmarks, neighborhoods, and properties on the historic inventory.

- Preserve and maintain sites, structures, and neighborhoods that serve as significant reminders of the City's social, educational, religious, and architecture history.
- Encourage maintenance and preservation of historic structures and artifacts.
- Maintain elements of the natural landscape that contribute to the attractiveness and the historic character of districts, neighborhoods, and landmarks.
- Assure continuity of the City's historic character, scale, and small-town atmosphere for all future projects.
- Build public awareness of preservation issues and appreciation for the unique history of South Pasadena and its neighborhoods.
- Adopt incentives that promote the preservation and rehabilitation of historic structures.
- Encourage public/private cooperation in preservation efforts that enhance property values, enrich the local economy and promote tourism.
- Integrate preservation into the planning process.

Mission Street Specific Plan

South Pasadena’s first Specific Plan, the Mission Street Specific Plan, was adopted on April 4, 1996.¹² The purposed of the Mission Street Specific Plan was to take advantage of the Metro station and to enhance the presence of Mission Street as a “pedestrian-oriented, historic shopping street.”¹³

The Mission Street Specific Plan includes a Historic Resources and Architectural Character section which describes the visual characteristics of the historic resources in the area. The majority of the non-residential Historic Resources (82 percent) are storefront commercial buildings, constructed of brick and other masonry materials. These storefront buildings are located primarily along Mission Street and are concentrated in the same locations that the retail/service uses are concentrated. There are only two historic storefronts that are not located along Mission Street (the former South Pasadena Banks building on the southwest corner of El Centro Street and Meridian Avenue and the Meridian Ironworks building on Meridian Avenue).

Most of the storefront buildings are Vernacular Commercial in style; they are simple buildings with minimal ornamentation. In addition, in the Core Area there are three Renaissance Revival Influence storefronts (the Alexander and Graham Blocks on the south side of Mission Street just east of Meridian Avenue and the South Pasadena Bank building) and one Streamline/Regency (Day Ray). The Adjacent Area to the east contains two Renaissance Revival Influence storefronts, one Spanish Colonial Revival, and one Post-War Modern, as well as one “black wall” Spanish Colonial Revival building (the Pacific Bell building) which could be converted to a storefront. There is one Spanish Colonial Revival and one Tudor Revival storefront building in the West Area.

Mission Street’s storefront buildings typically share the following characteristics:

- Front façades located within a few feet of the property line/sidewalk
- Solid masonry wall with individual windows set into the walls
- Vertical bays (storefronts) articulated by horizontal divisions
- Architectural detailing and ornamentation on the façade that faces the street
- Entries and display windows that re oriented to the sidewalk
- Brick or earth-tone or light walls.

¹² City of South Pasadena, *General Plan* (October 1998).

¹³ City of South Pasadena, *Mission Street Specific Plan* (April 1996).

City of South Pasadena Cultural Heritage Ordinance

In 1971, South Pasadena adopted Cultural Heritage Ordinance No. 1591 that established the City’s Cultural Heritage Commission to advise the City Council on all issues related to preservation. In 1992 the City adopted Ordinance No. 2004, the Historic Preservation Ordinance which defined the legal framework for preservation and clarified the role and functions of the Commission. In 1994 the City Council adopted the “South Pasadena Historic Resources Survey and Inventory of Addresses” which comprises the City’s Cultural Resources Inventory. The City adopted a new Historic Preservation Ordinance in 2017.

The Cultural Heritage Commission is responsible for adopting specific criteria and recommendations for the designation of landmarks and historic districts, subject to approval by the City Council. The following is a list of the six categories of landmark designation:

- Eligible for National Register of Historic Places – Districts, sites, buildings, structures, and objects of local, state and national significance in American history, architecture, archaeology, and culture that possesses integrity of location, design, setting, materials, workmanship, feeling, and association.
- Eligible for California Register of Historical Landmark Program – Sites and structures that contribute in a unique way to the history and heritage of the state. Several categories may determine landmark status, such as architectural, influential individuals, and other comparable categories.
- Eligible for California Point of Historical Interest Program – Program recognizes site sand structures of local countrywide importance.
- Locally Significant Resources – Structures, places, or historic sites that are individually significant to South Pasadena’s history and heritage
- Districts – Structures, groups of structures, historic sites or features, design components, natural features, and landscape architecture that contribute to the historic or community sense of place or are significant to an area’s historic feel. Normally, significant district structures must be located within the district boundaries; however, all structures in this area are not necessarily contributors to the district.
- Resources Eligible for the California Register of Cultural Resources – the register automatically includes all properties eligible for or listed in the National Register, California Registered Historic Landmarks from No. 770, and California Points of Historic Interest, and will include locally registered landmarks, inventories, and the new category of the California Register itself.

Existing Conditions

a. Regional and Local Setting

Located approximately 10 miles northeast of downtown Los Angeles, just east of the Arroyo Seco, and bounded by Raymond Hill to the north and the Monterey Hills to the southwest, South Pasadena sits on an alluvial plain that was cultivated with orange groves and grapevines in the late nineteenth century. In

1885, the Los Angeles and San Gabriel Valley Railroad constructed a passenger rail line between Pasadena and Los Angeles as well as a depot near the corner of Meridian Avenue and El Centro Street in South Pasadena. By 1887, the Santa Fe Railroad took control over the railroad company and its depot. The growth of the small community was aided by the establishment of the Raymond Hotel and the Cawston Ostrich Farm, which attracted visitors and new residents in the late nineteenth and early twentieth centuries. With the construction of the Pacific Electric Short Line from downtown Los Angeles to downtown Pasadena in 1902, South Pasadena became one of Los Angeles' first suburbs—a destination for those seeking a favorable climate, scenic views, and a more serene atmosphere than the hustle and bustle of its much larger neighbors of Pasadena and Los Angeles. South Pasadena has maintained this small-town suburban feel, with a population just over 25,000 and much of its land occupied by single-family residences.

South Pasadena has two main commercial thoroughfares today: Mission Street and Fair Oaks Avenue. The original commercial core developed adjacent to the Los Angeles and San Gabriel Valley Railroad depot at Mission and El Centro streets. Commercial buildings were constructed in the following years extending east along Mission Street. Commercial growth along Fair Oaks Avenue (for a time a part of historic Route 66) did not commence until the 1920s when the street was rezoned for commercial purposes. Larger commercial development replaced many of the smaller buildings along the street in the 1970s and 1980s. The City's development pattern generally conforms to the rectilinear street grid pattern established prior to the turn of the twentieth century. Later alterations to the street grid include the construction of Arroyo Seco Parkway (Pasadena Freeway/CA 110) in 1940, which runs east–west through the north end of the City.

The Project Site is in the Los Angeles Basin: a broad, level plain defined by the Pacific Ocean to the west; the Santa Monica Mountains and Puente Hills to the north; and the Santa Ana Mountains and San Joaquin Hills to the south. This extensive alluvial wash basin is filled with Quaternary alluvial sediments. It is drained by several major watercourses, including the Los Angeles, Rio Hondo, San Gabriel, and Santa Ana Rivers. The Project Site is within an urbanized setting at an elevation of approximately 68 feet above mean sea level. The Project Site is located approximately 0.81 miles east of the Port of Arroyo Seco and 6.08 miles south of the Angeles National Forest.

b. Cultural Setting

Prehistoric Background

Numerous chronological sequences have been devised to aid in understanding cultural changes in Southern California. The four principal prehistoric periods for the Southern California coastal region are

the Early Man, Milling Stone, Intermediate, and Late Prehistoric periods.¹⁴ A summary of each of these prehistoric chronological sequences for southern California is described below.

Early Human (10,000–6,000 BCE)

The earliest accepted dates for archaeological sites on the Southern California coast are from two of the northern Channel Islands, located off the coast of Santa Barbara. On San Miguel Island, Daisy Cave clearly establishes the presence of people in this area about 10,000 years ago. On Santa Rosa Island, human remains have been dated from the Arlington Springs site to approximately 13,000 years ago. Present-day Orange and San Diego Counties contain several sites dating from to 9,000 to 10,000 years ago. Although the dating of these finds remains controversial, several sets of human remains from the Los Angeles Basin (e.g., Los Angeles Man, La Brea Woman, and the Haverty skeletons) apparently date to the middle Holocene, if not earlier.

Recent data from Horizon I sites indicate that the economy was a diverse mixture of hunting and gathering, with a major emphasis on aquatic resources in many coastal areas and a greater emphasis on large-game hunting inland.

Milling Stone (6,000–3,000 BCE)

Set during a drier climatic regime than the previous horizon, the Milling Stone Horizon period is characterized by subsistence strategies centered on collecting plant foods and small animals. The importance of seed processing is apparent in the dominance of stone-grinding implements in contemporary archaeological assemblages, namely milling stones (metates) and handstones (manos). Recent research indicates that Milling Stone Horizon food-procurement strategies varied in both time and space, reflecting divergent responses to variable coastal and inland environmental conditions.

In the Ballona Wetlands area, the Milling Stone period represented the beginning of many changes in the settlement of the area. The influx of Takic-speaking peoples into the Los Angeles Basin resulted in an increase of sites, new subsistence strategies, and new mortuary practices.

Intermediate (3,000 BCE–500 CE)

The Intermediate Horizon period is characterized by a shift toward a hunting and maritime subsistence strategy, along with a wider use of plant foods. An increasing variety and abundance of fish, land mammal, and sea mammal remains are found in sites from this period along the California coast. Related chipped-stone tools suitable for hunting are more abundant and diversified, and shell fishhooks became part of

14 William J. Wallace, "A Suggested Chronology for Southern California Coastal Archaeology," in *Southwestern Journal of Anthropology* 11 no. 3 (1955): 214–230.

the toolkit during this period. Mortars and pestles also became more common during this period, gradually replacing manos and metates as the dominant milling equipment, signaling a shift away from the processing and consuming of hard seed resources to the increasing importance of the acorn.

In the Ballona area, the intermediate period saw the continued growth of population; all major sites were occupied. This period also corresponds with the highest amount of precipitation in thousands of years, increasing the productivity of the wetlands and allowing for a higher population to be supported.

Late Prehistoric (500 CE–Historic Contact)

In the Late Prehistoric Horizon, there was an increase in the use of plant food resources, in addition to an increase in land and sea mammal hunting. There was a concomitant increase in the diversity and complexity of material culture during the Late Prehistoric, demonstrated by more classes of artifacts. The recovery of a greater number of small, finely-chipped projectile points suggests increased use of the bow and arrow rather than the atlatl (spear thrower) and dart for hunting. Steatite cooking vessels and containers are also present in sites from this time. In addition, there is an increased presence of smaller bone and shell circular fishhooks; perforated stones; arrow-shaft straighteners made of steatite; a variety of bone tools; and personal ornaments, such as beads made from shell, bone, and stone. There was also an increased use of asphalt for waterproofing and as an adhesive.

By 1,000 CE, fired-clay smoking pipes and ceramic vessels were being used at some sites. The scarcity of pottery in coastal and near-coastal sites implies that ceramic technology was not well developed in that area, or that ceramics were obtained by trade with neighboring groups to the south and east. The lack of widespread pottery manufacture is usually attributed to the high quality of tightly woven and watertight basketry that functioned in the same capacity as ceramic vessels.

During this period, there was an increase in population size accompanied by the advent of larger, more permanent villages. Large populations and, in places, high population densities are characteristic, with some coastal and near-coastal settlements containing as many as 1,500 people. Many of the larger settlements were permanent villages in which people resided year-round. The populations of these villages may have also increased seasonally.

In anthropologist Claude Warren's cultural ecological scheme,¹⁵ the period between AD 500 and European contact is divided into three regional patterns: Chumash (Santa Barbara and Ventura Counties), Tatic/Numic (Los Angeles, Orange, and western Riverside Counties), and Yuman (San Diego County). The

15 Claude N. Warren, "Cultural Tradition and Ecological Adaptation on the Southern California Coast," in *Archaic Prehistory in the Western United States*, Contributions in Anthropology No. 1(3), edited by Cynthia Irwin-Williams (Portales, NM: Eastern New Mexico University, 1968).

seemingly abrupt introduction of cremation, pottery, and small, triangular arrow points in parts of modern-day Los Angeles, Orange, and western Riverside Counties at the beginning of the Late Prehistoric period is thought to be the result of a Takic migration to the coast from inland desert regions. Modern Gabrielino/Tongva, Juaneño, and Luiseño people in this region are considered to be the descendants of the Uto-Aztecan, Takic-speaking populations that settled along the California coast during this period.¹⁶

Ethnographic Background

The Project Site is in the heart of territory for the Gabrielino/Tongva native groups. Surrounding native groups include the Chumash and Tatataviam/Alliklik to the north, the Serrano to the east, and the Luiseño/Juaneño to the south. There is well-documented interaction between the Gabrielino and many of their neighbors in the form of intermarriage and trade.

The Gabrielino/Tongva lands encompassed the greater Los Angeles Basin and three Channel Islands—San Clemente, San Nicolas, and Santa Catalina. Their mainland territory was bounded on the north by the Chumash at Topanga Creek; the Serrano at the San Gabriel Mountains in the east; and the Juaneño on the south at Aliso Creek.

The Gabrielino/Tongva established large, permanent villages in the fertile lowlands along rivers and streams, and in sheltered areas along the coast, stretching from the foothills of the San Gabriel Mountains to the Pacific Ocean. A total tribal population has been estimated of at least 5,000, but recent ethnohistoric work suggests that a number approaching 10,000 seems more likely. Several Gabrielino/Tongva villages appear to have served as trade centers due in large part to their centralized geographic position in relation to the southern Channel Islands and to other tribes. These villages maintained particularly large populations and hosted annual trade fairs that would bring their population to 1,000 or more for the duration of the event.

Historical Background

Like much of the Los Angeles County, South Pasadena was originally inhabited by a branch of the Tongva Nation (in this case, the Hahamongna tribe). For centuries, the Hahamongna thrived on land now part of Altadena, Pasadena, and South Pasadena, largely due to its proximity to the Arroyo Seco, which provided access to travel and commerce for native peoples in Southern California. In 1771, Mission San Gabriel Arcángel was founded just southeast of present-day South Pasadena, and the natives inhabiting this area became known as Gabrieliños. When the Spanish began occupying the San Gabriel Valley, the Gabrieliños

16 SWCA Environmental Consultants, *Archeological Assessment for the Compton High School Reconstruction Project* (January 2018).

were forced to live on Mission land. In 1834, Spain secularized the missions, while at the same time, Mexico won independence and California became a Mexican province.

South Pasadena occupies a small portion of the lands that were a part of Mission San Gabriel. After the secularization of Mission lands by the Mexican government, the land on which South Pasadena would later develop was given in an 1835 land grant by the government of Mexico to Juan Marine and Eulaia Pérez de Guillen and named Rancho San Pasqual. Portions of the rancho were sold.

In 1873, Indiana native Daniel Berry moved to Los Angeles with the intention of establishing the California Colony of Indiana, which came to prosper with the cultivation of citrus trees and grapevines. In November of 1873, Berry organized a group of fellow Indianans as well as new associates he had met in California to create the San Gabriel Orange Grove Association. The newly-formed association acquired a large tract of Rancho San Pasqual and subdivided it among its members. Known as the Indiana Colony up until that point, the investors selected the name Pasadena in 1875; residents located in the southern section of the settlement were known as South Pasadenans, but there was no political division at the time.

South Pasadenans petitioned for their own school and later, in 1882, a dedicated post office, both located on Columbia Street. Jane Apostol, in her definitive history book on South Pasadena, notes that Pasadena began working toward incorporation in 1884, but there was less interest in such political recognition in the southern regions, where a desire to avoid “outside interference” prevailed. Pasadena was incorporated in 1886, with Columbia Street as the southern boundary.

Throughout the 20th century, business and industry declined. Several ideas were proposed for the revitalization of the downtown commercial core. In 1989, the South Pasadena City Council created the Downtown Revitalization Task Force (later known as the General Plan Advisory Committee). In 1996, the Mission Street Specific Plan was adopted to aid in the revitalization of the city’s old commercial core. The plan proved to be successful, and today, businesses are thriving along Mission Street with a number of new restaurants, retail stores and office occupying some of the city’s oldest commercial buildings.

c. Historical Resources

Project Site

The Project site is currently occupied by three buildings. The buildings at 1101 and 1107 Mission Street were constructed in the late 1970s, have not been identified in any historic surveys and therefore do not qualify as historic resources. These two structures would be demolished as part of the Project. The structure at 1115 Mission Street was constructed in 1921 and is listed in the City's Historic Resource Inventory. As such, this section shall focus on the structure at 1115 Mission Street.

Known as the Luttrell's Building, 1115 Mission Street was identified as a "Vernacular commercial building" by the 1996 Mission Street Specific Plan. The original owner was James H. McCluer. According to the South Pasadena and San Marino City Directory (1926, 1928, 1929), he was an employee at the Water Department (1926) and lived with his wife Kate at 1117 Mission Street, immediately east of the Subject Property. A business building announcement was published in *Southwest Building and Contractor* for a "brick building at 1115 Mission St." in March 25, 1921. The building was repaired in 1933 and plastered for a three-room apartment. Another remodel in 1978 reported by the County Assessor raised the effective age to 1943.¹⁷

According to an advertisement in the *San Bernardino Sun* (March 25, 1925), the headquarters for a nationally known bottled beverage, the Whistle Bottling Company, operated from 1115 Mission Street in 1925. A 1927 photograph from the Huntington Library shows the Whistle Bottling Company store with a different storefront than what is seen today. The storefront featured a large projecting window with marble bulkhead, plate glass window, and wood entrance ceiling. Another 1925 photograph showed a large plate glass window with one mullion down the middle. The walls appeared to be unglazed brick and concrete. In 1926, the city directory listed A.E. Myers as president of the Whistle Bottling Company. In 1928-9, J.R. Irvine was the President. By 1932, the Whistle Bottling Company was not mentioned in the city directory. Building permits show that E.M. and A.E. Turner were the owners of the property in 1954. In 1960, A.E. Turner started Superior Shirt Laundry at the Subject Property and the business was operated at the building from 1960 to at least 1971. In 1965, the city directory listed Superior Shirt Landry and Edwin B. Strong under the address. In 1974, Thomas A. Urton was the owner. In 1982, the owner was Luttrell's Upholstery. In 1992, the owner was Andrew Cherng.

1115 Mission Street is a two-story commercial building with residential use above, commercial use on the ground floor, and a one-story warehouse attached to the rear. The front (north) facade of the building faces Mission Street at the property line and features white-enameled brick in a running bond, an off-

¹⁷ Los Angeles County Assessor, Record for 1115 Mission Street, 1934-1978.

center entrance and storefront-style window. The upper level features two symmetrical windows and a projecting brick frieze. The front windows are non-original replacements. Although the building's storefront is substantially altered and the brick on the side elevations is in poor condition, the buildings footprint, massing, enabled brick masonry primary (front) elevation, parapet, segmental arched openings on the east elevation, and wood-truss warehouse roof are characteristic components of the original style.

1115 Mission Street was included in a list of historic structures in the 1996 Mission Street Specific Plan, in a 2003 reconnaissance-level City-wide historic survey, and in the 2015/16 City of South Pasadena Historic Resources Survey. In the 2003 survey the property was identified as "Not Eligible for Local Listing" but "eligible for consideration in Local Planning." In the 2015/2016 survey it was also identified as "not eligible for local listing", but "may warrant special consideration in local planning." As such, the structure at 1115 Mission Street is not clearly a historic resource under CEQA, however the City has given the property special consideration in its planning efforts with its evaluation in this EIR.

South Pasadena Historic Business District

The South Pasadena Historic Business District (also known as the Mission West Historic Business District) comprises the City's commercial core that largely developed between 1887 and 1924. The district is generally bounded by Fairview Avenue to the east, Hope Street to the north, and El Centro Street to the south (except where the boundary extends south to Oxley Street to include the South Pasadena Public Library). Its westerly boundary jogs to include four structures directly west of Meridian Avenue: the former Mission Arroyo Hotel at 950-966 Mission Street, Meridian Iron Works at 913 Meridian Avenue, a watering trough and wayside station along Meridian Parkway, and a lot originally part of the Santa Fe Railroad right-of-way (now occupied by a 1980s building). The historic district encompasses 18 properties, of which 14 are contributors to the district. These include several commercial buildings located along Mission Street the former South Pasadena Bank at the southwest corner of El Centro Street and Diamond Avenue, and diverse resources including Meridian Iron Works (originally a hotel and market, now occupied by the South Pasadena Historical Museum), a watering trough and wayside station, the School District Administration Building (formerly El Centro School; includes the auditorium addition which is now the South Pasadena School District Boardroom), and the South Pasadena Public Library.

Three additional buildings within the district boundaries were constructed after the National Register of Historic Places listing: two commercial buildings—919 Mission Street (1986) and 1020 Mission Street (1997) —and a multifamily apartment building at 1000 El Centro Street (built in 1988). The commercial buildings were constructed on sites that were vacant or used as parking lots at the time of the nomination, and the apartment building replaced an electronic equipment manufacturing building (1949) that was a non-contributor to the district.

Description of District Contributors

One- and two-story commercial buildings from the early twentieth century comprise the majority of the historic resources within the district. All were constructed between 1887 and 1924 and built to the sidewalk line. The Alexander Block (1101–1005 Mission Street) and the Graham Block (1011– 1017 Mission Street), located between Meridian and Diamond, contain relatively earlier buildings that cover significantly more street frontage. The architectural character of the buildings is generally modest and vernacular in nature, though those that are better preserved are very good examples of the early twentieth century commercial vernacular of small Southern California towns. The district's significance has been well sustained in the 35 years since its listing in the NRHP, with no demolition or major alteration of contributors. It must be noted, however, that approximately one-third of the buildings within the historic district exhibit fairly significant alterations which, in most cases, occurred prior to the district's listing. Typical alterations include non-historic stucco cladding and stone cladding (circa the 1950s) on the main façades of commercial properties as well as altered and replaced storefronts.

The historic district also contains two institutional buildings. El Centro School, now the SPUSD Administration Building, which is adjacent to the project footprint (1928; north addition 1931, auditorium, now the SPUSD Boardroom) was designed in the Romanesque Revival style. The South Pasadena Public Library (originally built in 1907) reflects its appearance as of 1930, when it was moved to the center of the lot, enlarged, and remodeled in the Mediterranean Revival style. The former school was altered after the period of significance, in 1949. For seismic safety reasons, the central bell tower, a major feature of the building, was removed and a significant amount of exterior brick veneer was covered with stucco or removed. The east and west corridors or colonnades were altered, apparently during the same seismic upgrade, and a few of the bays that originally retained operable rectangular panels were filled in. Since the building has been used for offices since 1977, its interior no longer reflects the character or features of the original classrooms. While it is not considered an individually eligible resource, as discussed below, the building retains enough of its original design to contribute to the historic district.

The South Pasadena Public Library was also altered in 1982 with a large addition on its south side, facing away from and generally not visible from the rest of the district. This alteration did not affect the eligibility of the historic district or compromise the building's eligibility for local listing or as a contributor to the historic district.

Several of the commercial buildings in the district have compromised historic integrity of design and materials (resulting in compromised historic feeling). Most of these alterations had already taken place when the NRHP listing occurred. Therefore, these properties were not reevaluated.

ENVIRONMENTAL IMPACTS

Methodology

The evaluation of potential impacts is based on the *Historical Resources Assessment and CEQA Impacts Analysis for CFT Mission Bell Center Mixed Use Project* (Historical Report), dated July 13, 2017, by Environmental Science Associates (ESA) provided as **Appendix C** to this Draft EIR and on the review and evaluation of the Project by City staff and City retained consultants. Under CEQA, a historic impact occurs if there is a substantial change to the resource such that its significance would be impaired.

Thresholds of Significance

The proposed Project may be deemed to have a significant impact related to cultural resources if it would:

Threshold CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5

Threshold CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5

Threshold CUL-3: Disturb any human remains, including those interred outside of formal cemeteries

Project Impact Analysis

Threshold CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5

Less than Significant Impact. The Project would demolish two-thirds of the warehouse portion of the property 1115 Mission Street and retain the two-story commercial and residential portion and one-third of the warehouse portion of the building. The Project would rehabilitate the portion of the building fronting Mission Street for adaptive reuse as a two-story commercial and residential building and construct a new two-story residential building attached to the rear of the retained portion of 1115 Mission Street. The Project would also demolish the two existing buildings located at 1101 and 1107 Mission Street and construct a new three story commercial and residential building on the site.

Significance Evaluation of the Building

1115 Mission Street is a two-story commercial and residential structure built in 1921 that has been included in a list of historic structures in the 1996 Mission Street Specific Plan, a 2003 reconnaissance-level City-wide historic survey, and the 2015/16 City of South Pasadena Historic Resources Survey. In the 2003 survey the property was identified as "Not Eligible for Local Listing" but "eligible for consideration

in Local Planning." In the 2015/2016 survey it was also identified as "not eligible for local listing, but as, the property warrants special consideration in local planning." As such, the structure at 1115 Mission Street is not clearly a historic resource under CEQA, however, the City has given the property special consideration in its planning efforts with its evaluation in this EIR.

1115 Mission Street was identified as a "Vernacular commercial building" in the 1996 Mission Street Specific Plan. A 1927 photograph from the Huntington Library shows the building as the Whistle Bottling Company store with a different storefront than what is seen today. The storefront featured a large projecting window with marble bulkhead, plate glass window, and wood entrance ceiling. Another 1927 photograph showed a large plate glass window with one mullion down the middle. The walls appeared to be unglazed brick and concrete.

The overall primary features include the rectangular-shaped footprint; massing; flat roof; brick material; and commercial facade. Key features of the commercial façade include the glazed brick surface, storefront windows, the single door opening, decorative brick course between the first and second stories, recessed sign area, the cornice, frieze, and angled sills. The features of the original 1921 design shown in historic photographs of the storefront are different than what is seen today. However, building permits do not show what alterations were done on the storefront.

Direct Impacts

The proposed Project changes affect the appearance of the building facade and the footprint and massing of the building. The primary façade adjacent to Mission Street will have the non-original first and second-story windows replaced with period-appropriate style windows. Three windows will be added to the first story of the west façade. A solid door, replacing a window, will be added to the east façade. The south façade would be altered with the removal of the existing shed structure and the construction of the new residential building.

The National Park Service defines rehabilitation as "the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values."¹⁸ As part of the effort to give special consideration to the planning effort of the Project the design would make possible a compatible use of the property with alterations that preserve those portions of the property that convey its historic and architectural value. Under CEQA, a project that follows *the Secretary of the Interior's Standards* ("the

18 *The Secretary Of The Interior's Standards For The Treatment Of Historic Properties, 1995 With Guidelines For Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings*, Introduction

Standards”) shall be considered as mitigated to a level of less than significant impact on the Historical Resource.¹⁹ Special consideration in the planning effort for the Project has been taken to evaluate the Project per the Standards. As shown in **Table 4.2-1**, the Project is generally consistent with the Standards. As such, direct impacts would be less than significant.

**Table 4.2-1
Consistency with Secretary of the Interior Standards**

Standard	Project Consistency
Standard 1: A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.	Consistent. The property would be redeveloped as a commercial and residential use and would retain the commercial façade along Mission Street.
Standard 2: The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.	Consistent. Although the property is not eligible for designation as a local landmark or inclusion in a historic district, the Project proposes to retain some of the building’s original features. These features include: the enameled brick of the main façade; the decorative brick course between the first and second stories; recessed sign area; the cornice; frieze; and angled window sills. The distinctive materials and features of the store front would be retained. A new structure would be attached at the rear which would be architecturally consistent with the character of the retained front of the building.
Standard 3: Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.	Consistent. The overall design does not create a false sense of historical development and does not incorporate conjectural features from other historic properties into the development.
Standard 4: Changes to a property that have acquired historic significance in their own right will be retained and preserved.	Consistent. There have been no changes to the subject property that have acquired historic significance in their own right.
Standard 5: Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.	Consistent. Although the property is not eligible for designation as a local landmark or inclusion in a historic district, the Project proposes to retain some of the building’s original features such as the enameled brick of the main façade, the decorative brick course between the first and second stories, the recessed sign area, the cornice, frieze, and angled window sills.
Standard 6: Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible,	Consistent. The first and second-story windows are not original to the building and are deteriorated beyond repair. These windows will be replaced with period-appropriate style windows.

¹⁹ California Environmental Quality Act, 15064.5(3)

Standard	Project Consistency
materials. Replacement of missing features will be substantiated by documentary and physical evidence.	
Standard 7: Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.	Consistent. No chemical or physical treatments are proposed.
Standard 8: Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.	Consistent. No archeological resources are known to exist on the site.
Standard 9: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property, the new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.	Consistent. The proposed new construction would be differentiated from the existing portion of the building fronting Mission Street. The new building to be attached at the rear will be a two story residential building designed at a scale and mass similar to the existing being retained and renovated.
Standard 10: New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.	Consistent. The Project would remove the single story warehouse from the rear façade and a new two story residential structure would be constructed in its place. The new construction, if removed at some later time, would not impair the essential form and integrity of the retained portion of the building fronting Mission Street.

Indirect Impacts

The surrounding area includes numerous historic resources. Construction and operation of the Project would not alter any of the physical characteristics of nearby historic resources. Additionally, construction and operation of the Project would not alter the historic context of the South Pasadena Historic District and other commercial areas fronting Mission Street. Though the new component of the Project would be two and three-stories in height and the historic resources of the South Pasadena Historic Business District (District) are predominantly two-story in height, the design of the new construction features upper level setbacks and building volumes defined by differing material and color finishes. As such, the massing of the new construction would be compatible with the development pattern of the surrounding area. Therefore, the Project would not adversely alter the character or feeling associated with the District or other commercial areas fronting Mission Street, and the historical significance and eligibility of existing resources would not be impaired. Therefore, indirect impacts would be less than significant.

Threshold CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5

The proposed Project area has been heavily disturbed by past development and related construction activities. However, the potential exists for unknown archaeological resources to be inadvertently unearthed during earthmoving activities associated with the demolition of the existing residential buildings on the site. The demolition of these buildings would facilitate the future development of commercial and multifamily mixed-use buildings. During any future construction, if subsurface artifacts are unearthed, the Applicant is required to comply with California Public Resources Code (PRC) Section 21083.2, which specifies the protocol to be followed should cultural resources be discovered during excavation, grading, or construction activities. Should that process determine that any artifacts found are tribal in origin, ground-disturbance activity shall cease, and the City shall notify the tribes known to be affiliated with the Project area to initiate development of a tribal cultural resource (TCR) monitoring plan. With compliance with these procedures, impacts would be less than significant.

Threshold CUL-3: Disturb any human remains, including those interred outside of formal cemeteries

A significant impact would occur if previously interred human remains would be disturbed during excavation of the Project Site. The Project Site is in an urbanized area and has been subject to grading and development in the past.

While no formal cemeteries, other places of human internment, or burial grounds or sites are known to occur within the Project area, there is always a possibility that human remains can be encountered during ground-disturbing activities. Construction of the proposed Project would adhere to California Health and Safety Code Section 7050.5, which states that if human remains are encountered, no further disturbance shall occur until the Los Angeles County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The Los Angeles County Coroner must be notified of the find immediately. If the human remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify a Most Likely Descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. With adherence to these regulatory requirements, impacts would be less than significant.

CUMULATIVE IMPACTS

The analysis of cumulative impacts to historic resources is based on whether impacts of the proposed Project and related projects, when taken as a whole, substantially diminish the number of historic resources within the same or similar context or property type. As discussed previously, the proposed Project would not significantly impact any historic resources. Thus, the proposed Project would not contribute to cumulative impacts to historic resources and would result in a less than significant impact.

The proposed Project, in combination with cumulative development, could contribute to the disturbance of land, which could potentially contain archaeological and paleontological resources. Determinations regarding the significance of impacts of the related projects on archaeological and paleontological resources would be made on a case-by-case basis and, if necessary, the applicants of the related projects would be required to adhere to applicable with federal, State, and local requires and/or implement appropriate mitigation measures. The proposed Project's potential impacts to archaeological and paleontological resources would be less than significant with adherence to regulatory requirements and implementation of the recommended mitigation measures. Therefore, the proposed Project would not contribute to any potential cumulative impacts on archaeological and paleontological resources. Impacts would not be cumulatively considerable.

MITIGATION MEASURES

All Project impacts related to Cultural Resources were found to be less than significant. No mitigation measures are required.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

As discussed above all Project impacts to Cultural Resources were found to be less than significant.

INTRODUCTION

This section of the Draft Environmental Impact Report (Draft EIR) analyzes the potential impacts of the proposed Mission Bell Mixed-Use (proposed Project) on energy resources, focusing on three in particular: electricity, natural gas, and transportation-related energy (petroleum-based fuels). This analysis addresses both construction and operational impacts associated with the consumption of energy resources. This analysis was prepared pursuant to Appendix F of the California Environmental Quality Act (CEQA) Guidelines, which provides guidance on discussing energy implications in an EIR, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. This section evaluates the demand for energy resources attributable to the proposed Project and determines whether the current and planned electrical, natural gas, and petroleum-based fuel supplies and distribution systems are adequate to meet the proposed Project's forecasted energy consumption. The information presented herein is based, in part, on the California Emissions Estimator Model (CalEEMod) outputs as calculated for **Section 4.1: Air Quality**.

ENVIRONMENTAL SETTING

Regulatory Framework

a. Federal

Corporate Average Fuel Economy Standards

In response to the *Massachusetts v. Environmental Protection Agency* ruling,¹ the George W. Bush administration issued Executive Order 13432 in 2007, directing the US Environmental Protection Agency (USEPA), the United States Department of Transportation (USDOT), and the United States Department of Energy (USDOE) to establish regulations that reduce greenhouse gas (GHG) emissions from motor vehicles, nonroad vehicles, and nonroad engines by 2008.² In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency for and GHG emissions from cars and light-duty trucks for model year 2011; in 2010, the USEPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.³

1 *Massachusetts v. Environmental Protection Agency*, 127 S.Ct. 1438 (2007).

2 US Government Publishing Office, Administration of George W. Bush (May 14, 2007), 631, accessed June 2019, <https://www.gpo.gov/fdsys/pkg/WCPD-2007-05-21/pdf/WCPD-2007-05-21-Pg631.pdf>.

3 US Environmental Protection Agency (USEPA), "Regulations for Greenhouse Gas Emissions from Commercial Trucks & Buses," accessed June 2019, <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-greenhouse-gas-emissions-commercial-trucks>.

In 2010, President Obama issued a memorandum directing the USEPA, USDOT, USDOE, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles.⁴ The proposed standards projected to achieve 163 grams per mile of CO₂ in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon (mpg) if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and the USEPA issued augural standards for MY 2022 through 2025 following direction from the Obama Administration.⁵ The agencies developed the second phase of the coordinated National Program for GHG emissions and fuel efficiency standards following the successful adoption of the first phase for MY 2012–2016 light-duty vehicles in April 2010. Under the second phase standards, carbon dioxide (CO₂) emission limits would decrease from 250 grams per mile (g/mi) in MY 2016 to 163 g/mi in model year 2025 for a combined fleet of cars and light trucks, equivalent to 54.5 mpg if this level were achieved solely through fuel efficiency improvements. If all of the necessary emission reductions were made from fuel economy improvements, then the standards would correspond to a combined fuel economy of 40.3–41 mpg in 2021 for the first phase of NHTSA rulemaking action and 48.7–49.7 mpg in 2025 for the second phase. In August 2018, the Trump Administration released a notice of proposed rulemaking, the *Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule)*, which proposes to freeze these fuel-efficiency requirements and lock in MY 2020 standards through 2026.⁶

In addition to the regulations applicable to cars and light-duty trucks described above, in 2016, the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2018–2027 (for certain trailers) and 2021–2027 (for semitrucks, large pickup trucks, vans, and all types and sizes of buses and work trucks). The final standards are expected to lower CO₂ emissions by

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- 4 USEPA, “Presidential Announcements and Letters of Support related to Greenhouse Gas Emissions” (August 28, 2017), accessed June 2019, <https://www.epa.gov/regulations-emissions-vehicles-and-engines/presidential-announcements-and-letters-support-related>.
 - 5 U.S. Environmental Protection Agency (USEPA), *Regulations for Emissions from Vehicles and Engines*, “Final Rule for Model Year 2017 and Later Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards,” October 15, 2012, accessed June 2019, <https://www.gpo.gov/fdsys/pkg/FR-2012-10-15/pdf/2012-21972.pdf>.
 - 6 USEPA, “The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks,” August 24, 2018, accessed June 2019, <https://www.gpo.gov/fdsys/pkg/FR-2018-08-24/pdf/2018-16820.pdf>.

approximately 1.1 billion metric tons, save vehicle owners fuels costs of about \$170 billion, and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.⁷

Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:⁸

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of renewable fuel in 2022, with at least 16 billion gallons from cellulosic biofuels and a cap of 15 billion gallons for corn-starch ethanol;
- Prescribing or revising 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;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and
- While superseded by USEPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green jobs.”⁹

b. State

Assembly Bills

Assembly Bill 32

Assembly Bill (AB) 32 (Health and Safety Code Sections 38500–38599), also known as the California Global Warming Solutions Act of 2006, committed the State to achieving year 2000 GHG emission levels by 2010

7 USEPA, “Final Rule for Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles – Phase 2,” accessed June 2019, <https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-greenhouse-gas-emissions-and-fuel-efficiency>.

8 Energy Independence and Security Act of 2007, Public Law 110–140 (December 19, 2007).

9 A green job, as defined by the United States Department of Labor, is a job in business that produce goods or provide services that benefit the environment or conserve natural resources.

and year 1990 levels by 2020.¹⁰ To achieve these goals, AB 32 tasked the California Public Utilities Commission (CPUC) and California Energy Commission (CEC)¹¹ with providing information, analysis, and recommendations to the California Air Resources Board (CARB) regarding ways to reduce GHG emissions in the electricity and natural gas utility sectors.

Complete Streets Act

In 2008, Governor Arnold Schwarzenegger approved AB 1358, which required a legislative body of a city or county upon any substantive revision of the circulation element of the general plan to include users of public transportation in a manner suitable to the rural, suburban, or urban context.¹²

Advanced Clean Cars Regulations

In 2012, CARB approved the Advanced Clean Cars (ACC) program, a new emissions-control program for vehicle model years 2017–2025. The program combines the control of smog, soot, and GHGs with requirements for greater number of zero-emission vehicles (ZEVs). By 2025, when the rules will be fully implemented, automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.¹³

Senate Bills

Senate Bill 375

Senate Bill (SB) 375, signed into law in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocations.¹⁴ The act requires metropolitan planning organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS) that prescribes land use allocation in that MPO's regional transportation plan (RTP). CARB, in consultation with MPOs, provided regional reduction targets for GHGs for the years 2020 and 2035.

Senate Bill X1-2: 2020 Renewable Portfolio Standard

On April 12, 2011, California governor Jerry Brown signed SB X1-2.¹⁵ This bill codifies the 33 percent by 2020 Renewable Portfolio Standard (RPS) created by Executive Order S-14-08, previously signed by

10 CARB, "Assembly Bill 32 Overview" (last reviewed August 5, 2014), <https://www.arb.ca.gov/cc/ab32/ab32.htm>.

11 The CEC was created as the State's principal energy planning organization in 1974.

12 California Legislative Information, Assembly Bill No. 1358 (September 2008), http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200720080AB1358.

13 CARB, "Advanced Clean Cars Program," accessed January 18, 2017, <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program>.

14 California Legislative Information, Senate Bill No. 375 (September 30, 2008), https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200720080SB375.

15 California Energy Commission, "Renewables Portfolio Standard (RPS)," accessed June 2019, <http://www.energy.ca.gov/portfolio/>.

Governor Schwarzenegger. The RPS required that all retail suppliers of electricity in California serve 33 percent of their load with renewable energy by 2020. A number of significant changes are made in SB X1-2. It extends application of the RPS to all electric retailers in the State, including municipal and public utilities, as well as community choice aggregators.

SB X1-2 creates a three-stage compliance period for electricity providers to meet renewable energy goals: 20 percent of retail sales must be renewable energy products by 2013, 25 percent of retail sales must be renewable energy products by 2016, and 33 percent of retail sales must be renewable energy products by 2020. The 33 percent level must be maintained in the years that follow. This three-stage compliance period requires the RPS to be met increasingly with renewable energy that is supplied to the California grid and is located within or directly proximate to California. SB X1-2 mandates that renewables from this category make up:

- At least 50 percent for the 2011–2013 compliance period;
- At least 65 percent for the 2014–2016 compliance period; and
- At least 75 percent for 2016 and beyond.

SB X1-2 sets rules for the use of Renewable Energy Credits as follows:

- Establishes a cap of no more than 25 percent unbundled RECs going toward the RPS from 2011 to 2013, 15 percent from 2014 to 2016, and 10 percent thereafter;
- Does not allow for the grandfathering of tradable REC contracts executed before 2010, unless the contract was (or is) approved by the CPUC;
- Allows banking of RECs for 3 years only; and
- Allows energy service providers, community choice aggregators, and investor-owned utilities with 60,000 or fewer customers to use 100 percent RECs to meet the RPS.

SB X1-2 also eliminates the Market Price Referent, which was a benchmark to assess the above-market costs of RPS contracts based on the long-term ownership, operating, and fixed-price fuel costs for a new 500-megawatt (mW) natural-gas-fired, combined-cycle gas turbine.

Senate Bill 350: Clean Energy and Pollution Reduction Act

SB 350, signed October 7, 2015 is the Clean Energy and Pollution Reduction Act of 2015.¹⁶ SB 350 implements some of the goals of Executive Order B-30-15 described above. The objectives of SB 350 are

¹⁶ California Legislative Information, Senate Bill No. 350 (October 7, 2015), accessed June 2019, https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350.

(1) to increase the procurement of electricity from renewable sources from 33 percent to 50 percent; and (2) to double the energy efficiency savings in electricity and natural gas end uses of retail customers through energy efficiency and conservation.¹⁷

Senate Bill 32: Statewide Reductions in GHG Emissions

On September 8, 2016, Governor Brown signed SB 32, which extends AB 32 another 10 years to 2030 and updates the State's objectives. SB 32 calls for Statewide reductions in GHG emissions to 40 percent below 1990 levels by 2030. The bill became effective on January 1, 2017.¹⁸

Senate Bill 97

SB 97 requires the Office of Planning and Research (OPR) to prepare and develop guidelines for the mitigation of GHG emissions or the effects thereof, including but not limited to effects associated with transportation and energy consumption.¹⁹ These guidelines were required to be transmitted to the Natural Resources Agency by July 1, 2009, to be certified and adopted by January 1, 2010. OPR submitted the Proposed Draft Guideline Amendments for Greenhouse Gas Emissions to the Secretary for Natural Resources on April 13, 2009. The California Natural Resources Agency conducted formal rulemaking in 2009 on December 30 of that year and adopted the Guideline Amendments, which address the specific obligations of public agencies when analyzing GHG emissions under CEQA to determine a project's effects on the environment.

However, neither a threshold of significance nor any specific mitigation measures is included or provided in these CEQA Guideline Amendments. The Guideline Amendments require a Lead Agency to make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. The Guideline Amendments give discretion to the Lead Agency whether to (1) use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use; and/or (2) rely on a qualitative analysis or performance-based standards. Further, the Guideline Amendments identify three factors that should be considered in the evaluation of the significance of GHG emissions:

1. The extent to which a project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

¹⁷ Senate Bill 350 (2015-2016 Reg. Session) Stats 2015, ch. 547.

¹⁸ California Legislative Information, Senate Bill No. 32 (September 8, 2016), accessed June 2019, https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32.

¹⁹ California Legislative Information, Senate Bill No. 97 (August 24, 2007), accessed June 2019, https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=200720080SB97.

2. Whether the project emissions exceed a threshold of significance that the Lead Agency determines applies to the project; and
3. The extent to which the project complies with regulations or requirements adopted to implement a Statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The administrative records of the promulgation of the Guidelines Amendments also clarify “that the effects of greenhouse gas emissions are cumulative and should be analyzed in the context of California Environmental Quality Act’s requirements for cumulative impact analysis.”²⁰

The Natural Resources Agency is required to periodically update the guidelines to incorporate new information or criteria established by CARB pursuant to AB 32. SB 97 applies retroactively to any environmental impact report, negative declaration, mitigated negative declaration, or other document required by CEQA that has not yet been certified.

Senate Bill 1389

SB 1389 (Public Resources Code Sections 25300–25323; SB 1389) requires the development of an integrated plan for electricity, natural gas, and transportation fuels. Pursuant to SB 1389, the CEC must adopt and transmit to the Governor and Legislature an Integrated Energy Policy Report every 2 years.²¹ The most recent version, the *2016 Integrated Energy Policy Report*, addresses the State’s “loading order,” reduction of demand response, renewable energy, electricity system, progress toward its 2050 GHG reduction goals, natural gas supplies, and the transportation sector’s contribution to the State’s GHG emissions.²²

California Codes and Regulations

California Building Energy Efficiency Standards (Title 24, Part 6)

California’s Energy Efficiency Standards for Residential and Nonresidential Buildings, found in Title 24, Part 6 of the California Code of Regulations (CCR) and commonly referred to as “Title 24,” were established in 1978 in response to a legislative mandate to reduce California’s energy consumption.²³ Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and

20 Cynthia Bryant, Director of the Office of Planning and Research, letter to Mike Chrisman, Secretary for Natural Resources, April 13, 2009.

21 California Legislative Information, Senate Bill No. 1389 (September 15, 2002), accessed June 2019, http://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=200120020SB1389.

22 California Energy Commission, *2016 Integrated Energy Policy Report* (2016).

23 California Code of Regulations, Title 24, Part 6, and Associated Administrative Regulations in Part 1, “2016 Building Energy Efficiency Standards, Building Energy Efficiency Standards for Residential and Nonresidential Buildings,” (June 2015).

methods.²⁴ These standards apply to new construction of both residential and nonresidential buildings, and regulate energy use for heating, cooling, ventilation, water heating, and lighting. These standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings provided these standards meet or exceed those provided in Title 24 guidelines. The South Pasadena Municipal Code (SPMC) incorporates these State requirements.

An update to Title 24 was adopted by the CEC on April 23, 2008. The 2008 Title 24 standards applied to building permits for which an application was submitted on or after January 1, 2010. The CEC adopted the changes made in 2008 to the Building Energy Efficiency Standards to respond to the mandates of AB 32 and to pursue California energy policy that energy efficiency is the resource of first choice for meeting California's energy needs. The CEC adopted 13 Title 24 standards as well as the 2016 Title 24 standards, which became effective on January 1, 2017, and are applicable to the Project.²⁵ The 2016 standards will continue to improve upon prior Title 24 standards for new construction of, and additions and alterations to, residential and nonresidential buildings.²⁶

California Green Building Standards (Title 24, Part 11)

The California Green Building Standards Code, which is Part 11 of the CCR, is commonly referred to as the CALGreen Code.²⁷ The purpose of CALGreen is to reduce GHG emissions by promoting environmentally responsible, energy-efficient, cost-effective, healthier places to live and work. CALGreen identifies certain residential and nonresidential buildings that are required to incorporate mandatory green building measures outlined in CALGreen. In addition, CALGreen includes voluntary measures that may be incorporated into the building design.

The 2008 edition, the first edition of the CALGreen Code, contained only voluntary standards. The 2010 CALGreen Code contained mandatory requirements for State-regulated buildings and structures throughout California beginning on January 1, 2011. The 2010 CALGreen Code contained 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 2010 CALGreen Code also provided design options, allowing the designer to determine how best to achieve compliance for a given site or building condition. In addition, the 2010 CALGreen

24 California Code of Regulations, Title 24, Part 6, and Associated Administrative Regulations in Part 1, "2016 Building Energy Efficiency Standards, Building Energy Efficiency Standards for Residential and Nonresidential Buildings," (June 2015).

25 California Code of Regulations, Title 24, Part 6, and Associated Administrative Regulations in Part 1, "2016 Building Energy Efficiency Standards, Building Energy Efficiency Standards for Residential and Nonresidential Buildings," (June 2015).

26 California Code of Regulations, Title 24, Part 6, and Associated Administrative Regulations in Part 1, "2016 Building Energy Efficiency Standards, Building Energy Efficiency Standards for Residential and Nonresidential Buildings," (June 2015).

27 California Code of Regulations, Title 24, Part 11, California Buildings Standards Commission, 2016 Green Building Standards Code (January 1, 2017).

Code required building commissioning, which is a process for verification that all building systems, such as heating and cooling equipment and lighting systems, are functioning at their maximum efficiency.

The 2016 CALGreen Code went into effect on January 1, 2017. It provides a number of important updates to the 2010 CALGreen Code, such as (1) increased requirements for electrical vehicle charging infrastructure and (2) a new universal waste code section.

California Appliance Efficiency Regulations (Title 20, Sections 1601 through 1608)

The 2016 Appliance Efficiency Regulations, adopted by the CEC, include standards for new appliances, equipment, and lighting, if they are sold or offered for sale in California. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy and water efficient appliances.²⁸

California Plumbing Code

The California Plumbing Code is codified in Part 5 of Title 24. Chapter 4 contains provisions requiring the installation of low-flow fixtures and toilets. Existing development is also required to reduce its wastewater generation and water use by retrofitting existing structures with water-efficient fixtures.²⁹ Additionally, Sections 5.303.2 and 5.303.4 provide for a minimum 20 percent reduction in water demand and wastewater discharges. This would result in a concurrent reduction in energy demand to supply, treat, and convey water and wastewater.

California Energy Action Plan

The California Energy Action Plan, most recently updated in 2008, was developed jointly by the California Public Utilities Commission and the California Energy Commission with active participation from other State agencies with energy-related responsibilities.³⁰ The plan establishes energy efficiency as the resource of first choice for meeting California's energy needs (i.e., energy efficiency is at the "top of the loading order"). These standards have been adopted and incorporated into the California Energy Code.³¹

28 California Energy Commission, *2016 Appliance Efficiency Regulations* (January 2017), accessed June 2019, <http://www.energy.ca.gov/2017publications/CEC-400-2017-002/CEC-400-2017-002.pdf>.

29 California Civil Code, Section 1101.1 et seq., SB 407 (2009).

30 California Energy Commission, *State of California Energy Action Plan, 2008 Update*, accessed June 2019, https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy_-_Electricity_and_Natural_Gas/2008%20Energy%20Action%20Plan%20Update.pdf.

31 California Energy Commission, *2016 Building Energy Efficiency Standards for Residential and Nonresidential Buildings*.

c. Regional

Southern California Association of Governments

Sustainable Communities Strategy

The City is a member agency of the Southern California Association of Governments (SCAG). To fulfill its commitments as an MPO under the Sustainable Communities and Climate Protection Act, SCAG adopted the *2016–2040 Regional Transportation Plan/Sustain Communities Strategy (2016–2040 RTP/SCS)*.³² The 2016–2040 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. It is designed to reduce GHG emissions from passenger vehicles by 8 percent per capita by 2020, 18 percent by 2035, and 21 percent by 2040. The 18 percent reduction by 2035 over 2005 levels represents a 2 percent greater reduction compared to the RTP/SCS projection contained in the 2012–2035 RTP/SCS. The 2016–2040 RTP/SCS reaffirms the land use policies that were incorporated into the 2012–2035 RTP/SCS. The SCS focuses the majority of new regional 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 (TOD). Many of Los Angeles’s transportation corridors are SCS high-quality transit areas.

The SCS identifies several GHG emission reduction actions and strategies for the State, SCAG, and local jurisdictions. The SCS recommends that local jurisdictions (1) update zoning codes to accelerate adoption of SCS land use strategies; (2) prioritize transportation investments to support compact infill development that includes a mix of land uses and housing options; (3) develop infrastructure plans and educational programs that promote active transportation options; (4) emphasize active transportation projects as part of complying with the Complete Streets Act (AB 1358),³³ and (5) increase the efficiency of existing transportation systems.

32 Southern California Association of Governments (SCAG), *Final 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy [Final 2016 RTP/SCS]* (April 2016), accessed June 2019, <http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf>.

33 California Legislative Information, Assembly Bill No. 1358 (September 2008), accessed June 2019, http://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=200720080AB1358.

d. Local

City of South Pasadena General Plan

General Plan

The General Plan includes an Open Space and Resource Conservation Element (Conservation Element).³⁴ The Conservation Element addresses issues regarding environmental protection.

The City's adopted General Plan Conservation/Open Space/Park and Recreation Element identifies the following goals and policies related to the conservation of energy resources:

- Goal 8: To encourage the conservation of energy.
- Policy 8.1: Encourage the enforcement of state energy conservation guidelines that require the incorporation of energy saving designs and features into new and refurbished buildings.
- Policy 8.2: Work with local utility companies with their public education energy conservation programs.
- Policy 8.3: Encourage public employees to follow energy conservation procedures designed to reduce energy consumption, such as alternative means of commuting to work.

Existing Conditions

Project Site

The Project site consists of approximately 0.71 acres and includes the existing historic building and two restaurants, as shown in **Figure 2.0-2: Project Location Map** in **Section 2.0: Project Description**.

The Project site is identified by two parcels, Assessor's Parcel Numbers (APNs) 5315-008-045 and 5315-008-043. As previously described, the Project site is currently occupied by three buildings. The historic building located at 1115 Mission Street is currently occupied by Amy's Playground, which is an indoor playground area.³⁵ The restaurant La Fiesta Grande is located directly next door at 1107 Mission Street. The currently unoccupied building at 1101 Mission Street also exists on the Project site. The Project site

³⁴ City of South Pasadena, *General Plan*, "Open Space and Resource Conservation Element" (January 2012), accessed June 2019, <https://ww5.cityofpasadena.net/wp-content/uploads/sites/56/2017/07/General-Plan-Open-Space-and-Conservation-Element-2012.pdf>.

³⁵ Amy's Playground, "About Amy's Playground," accessed June 2019, <http://www.amysindoorplayground.com/>

is generally bound by Mission Street to the north and Fairview Avenue to the west, and is entirely located within the City of South Pasadena (City), Los Angeles County, California.

a. Electricity

Electricity, a consumptive utility, is a man-made resource. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. The delivery of electricity involves a number of system components, including substations and transformers that lower transmission line power (voltage) to a level appropriate for on-site distribution and use. The electricity generated is distributed through a network of transmission and distribution lines commonly called a power grid. Conveyance of electricity through transmission lines is typically responsive to market demands.

Energy capacity generally is measured in watts (W), while energy use is measured in watt-hours (Wh). For example, if a light bulb has a capacity rating of 100 W, the energy required to keep the bulb on for 1 hour would be 100 Wh. If ten 100 W bulbs were on for 1 hour, the energy required would be 1,000 Wh or 1 kilowatt-hour (kWh). On a utility scale, a generator's capacity is typically rated in megawatts (MW), which is 1 million watts; energy usage is measured in megawatt-hours (MWh), or in gigawatt-hours (GWh), which is 1 billion watt-hours.

Southern California Edison (SCE) provides electrical service throughout the City, including the Project site. SCE serves over 14 million people within a service area of approximately 50,000 square miles.³⁶ SCE supplies over 87 billion kWh of electricity a year to 15 million customers. Overall demand is expected to grow very slowly over the next several years as regional growth is offset by improvements in efficiency and more interest in renewable energy.³⁷

SCE generates power from a variety of energy sources, including hydropower, coal, gas, nuclear sources, and renewable resources, such as wind, solar, and geothermal sources. As of 2015, SCE renewable energy accounted for approximately 24.3 percent of SCE's electricity demand.³⁸ As shown in **Table 4.3-1: Existing Electrical Demand**, the existing uses on the Project site are estimated to currently demand approximately 223,099 kWh per year.

36 Southern California Edison, "Who We Are," accessed June 2019, <https://www.sce.com/wps/portal/home/about-us/who-we-are>.

37 Southern California Edison, "Who We Are."

38 Southern California Edison, "Green Rate and Community Renewables Programs," fact sheet (2017), accessed June 2019, https://www.sce.com/wps/wcm/connect/28d57219-fbba-4823-b347-ce5b5d09fd0d/G16-048_Green+Rate_Residential_Fact_sheet_v9_AA.pdf?MOD=AJPERES.

**Table 4.3-1
Existing Electrical Demand**

Use Type	Quantity	Consumption Rate	Demand (kWh/year)
Recreational ^a	3,623 sf	13.55 kWh/sf/year	49,092
Restaurant	1,779 sf	47.45 kWh/sf/year	84,414
Other ^b	6,612 sf	13.55 kWh/sf/year	89,593
Total			223,099

Source: SCAQMD, CEQA Air Quality Handbook, 1993, Table A9-11-A, Electricity Usage Rate.

Notes: sf = square feet; kWh = kilowatt hours.

^a Usage rate based on the Retail land use type because there is no direct equivalent land use type.

^b Usage rate based on the Retail land use type because there is no direct equivalent land use type.

b. Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from natural occurring reservoirs, mainly located outside the State, and delivered through high-pressure transmission pipelines. The natural gas transportation system is a nationwide network and, therefore, resource availability is typically not an issue. Natural gas satisfies almost one-third of the State's total energy requirements and is used in electricity generation, space heating, cooking, water heating, and industrial processes, and as a transportation fuel. Natural gas is measured in terms of cubic feet (cf).

Natural gas is provided to the City by the Southern California Gas Company (SoCalGas). In 2016, approximately 2,681 million cubic feet (MMcf) of natural gas per day (978,565 MMcf annually) were consumed in Southern California.³⁹ SoCalGas projects total natural gas demand to decline due to modest economic growth; CPUC-mandated energy efficiency standards and programs; renewable electricity goals, declining commercial and industrial demand; and conservation savings linked to advanced metering infrastructure. Projected utility requirements for natural gas in Southern California in 2025, the nearest available forecast to the anticipated buildout date for the proposed Project, is anticipated to be 2,456 MMcf per day (896,440 MMcf annually).⁴⁰ SoCalGas obtains the majority of its natural gas from out-of-

39 California Gas and Electric Utilities, *2016 California Gas Report* (2016), accessed June 2019, <https://www.socalgas.com/regulatory/documents/cgr/2016-cgr.pdf>.

40 Because the *2016 California Gas Report* does not contain specific information for the proposed Project operational year of 2023, the following year listed, 2025, was used as a conservative analysis.

State sources, mostly in the western United States and Canada. Future supplies of natural gas are anticipated to be adequate to meet projected Southern California demand through 2035.⁴¹

Natural gas is primarily used by uses within the Project site for space and/or water heating, food preparation, and maintenance activities. There are no high-pressure distribution lines within the vicinity of the Project site. The closest high-pressure distribution line is located approximately 0.6 miles northeast of the Project site along Garfield Avenue.⁴² As shown in **Table 4.3-2: Existing Natural Gas Demand**, the existing uses on the Project site currently demand approximately 0.42 MMcf per year.

**Table 4.3-2
Existing Natural Gas Demand**

Use Type	Size	Usage Factor	Demand(cf/year)
Recreational ^a	3,623 sf	2.9 (cf/ sf/month)	126,081
Restaurant ^a	1,779 sf	2.9 (cf/ sf/ month)	61,910
Other ^a	6,612 sf	2.9 (cf/ sf/month)	230,098
Total			418,089

Source: SCAQMD, CEQA Air Quality Handbook (1993), Table A9-12-A: Natural Gas Usage Rate.

Notes: sf = square feet; cf = cubic feet; MMcf = million cubic feet.

^a Usage rate based on the Retail/Shopping Centers land use type because there is no direct equivalent land use type.

c. Transportation Energy

Petroleum is a worldwide commodity. The Organization of the Petroleum Exporting Countries (OPEC) forecasts the worldwide supply and demand in its *2016 World Oil Outlook* publication. The projected buildout year for the proposed Project is 2022. The OPEC forecast for 2025 projects a worldwide oil demand of 102.3 million barrels per day (mb/d) and a worldwide oil supply of 102.5 mb/d. OPEC's long-term projections show a similar trend: in 2040, worldwide oil demand is projected to be 109.4 mb/d; and worldwide oil supply is projected to be 109.6 mb/d.^{43,44}

41 California Gas and Electric Utilities, *2016 California Gas Report*.

42 Southern California Gas Company, "Los Angeles County: Gas Transmission and High Pressure Distribution Pipeline Interactive Map," accessed June 2019, available at <https://www.socalgas.com/stay-safe/pipeline-and-storage-safety/natural-gas-pipeline-map/los-angeles>.

43 Organization of the Petroleum Exporting Countries (OPEC), *2016 World Oil Outlook* (October 2016), accessed June 2019 http://www.opec.org/opec_web/static_files_project/media/downloads/publications/WOO%202016.pdf.

44 Because the *2016 World Outlook Report* does not contain specific information for the proposed Project buildout year of 2022, the following year listed, 2025, was used as a conservative analysis.

According to the CEC, transportation accounts for nearly 40 percent of California’s total energy consumption and approximately 37 percent of the State’s GHG emissions. In 2015, California consumed 651,133,000 barrels (27,347,586,000 gallons, or 42 gallons per barrel) of petroleum for transportation.⁴⁵ Incentive programs, such as the CEC’s Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP), are helping the State to reduce its dependency on gasoline. For example, the ARFVTP is predicted to displace approximately 313.5 million gallons of gasoline and diesel by year 2025.⁴⁶ Several regulations adopted by California to reduce GHG emissions, such as SB 375, have the added benefit of reducing the State’s demand on petroleum-based fuels by requiring reductions in vehicle miles traveled (VMT) and by reducing the carbon intensity of transportation fuels.

The existing recreational and restaurant uses generate a demand for transportation-related fuel use as a result of vehicle trips to and from the Project site. Based on 2019 fuel consumption averages calculated using CARB’s EMFAC2014 v.1.0.7 data,⁴⁷ it is assumed that on-road transportation sources in the subarea of Los Angeles County within the South Coast Air Quality Management District (SCAQMD) used approximately 21.3 mpg of gasoline and 8.0 mpg of diesel fuel. The estimate of annual VMT associated with the existing Project site uses is 869,340 VMT per year. This translates to 37,958 gallons of gasoline and 7,607 gallons of diesel per year, as shown in **Table 4.5-3: Existing Transportation Energy Demand** (see detailed calculations provided in **Appendix D**).

Table 4.3-3
Existing Transportation Energy Demand

Use Type	Fuel Efficiency (mpg)	Fleet ^a (Percent)	Fuel Consumption with VMT (gallons)
Gasoline	21.3	93	37,958
Diesel	8.0	7	7,607
Total			45,565

Source: Annual VMT based on CalEEMod Estimates in **Appendix B**.

Notes: mpg = miles per gallon; VMT = vehicle miles traveled.

^a Percent Fleet based on VMT from EMFAC2014.

45 Independent Statistics & Analysis, US Energy Information Administration, “Table F15: Total Petroleum Consumption Estimates, 2015,” https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=US.

46 California Energy Commission, *2016–2017 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program*, draft staff report, CEC-600-2014-014-SD (October 2015), <http://www.energy.ca.gov/2015publications/CEC-600-2015-014/CEC-600-2015-014-SD.pdf>.

47 CARB, *EMFAC2014 Web Database*, <https://www.arb.ca.gov/emfac/2014/>.

ENVIRONMENTAL IMPACTS

Methodology

The SCAQMD has developed electricity and natural gas energy demand factors for various land uses, including those proposed under the proposed Project.⁴⁸ These energy demand factors were used to determine the proposed Project's potential demand for electricity and natural gas.

The proposed Project's potential petroleum impacts are based on an analysis of estimated net petroleum demand. Potential petroleum impacts are associated with construction and operational vehicle trips. Daily trip generation used in this analysis was based on the air quality worksheets and California Emissions Estimator Model (CalEEMod) output data found in **Appendix B**. Developed by the California Air Pollution Control Officers Association, CalEEMod is a Statewide land use emissions computer model that estimates construction and operational emissions from a variety of land use projects.⁴⁹ Because CalEEMod does not directly estimate fuel consumption, fuel rate and VMT data from CARB's EMFAC2014 model were used to develop fuel-efficiency factors for gasoline and diesel fuel, in units of miles per gallon. Trip rate and trip length data from CalEEMod were used to estimate the total VMT of on-road motor vehicles that would occur from construction activities and operational uses. The fuel-efficiency factors were applied to the estimated VMT to determine the quantity of gasoline and diesel that would be used. Consistent with CalEEMod, construction worker vehicles were assumed to consist of 50 percent gasoline-fueled light-duty automobiles (LDA) and 50 percent gasoline-fueled light-duty trucks (LDT1 and LDT2). Additionally, all vendor truck and haul trucks were assumed to be heavy heavy-duty diesel-fueled trucks (HHDT). To assess operational impacts, the percent fleet (percent of gasoline vehicles vs diesel vehicles) was calculated using EMFAC2014.

Thresholds of Significance

Appendix F of the State CEQA Guidelines⁵⁰ provides the following list of potential energy impacts that may be considered:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.

48 South Coast Air Quality Management District, *California Environmental Quality Act Air Quality Handbook* (1993), Appendix 9, Table A9-11-A. SCAQMD is currently developing the Air Quality Analysis Guidance Handbook to replace the Air Quality Handbook, but no publication date has been set.

49 California Air Pollution Control Officers Association, *CalEEMod* (2017), <http://www.caleemod.com/>

50 California Natural Resources Agency, *The California Environmental Quality Act*, Appendix F: Energy Conservation, http://resources.ca.gov/ceqa/guidelines/Appendix_F.html.

- The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- The effects of the project on peak and base period demands for electricity and other forms of energy.
- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources; and/or
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

To assist in determining whether the proposed Project would have a significant effect on the environment, the City finds the proposed Project may be deemed to have a significant impact related to energy if it would:

Threshold ENERGY-1: Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Threshold ENERGY-2: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

Project Impact Analysis

Threshold ENERGY-1: Would the project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Construction of the proposed Project would consume energy from off-road construction equipment and on-road vehicular travel from vendor trucks, haul trucks, and construction employee commuting. Additionally, electricity would be required to deliver water to the Project site for dust control. During operation, energy would be consumed by vehicles arriving at and departing from the commercial and residential uses. Natural gas would be used for cooking, space heating, and for other equipment, such as dryers and ovens. Electricity would be used to power the building, including heating, ventilating, and air conditioning (HVAC) equipment, lights, and appliances; to supply water to the Project site; and to deliver wastewater for treatment.

Construction

Construction of the proposed Project would require the use of various forms of energy as shown on **Table 4.3-4: Summary of Energy Use During Construction**, which presents a summary of the quantity of petroleum fuels and electricity that would be consumed during construction. As shown, a total of 56,487 gallons of diesel fuel, 19,412 gallons of gasoline fuel, and 5,005.6 kWh of electricity would be consumed

during construction. When compared to the worldwide oil supply in 2023 (buildout) and the SCE's 2023 estimated power demand, the oil and electricity usage during construction would be minimal.

**Table 4.3-4
Summary of Energy Use During Construction**

Fuel Type	Quantity
Diesel	
On-site construction equipment	24,593 gallons
Off-site motor vehicles	31,894 gallons
Total	56,487 gallons
Gasoline	
On-site construction equipment	0 gallons
Off-site motor vehicles	19,412 gallons
Total	19,412 gallons
Electricity	
	5,005.6 kWh

Source: Refer to **Appendix D**, Summary Construction.

Operation

During operation of the proposed Project, energy would be consumed for a variety of purposes, including electricity consumption for lighting, appliances, HVAC equipment, water supply and delivery, and other commercial operations; natural gas consumption for cooking, and science classes; and transportation fuel consumption from motor vehicles driving to and from the site.

Various sustainable building design and energy conservation components would be considered in the design, construction, and operation of the proposed facilities to meet or exceed the 2016 Title 24 requirements.⁵¹ Specific measures that would be implemented to achieve the CALGreen standards would be identified during the Project's design. Typical methods that could be incorporated into the Project's design to improve energy efficiency and meet CALGreen standards include use of efficient building techniques.

CalEEMod was run for the proposed Project utilizing the baseline conditions and for the proposed Project to produce a net difference. The output for CalEEMod considers that the Project would meet Title 24 energy requirements, including installation of high-efficiency lighting and the use of low-flow appliances

⁵¹ California Building Standards Code, 24 California Code of Regulations.

for water conservation. **Table 4.3-5: Summary of Annual Energy Use during Operation**, summarizes the estimated annual energy consumption from operations for the proposed Project with incorporation of the energy conservation and efficiency measures that were previously described. Operation of the proposed Project would result in a permanent increase in electricity and natural gas consumption, 359,847 kWh per year and 71,827 thousand British Thermal Units (kBtu) per year respectively. Additionally, the proposed Project would result in a permanent increase in annual consumption of diesel and gasoline, 4,236 and 10,926 gallons, respectively. When compared to the projected Statewide natural gas supply through 2035, SCE’s 2023 estimated power demand, and projected global oil supply through 2040, the proposed Project’s energy usage during operation would be minimal. The buildings would be constructed in compliance with CALGreen requirements, and they would include the sustainability components for building design and energy conservation mentioned above to minimize induced demand. By meeting these requirements, the proposed Project would not conflict with an adopted energy conservation plan. Impacts would be less than significant.

**Table 4.3-5
Summary of Annual Energy Use During Operation**

Source	Units	Existing Energy Use	Proposed Project Energy Use	Difference
Electricity				
Buildings	kWh/yr	182,397	511,973	+329,576
Water	kWh/yr	18,729	48,999	+30,271
Electricity Total	kWh/yr	201,126	560,972	+359,847
Natural Gas				
Buildings	kBtu/yr	422,465	494,291	+71,827
Natural Gas Total	kBtu/yr	422,465	494,291	+71,827
Mobile				
Diesel	Gallons	8,117	11,843	+3,727
Gasoline	Gallons	33,505	48,884	+15,380

Source: Refer to **Appendix D, Summary Operation**.

Notes: kWh/yr = thousand kilowatt-hours per year; kBtu/yr = thousand British Thermal Units per year.

Electricity and Natural Gas for the Project is total operational usage. Net difference = total Project usage – existing uses.

Mobile gasoline and diesel usage was calculated using VMT, which was provided by CalEEMod. The VMT already assumes a net difference. Numbers may not add up precisely due to rounding.

^a Because there is no Car Wash category, the energy rate was taken from Retail.

Threshold ENERGY-2: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Electricity

The availability of electricity depends on adequate general capacity of the grid and sufficient fuel supplies. The SCE estimates that electricity consumption within SCE’s planning area will be approximately 124,287 GWh per year by 2027, when the Project would already be fully operational.^{52,53} SCE expects to have adequate electricity supply and transmission capability to meet the needs of its customers well beyond 2027.

As shown in **Table 4.3-5**, the proposed Project would use a net increase of 359,847 kWh per year of electricity, which is approximately 0.0004 percent of the 2027 forecasted demand. As mentioned previously, the buildings would be constructed in compliance with CALGreen requirements, and they would include the sustainability components for building design and energy conservation mentioned above to minimize energy consumption, including electricity. By meeting these requirements, the proposed Project’s incremental percentage increase of electricity consumption compared to existing conditions would not constitute wasteful, inefficient, or unnecessary consumption of energy resources. Impacts would be less than significant.

Natural Gas

The 2016 California Gas Report indicates that sufficient capacity exists in the utility network to meet future demand in Southern California. The total gas supply available in 2025 is estimated to be 2,456 MMcf per day; SoCalGas anticipates it will have sufficient capability to meet future needs.⁵⁴

Natural gas consumption would increase during Project operations from existing conditions. As shown in **Table 4.3-5**, the proposed Project would use approximately a net increase of 70,419 cf per year of natural gas, which is approximately 0.0001 percent of the 2025 forecasted demand.⁵⁵ As mentioned previously, the buildings would be constructed in compliance with CALGreen requirements, and they would include the sustainability components for building design and energy conservation mentioned above to minimize energy consumption. By meeting these requirements, the proposed Project’s incremental percentage

52 California Energy Commission, Demand Analysis Office, “California Energy Demand Updated Forecast, 2017–2027, available at <http://www.energy.ca.gov/> (January 2017).

53 Given that the SCE Report does not contain specific information for the proposed Project’s operational year of 2023, the next following year, 2027, was used as a conservative analysis.

54 California Gas and Electric Utilities, *2016 California Gas Report*.

55 Based on a total of 978,565 MMcf annually for the southern California region and that 71,827 kBtu is 70,419 cf.

increase of natural gas consumption compared to existing conditions would not constitute wasteful, inefficient, or unnecessary consumption of energy resources.

Impacts would be less than significant.

Transportation

The Project would consume a total of 11,843 gallons of gasoline and 48,884 gallons of diesel per year, or a total of 60,728 gallons of petroleum-based fuels per year. As shown in **Table 4.3-5**, the proposed Project would result in a net increase of 19,106 gallons per year of petroleum-based fuels per year, which is an increase of approximately 31 percent over the existing site demand. However, this increase would be less than approximately 0.00001 percent of Statewide fuel consumption estimates, and ample supplies are projected through 2040.

As mentioned previously, the proposed Project would be constructed in compliance with CALGreen requirements, and would include the sustainability components for alternative transportation methods mentioned above to minimize petroleum-based fuel consumption. With these provisions, the proposed Project's incremental total increase of petroleum-based fuel consumption would not constitute wasteful, inefficient, or unnecessary consumption of energy resources. Impacts would be less than significant.

CUMULATIVE IMPACTS

The area of analysis for cumulative effects related to electricity is SCE's service area, and the area of analysis for cumulative effects related to natural gas is SoCalGas's service area. The area of analysis for transportation fuels considers cumulative projects and growth within the City of South Pasadena. Expected growth in these areas would increase the demand for electricity, natural gas, and transportation fuels. As identified in **Section 3.0: Environmental Setting**, there are two known projects that could contribute to cumulative impacts in the City.

Electricity

Buildout of the proposed Project and additional forecasted growth in the City, including the two cumulative projects, would increase electricity consumption within the SCE service area. As such, there would be a cumulative increase in the demand for electricity. The SCE estimates that approximately 124,287 GWh per year of electricity would be consumed within the area by 2027. The proposed Project would account for less than 0.001 percent of the forecasted demand in SCE's planning area within this period. Although future development would result in the irreversible use of both renewable and nonrenewable electricity resources during Project construction and operation, the use of such resources would be consistent with growth expectations for SCE's service area. Furthermore, as with the proposed

Project, all new projects would be required to comply with CALGreen building standards. As previously stated, SCE has adequate electricity supply capability to meet the needs of its future customers.

Electricity infrastructure is typically expanded in response to increasing demand, and system expansion and improvements by SCE are ongoing. As described above, SCE would continue to expand delivery capacity as needed to meet demand increases within its service area. Development projects within the SCE service area would also be anticipated to incorporate site-specific infrastructure improvements, as necessary. Impacts with respect to electricity infrastructure would be not be cumulatively considerable.

Natural Gas

Buildout of the proposed Project and additional forecasted growth in the region, including the two related projects, would increase natural gas consumption within the SoCalGas service area. As such, there would be a cumulative increase in the demand for natural gas. SoCalGas estimates that 2,456 MMcf per day of natural gas would be consumed in Southern California in 2025.^{56,57} The proposed Project would account for less than 0.0001 percent of the forecasted demand within SoCalGas's planning area during this period. Although a permanent increase in natural gas consumption would occur, all future projects would be built with energy conservation features, as required by the CALGreen building code. As such, there would be a net decrease in natural gas consumption. As previously stated, future supplies of natural gas are anticipated to be adequate to meet projected future demand.

Natural gas infrastructure is typically expanded in response to increasing demand, and system expansion and improvements by SoCalGas occur as needed. It is expected that SoCalGas would continue to expand delivery capacity if necessary to meet demand increases within its service area. Development projects within its service area would also be anticipated to incorporate site-specific infrastructure improvement, as appropriate.

Impacts with respect to natural gas infrastructure would not cumulatively considerable.

Transportation

Buildout of the proposed Project and additional forecasted growth in the City, including the two cumulative projects, would increase demand for transportation fuels. As described above, California

⁵⁶ California Gas and Electric Utilities, *2016 California Gas Report*.

⁵⁷ Because the *2016 California Gas Report* does not contain specific information for the proposed Project's operational year of 2023, the following year listed, 2025, was used as a conservative analysis.

consumed 651,133,000 barrels (27,347,586,000 gallons, or 42 gallons per barrel) of petroleum for transportation in 2015.⁵⁸

As discussed previously, the proposed Project's anticipated annual increase in petroleum-based fuel consumption would be less than approximately 0.00001 percent of Statewide fuel consumption estimates. Although a permanent increase in petroleum-based fuel consumption would occur, all future projects would be built with energy conservation features, as required by the CALGreen building code, which include measures for means of alternative transportation, including the provision of EV parking infrastructure. Further, several regulatory measures in California are expected to decrease transportation fuel usage in the future, which would reduce future demand for gasoline. In the long term, adequate supplies are anticipated well beyond the proposed Project buildout date. Although there would be a cumulative increase in the consumption of petroleum-based fuels, future supplies would be adequate to meet projected demand as noted above.

Impacts from mobile sources would not be cumulatively considerable.

MITIGATION MEASURES

No mitigation measures are required.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Energy impacts would be less than significant.

58 Independent Statistics & Analysis, US Energy Information Administration, "Table F15: Total Petroleum Consumption Estimates, 2015," https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=US.

4.4 LAND USE AND PLANNING

INTRODUCTION

This section of the EIR provides evaluates the potential land use impacts on the surrounding uses as a result of the proposed Project. Specifically, this section analyzes the proposed Project's consistency with relevant land use plans, policies, and regulations as well as its compatibility with the surrounding land uses in the area. The existing land use conditions, including current uses and designations, are described, along with the methodology and framework that guided the evaluation of the Project's physical land use impacts. The consistency of the Project with applicable land use plans, policies, and regulations is then discussed, as well as any measures needed to mitigate impacts associated with inconsistency, if any, to a less than significant level.

ENVIRONMENTAL SETTING

Regulatory Framework

a. State

Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008, also known as Senate Bill (SB) 375, supports the State's climate action goals to reduce greenhouse gas (GHG) emissions through coordinated transportation and land use planning with the goal of creating more sustainable communities.¹ SB 375 instructs the California Air Resources Board (CARB) to set reduction targets for regional emissions from passenger vehicles. In 2010, CARB established these targets for 2020 and 2035 for each region covered by one of the State's metropolitan planning organizations (MPO). These targets are periodically reviewed and updated.

Each of California's MPOs must prepare a "sustainable communities' strategy" (SCS) as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. CARB must review the adopted SCS to confirm the MPO's determination that the SCS, if implemented, would meet the regional GHG targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate "alternative planning strategy" (APS) to meet the targets.

1 California Environmental Protection Agency, Air Resources Control Board, "Sustainable Communities." <http://www.arb.ca.gov/cc/sb375/sb375.htm>. Accessed July 2017.

Finally, SB 375 establishes incentives to encourage local governments and developers to implement the SCS or the APS. Developers can obtain relief from certain environmental review requirements under CEQA if their new residential and mixed-use projects are consistent with a region’s SCS or APS that meets the targets.

b. Regional

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the federally designated Metropolitan Planning Organization for six Southern California counties, including the County of Los Angeles. As such, SCAG is mandated to create regional plans that address transportation, growth management, hazardous waste management, and air quality.

i. 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy

SCAG’s 2016–2040 RTP/SCS, adopted on April 7, 2016, presents a long-term transportation vision through the year 2040 for the six-county region of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. The mission of the 2016–2040 RTP/SCS is to provide “leadership, vision and progress which promote economic growth, personal well-being, and livable communities for all Southern Californians.” The 2016–2040 RTP/SCS places a greater emphasis on sustainability and integrated planning compared to previous versions of the RTP, and identifies mobility, accessibility, sustainability, and high quality of life, as the principles most critical to the future of the region. As part of this new approach, the 2016–2040 RTP/SCS establishes commitments to develop a Sustainable Communities Strategy to reduce per capita greenhouse gas (GHG) emissions through integrated transportation, land use, housing and environmental planning in order to comply with SB 375, improve public health, and meet the National Ambient Air Quality Standards (NAAQS). The 2016–2040 RTP/SCS also establishes High-Quality Transit Areas, which are described as generally walkable transit villages or corridors that are within 0.5 mile of a well-served transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours. Local jurisdictions are encouraged to focus housing and employment growth within HQTAs. The proposed Project is located within an HQTA as designated by the 2016–2040 RTP/SCS.^{2,3}

ii. Regional Comprehensive Plan

SCAG prepared and issued an updated Regional Comprehensive Plan (RCP) in 2008 in response to SCAG’s Regional Council directive in SCAG’s 2002 Strategic Plan to define solutions to interrelated housing, traffic, water, air quality, energy, open space, water, solid waste, economy, and security and emergency

2 SCAG, 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, adopted April 2016

3 Los Angeles County Metropolitan Transportation Authority (Metro), “High Quality Transit Areas”

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 Regional Comprehensive Plan replaced SCAG's 1996 Regional Comprehensive Plan and Guide for use in SCAG's Intergovernmental Review process. SCAG's Community, Economic, and Human Development Committee and the Regional Council took action to accept the Regional Comprehensive Plan, 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, because of its advisory nature, the Regional Comprehensive Plan is not used in SCAG's Intergovernmental Review process. Rather, SCAG reviews new major regional projects based on consistency with the 2016–2040 RTP/SCS.⁴

a. South Coast Air Quality Management District Air Quality Management Plan

The South Coast Air Quality Management District (SCAQMD) was established in 1977 pursuant to the Lewis-Presley Air Quality Management Act. The SCAQMD is responsible for developing plans for ensuring air quality in the South Coast Air Basin conforms with federal and State air pollution standards. In conjunction with SCAG, the SCAQMD has prepared an Air Quality Management Plan establishing a comprehensive regional air pollution control program including air pollution control strategies leading to the attainment of State and federal air quality standards in the South Coast Air Basin.

b. Los Angeles County Metropolitan Transportation Authority (Metro) Congestion Management Program

Metro administers the CMP, a State-mandated program designated to provide comprehensive long-range traffic planning on a regional basis. The CMP, revised in 2010, includes a hierarchy of highways and roadways with minimum level of service standards, transit standards, a trip reduction and travel demand management element, a program to analyze the impacts of local land use decisions on the regional transportation system, a seven-year capital improvement program, and a county-wide computer model used to evaluate traffic congestion and recommend relief strategies and actions. The CMP guidelines specify that those designated roadway intersections to which a project could add 50 or more trips during either the AM or PM peak hour be evaluated. The guidelines also require the elevation of freeway segments to which a project could add 150 or more trips in either direction during peak hours.

4 Prior to publication of the 2008 RTP, projects considered to be regionally significant based on the SCAG criteria were required to provide an analysis of consistency with the 1996 Regional Comprehensive Plan and Guide goals and policies. However, SCAG now considers the 1996 Regional Comprehensive Plan and Guide Defunct.

c. Local

City of South Pasadena

General Plan

The City of South Pasadena’s (the City) General Plan was first prepared in 1963. The current General Plan was adopted in October 1998.⁵ The City is currently updating its General Plan, which has not yet been adopted and is in the working draft stages.⁶ The Land Use Element of the General Plan is often considered the “umbrella” element – encompassing the issues and policies that are considered in greater detail in the other elements of the plan. The element establishes the overall policy direction for land use planning decisions in the City and provides location and distribution of land uses in the City. The element also identifies land use constraints that affect land use patterns, including those imposed by nature such as flooding and seismic hazards.

The City of South Pasadena General Plan provides a general, comprehensive, and long-range guide for community decision-making. The General Plan addresses a 15-year time period allowing for short-term, mid-range, and long-term objectives.

The General Plan comprises seven elements: Land Use and Community Design; Circulation and Accessibility; Economic Development and Revitalization; Historic Preservation; Housing; Open Space and Resource Conservation; and Safety and Noise. Each element of the General Plan is divided into six sections: (1) Introduction; (2) Existing Conditions; (3) Future Conditions; (4) issues; (5) Goals and Policies; and (6) Strategies. The goals, policies, and strategies (implementation measures) guide the City in its growth and development.

The Land Use and Community Design Element of the General Plan establishes land use goals and policies, as well as supporting standards for the various categories of land use envisioned within the community. Additionally, community design issues and policies are incorporated to address the City’s physical appearance. The City’s General Plan has identified the MSSP Area as a Focus Area, which is defined in the General Plan as an area that has unique character and/or conditions that require special planning considerations. The overarching intent of the City’s General Plan is to restore the concept of mixed-use commercial/residential areas that enhance the walkability of the community.

5 City of South Pasadena, General Plan (1998)

6 City of South Pasadena, Plan South Pasadena, accessed March 2019, <http://www.plansouthpasadena.org/>.

City of South Pasadena Zoning Code

The City of South Pasadena Zoning Code (Chapter 36 of the Municipal Code) implements the policies of the South Pasadena General Plan by classifying and regulating the uses of land and structures within the City in a manner consistent with the General Plan.⁷ South Pasadena has been divided into zoning districts that implement the General Plan. These districts are established and illustrated on the City of South Pasadena Zoning Map. As illustrated on the Zoning Map, the existing zoning district for the Project site is MSSP (Mission Street Specific Plan).

Mission Street Specific Plan

The Mission Street Specific Plan (MSSP) was adopted in 1996 to create a vision for the area that serves the Gold Line Station on Mission Street. The plan, by updating zoning guidelines in the Mission Street area, addresses the importance of developing Mission Street as a catalyst for economic development in South Pasadena while maintaining the small-town, pedestrian oriented character of the City's historic district. The MSSP Area has defined precise land use patterns, zoning, setbacks, and design to encourage transit-oriented and pedestrian-oriented development. The MSSP includes detailed regulatory mechanisms tailored to the particular land use mix and circumstances of the Mission Street area.

The MSSP has developed three distinct districts: MSSP District A, MSSP District B, and MSSP District C. MSSP District A is intended to be a pedestrian oriented shopping street with continuous storefronts along the sidewalks, with housing and offices located above and, in some cases, behind the storefronts. MSSP District B is intended to encourage uses that place residents and employees within walking distance of the shopping core or nodes and within proximity to the Gold Line Station and to establish a place for small-scale artisans and other cottage industries that serve both residents and the broader specialty market. MSSP District C is intended to encourage renovation, allow commercial reuse of historic residences, and allow the provision of additional housing that will place residents within walking distance of the Gold Line Station. Additionally, MSSP District C is intended to allow parking that serves nearby commercial uses as well as the Gold Line Station and to provide a buffer between the more intensive commercial uses and adjacent residential neighborhoods.

The Project Site is located within District A within the Core District which also includes the shopping district in the Core Area and convenience retail nodes in the West Area. District A is intended to be a pedestrian-oriented shopping street with continuous storefronts along the sidewalks and housing and offices above, and in some cases, behind the storefront. Permitted land uses include convenience retail and services,

7 City of South Pasadena, Municipal Code, Chapter 36, Zoning.

restaurants, and specialty retail on the ground floor, with other uses like live/work spaces, housing units, hotels or bed and breakfasts with up to 16 rooms, offices, studios, etc.

Existing Conditions

a. Project Site

Existing Uses

The Project Site comprises the approximately 0.71 acres consisting of an existing historic building and two existing commercial buildings, as shown in **Figure 2.0-2: Project Location Map** in **Section 2.0: Project Description**. The Project Site is generally bound by Mission Street to the north, and Fairview Avenue to the west.

The Project site is identified by two parcels, Assessor's Parcel Numbers (APNs) 5315-008-045 and 5315-008-043. As previously described, the Project Site is currently occupied by three buildings. The historic building located at 1115 Mission Street is currently occupied by Amy's Playground, which is an indoor playground area.⁸ The La Fiesta Grande restaurant is located directly next door at 1107 Mission Street, and a private fitness center occupies the building at 1101 Mission Street.

Land Use and Zoning Designations

The Project site is zoned MSSP District A, which is intended to be a pedestrian-orientated shopping street with continuous storefronts along the sidewalks, with housing and offices located above and, in some cases, behind the storefronts. **Figure 3.0-1: Land Use Map** and **Figure 3.0-2: Zoning Map** in **Section 3.0: Environmental Setting** depict the City's land use and zoning designations of the Project Site and the surrounding properties.⁹

c. Surrounding Uses

The Project Site is located within the central portion of the City, approximately 0.24 miles south of State Route 110 (SR 110). The City is located within the central portion of the County of Los Angeles and is bordered by the City of Pasadena to the north; the Highland Park to the west; the City of Alhambra to the south; and the City of San Marino to the east. Regional access to the City is gained through five freeways in or near the City's boundaries: Interstate 210 north of the City, State Route 110 (SR-110), which runs

8 Amy's Playground, *About Amy's Playground*, accessed January 2019, <http://www.amysindoorplayground.com/>

9 City of South Pasadena, Zoning Map, accessed January 2019, <https://www.southpasadenaca.gov/home/showdocument?id=192>

north and west of the City; and Interstate 110 (I-110), Interstate 710 (I-710) and Interstate 10 (I-10), which run south of the City; and Interstate 164 (I-164), which runs east of the City.

The Project Site is approximately 762 feet east of the Los Angeles County Metropolitan Authority (Metro) Gold Rail Line (Metro Gold Line), which is a light-rail line running from Azusa through Downtown Los Angeles and terminating in East Los Angeles.¹⁰

The Project Site is located along Mission Street, a major City corridor developed with residential, commercial, mixed use, and public/quasi-public uses. Surrounding buildings range from low- to mid-rise in height. Surrounding land uses include one- and two-story commercial buildings along Mission Street, many of which are historic, ground-floor storefronts and dining patios facing the sidewalk: Le Car, a one-story foreign and domestic auto dealer is to the east of the Project site; Mission Wines, a two-story commercial building is located directly north of the Project site, Collins Collins Muir + Stewart LLC, a two-story law firm is located to the south of the Project site; and the one story South Pasadena Unified School District and parking lot is located to the west of the Project site.

ENVIRONMENTAL IMPACTS

Methodology

Impacts were evaluated based on the proposed Project's physical land use impacts, including a descriptive review of how the proposed Project fits within the existing neighborhood and community, as well as the Project's consistency with existing regional and local land use regulations and policies.

The determination of consistency with applicable land use policies and ordinances is based upon a review of the previously identified planning and zoning documents that regulate land use or guide land use decisions pertaining to the Project Site. State CEQA Guidelines Section 15125(d) requires that a Draft EIR discuss any inconsistencies with the Project and applicable plans. A project is considered consistent with the provisions and general policies of an applicable city or regional land use plans and regulations if it is consistent with the overall intent of the plans and would not preclude the attainment of its primary goals.

The intent of the compatibility analysis is to determine whether the proposed Project would be compatible with surrounding uses. The analysis addresses general land use relationships and urban form based on a comparison of existing land use relationships in the vicinity of the Project Site under existing

10 Los Angeles County Metropolitan Authority, "Gold Line," accessed January 2019, https://www.metro.net/riding/paid_parking/gold-line/.

conditions at the time of the Notice of Preparation was issued, to the conditions that would occur with implementation of the proposed Project.

Thresholds of Significance

To assist in determining whether the proposed Project would have a significant effect on the environment, the District finds the proposed Project may be deemed to have a significant impact related to land use and planning if it would:

Threshold LU-1: Physically divide an established community.

Threshold LU-2: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Project Impact Analysis

Threshold LU-1: Physically divide an established community.

The Project would be developed within the boundaries of the existing lot. No rights-of-way or other connections between other properties would be obstructed or altered. No existing uses would be separated or disrupted by the Project. As such, impacts on establish communities would be less than significant.

Threshold LU-2: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The Project site currently consists of three buildings. The proposed Project would retain the two-story portion of the historic building that faces Mission Street, remove two-thirds of the existing one-story warehouse to the rear of the building, renovate the front portion of the building for adaptive reuse as a mixed-use retail commercial and residential building, and build a story multi-family residential building on the remainder of the parcel. The proposed project would demolish the other two existing buildings on the project site and construct a new three-story mixed-use retail commercial and residential building on this portion of the Project site. The Proposed Project would consist of 7,394 square feet of commercial space along the Mission Street and Fairview Avenue frontages and 36 residential units on the upper levels and in the interior of the site totaling 33,281square feet. The commercial spaces have been designed to enhance Mission Street’s pedestrian ambiance and complement the surrounding existing businesses. A new two-level subterranean parking area will be constructed beneath the entire Project Site.

SCAG 2016-2040 RTP/SCS

The Project's consistency with the 2016-2040 SCAG Regional Transportation Plan/Sustainable Communities Strategy is found below in **Table 4.4-1: SCAG RTP/SCS Goals Project Consistency Analysis**.

City of South Pasadena General Plan

The General Plan land use designation for the Project site is Mission Street Specific Plan (MSSP). As described above, the City has identified the MSSP Area as a Focus Area, which is defined in the General Plan as an area that has unique character and/or conditions that require special planning considerations. The overarching intent of the City's General Plan is to restore the concept of mixed-use commercial/residential areas that enhance the walkability of the community. The MSSP Area has defined precise land use patterns, zoning, setbacks, and design to encourage transit-oriented and pedestrian-oriented development. The Project would comply with the MSSP Area requirements. **Table 4.4-2: City of South Pasadena Applicable General Plan Consistency** below analyzes the Project against goals and policies outlined in the General Plan.

Mission Street Specific Plan

As described previously, the Project site is within the Mission Street Specific Plan. The Mission Street Specific Plan designates the Project site as "Pedestrian-Oriented Mixed-Use/Commercial Core and Nodes". The Project proposes land uses consistent with those listed for Pedestrian-Oriented Mixed-Use/Commercial Core and Nodes.

City of South Pasadena Zoning Code

Implementation of the proposed Project would not involve any change of zoning and would not conflict with the City's zoning or General Plan goals and policies for the Project Site. As such, the uses proposed by the Project would be allowable uses pursuant to the City's Zoning. Regarding development standards (i.e. massing, height, and setback requirements) identified for these zoning designations, the proposed Project is designed to be consistent with the City's requirements, including compatibility with surrounding uses. Therefore, the Project would not conflict with any local plans or policies.

Table 4.4-1
SCAG RTP Goals Project Consistency Analysis

SCAG RTP Goal	Consistency Analysis
RTP/SCS Goal 1: Align the plan investments and policies with improving regional economic development and competitiveness.	Not applicable: This is not a Project-specific goal and therefore is not applicable.
RTP/SCS Goal 2: Maximize mobility and accessibility for all people and goods in the region.	Consistent: Designed to be consistent with the City of South Pasadena General Plan Circulation and Accessibility Element, the Project is intended to maximize mobility for Project occupants by placing housing near an important transit corridor. The Project further implements required development standards that would promote street-facing storefronts and building entrances, thus encouraging pedestrian accessibility and encouraging mobility. By encouraging a variety of modes of transportation, the Project would maximize the productivity of the transportation system and would ensure a sustainable regional transportation system is connected and whole.
RTP/SCS Goal 3: Ensure travel safety and reliability for all people and goods in the region.	
RTP/SCS Goal 4: Preserve and ensure a sustainable regional transportation system.	
RTP/SCS Goal 5: Maximize the productivity of our transportation system.	
RTP/SCS Goal 6: Protect the environment and health of our residents by improving air quality and encouraging active transportation.	Consistent: The proposed Project is located approximately 0.15 miles away from the Metro Gold Line Station providing residents with transit opportunities to work and entertainment area.
RTP/SCS Goal 7: Actively encourage and create incentives for energy efficiency, where possible.	Consistent: The proposed Project would incorporate “green” building measures in both the building design and the landscape design. The Project would comply with the 2017 California Green Building Code. The proposed Project provides for high-performance building design and adds energy conservation measures and alternatives to meet a higher goal to enhance the residents’ living experience and reduce annual utility costs
RTP/SCS Goal 8: Encourage land use and growth patterns that facilitate transit and non-motorized transportation.	Consistent: The proposed mixed-use Project would be located on a currently developed site that is surrounded by developed land and is located approximately 0.15 miles away from the Metro Gold Line Station. The Project Site is an infill site located within a transit priority area that would facilitate transit and non-motorized transportation.
RTP/SCS Goal 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 is not a Project-specific goal and therefore is not applicable.

**Table 4.4-2
City of South Pasadena Applicable General Plan Consistency**

Plan Objectives	Project Consistency
City of South Pasadena General Plan	
<p>Goal 1: To manage change and target growth by type and location to better serve community needs and enhance the quality of life.</p>	<p>Consistent. The proposed Project plans to renovate an existing historic structure for adaptive reuse as a mixed-use building and construct two and three-story mixed-use buildings and subterranean parking beneath the Project site. The Project proposes 36 multi-family units with 7,394 square feet of commercial space and common and private open space areas within the Project enhancing the quality of life of future residents. Additionally, the Project is located approximately 600 feet east of the Metro Gold Line South Pasadena Station providing future residents of the Project transit connectivity to regional employment and entertainment centers. As such, the Project would be consistent with this goal.</p>
<p>Policy 1.3: Encourage Mixed Use. Authorize, encourage and facilitate “mixed-use” development within targeted areas, including horizontally or vertically-integrated housing, live-work spaces, professional office and retail commercial areas.</p>	<p>Consistent. The proposed Project plans to renovate an existing historic structure for adaptive reuse as a mixed-use building and construct two and three-story mixed-use buildings and subterranean parking beneath the Project site. The Project proposes 36 multi-family units with 7,394 square feet of retail commercial space. As such, the Project would be consistent with this policy.</p>
<p>Goal 2: To maintain the character of South Pasadena’s “main street” commercial areas, support the proprietary business of the city, avoid deterioration of commercial areas and the business tax base, and promote those forms of economic development that will provide additional jobs, services and opportunities to the city and its residents.</p>	<p>Consistent. The proposed Project is located along Mission Street, which is a “main street” in the City of South Pasadena. The proposed Project plans to renovate a historic structure for adaptive reuse as a mixed-use building and construct two and three-story mixed-use buildings consisting of 36 multi-family units with 7,394 square feet of commercial space thereby providing additional housing opportunities within the area and contributing to the City’s business tax base. As such, the Project will maintain the existing character of the area and be consistent with this goal.</p>
<p>Policy 2.5: Intensity use in select locations. Concentrate higher density and mixed-use development adjacent to transit or transportation corridors.</p>	<p>Consistent. The proposed Project plans to renovate an existing historic structure for adaptive reuse as a mixed-use building and construct two and three-story mixed-use buildings and subterranean parking beneath the Project site. The Project proposes 36 multi-family units at an overall density of approximately 50 units per acre with 7,394 square feet of retail commercial space. The Project is located approximately 600 feet east of the Metro Gold Line South Pasadena Station. As such, the Project would be consistent with this policy.</p>
<p>Policy 3.12: Encourage higher density in closer proximity to public transit. Encourage higher residential densities and a reduced reliance on the automobile in the design of projects in proximity to public transit.</p>	<p>Consistent. The Project is located approximately 600 feet east of the Metro Gold Line South Pasadena Station. The proposed mixed-use project has proposed a higher density residential component in exchange for the provision of public parking over and above the required number of parking spaces to serve the project to facilitate public accessibility to the Metro Gold Line Station. The higher density residential component within proximity to the Metro Gold Line Station provides residents alternative means of travel for commuting to work and shopping reducing reliance on the automobile. As such, the Project would be consistent with this policy.</p>

Plan Objectives	Project Consistency
<p>Policy 3.13: Promote mixed-use development. Maintain compaction and encourage vertically mixed-use (ground floor retail, office, and residential above) to create nodes of activity and to promote the pedestrian use concept.</p>	<p>Consistent. The Project proposes the construction two and three-story mixed-use buildings consisting of 36 multi-family units over and to the rear of 7394 square feet of commercial space. The Project also includes a pedestrian plaza and open space at street level promoting the pedestrian experience within commercial areas and connectivity to Mission Street. As such, the Project would be consistent with this policy.</p>
<p>Goal 4: To ensure that an adequate supply of parking is available to meet the demands generated land use.</p>	<p>Consistent. Parking required to serve the Project, including bonus public parking spaces totals 95 parking spaces. The Project proposes two levels of subterranean parking with 109 parking spaces of which 14 parking spaces are surplus, over and above the required number of parking spaces for the Project. As such, the Project would be consistent with this goal.</p>
<p>Goal 6: To encourage the provision of and use of alternative modes of transit (bicycle, bus, light-rail).</p>	<p>Consistent. The Project is located approximately 600 feet of the Metro Gold Line South Pasadena Station. Additionally, there are stops for Metro Bus 176 at the intersection of Mission and Fremont, approximately 400 feet east of the Project site, and Metro Buses 260 and 762 at the intersection of Mission and Fremont, approximately 1/4 mile east of the Project site. The Project is consistent with this goal.</p>
<p>Goal 7: To preserve South Pasadena’s historic character, scale, and “small town” atmosphere.</p>	<p>Consistent. The Project would retain the existing frontage of and one-third of the warehouse portion of the historic property at 1115 Mission Street. Additionally, the Project would comply with the City’s design guidelines and development standards for the Mission Street Specific Plan intended to preserve the character and scale of the historic district. As such, the Project would be consistent with this goal.</p>
<p>Policy 7.1: Reaffirm urban design objectives. Maintain urban design guidelines encouraging pedestrian-oriented development, emphasizing ease of access to all parcels, uses, transit stops, and public spaces; requiring human scale in building massing and detail; encouraging varied and articulated facades; requiring that ground floor residential and commercial entries face and engage the street; and encouraging pedestrian-oriented streetscape amenities.</p>	<p>Consistent. The proposed Project plans to construct two and three-story mixed-use buildings consisting of 36 multi-family units over and to the rear of 7,384 square feet of commercial space located along Mission Street, approximately 600 feet east of the Metro Gold Line South Pasadena Station. The Project proposes a pedestrian oriented scale of development with heavily landscaped plazas, gathering spaces and open space within the Project, providing connectivity to Mission Street encouraging pedestrian interaction and connectivity to transit stops. The Project incorporates varying building forms, building heights, and architectural features and details promoting an inviting, human scale streetscape. The proposed Project will comply with the MSSP design guidelines in building design and construction and the placement of ground floor commercial areas along Mission Street, a main commercial corridor in the City. As such, the Project would be consistent with this Policy.</p>
<p>Goal 9: To conserve and preserve the historic “built” environment of the city by identifying the architectural and cultural resources of the city, by encouraging their maintenance and/or adaptive reuse, and by developing guidelines for new and infill development assuring design compatibility.</p>	<p>Consistent. The Project would retain and renovate the existing frontage of and one-third of the warehouse portion of the historic property at 1115 Mission Street for the adaptive reuse of the building for mixed use purposes. As such, the Project would be consistent with this Policy.</p>

Plan Objectives	Project Consistency
<p>Policy 9.4: Encourage adaptive reuse. Encourage and promote the adaptive reuse of South Pasadena’s historic resources.</p>	<p>Consistent. The Project would retain and renovate the existing frontage of and one-third of the warehouse portion of the historic property at 1115 Mission Street for adaptive reuse of the building for mixed use purposes. As such, the Project would be consistent with this Policy.</p>
<p>Policy 11.1: Encourage Mixed-Use development. Encourage upper-floor residential and office uses as a permitted secondary use in commercial districts.</p>	<p>Consistent. The proposed Project plans to construct two and three-story mixed-use buildings consisting of 36 multi-family units located over and to the rear of 7,394 square feet of commercial space. As such, the Project would be consistent with this Policy.</p>

Design Guidelines

In accordance with Municipal Code Chapter 36.410.040, Design Review, the Project would be subject to the City’s design review process, which would ensure that the proposed improvements are consistent with the City’s MSSP design guidelines, which provide specific standards that would address the proposed landscaping, building mass, building color palette, circulation, and pedestrian walkway design. Subject to the City’s review and approval, the Project would be consistent with the applicable design guidelines and would not result in any conflicts that could result in a physical impact on the environment.

Based on the above, impacts would be less than significant.

CUMULATIVE IMPACTS

As described in **Section 3.0**, the surrounding area contains related development projects. The proposed Project, in combination with these related projects, would increase development in the City. The related projects would be reviewed for consistency with the City’s General Plan and Zoning Ordinance and would be required as individual projects to comply with CEQA. The Project and the related projects primarily reflect infill development consisting of retail, restaurant, office, and residential uses that would implement the growth and development forecasts of the City’s General Plan. As such land use impacts would not be cumulatively considerable.

MITIGATION MEASURES

No mitigation is required.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Land use and planning impacts would be less than significant.

INTRODUCTION

This section evaluates the potential noise and vibration impacts associated with the proposed Project. Specifically, the analysis describes the existing noise environment near the Project site; estimates future noise and vibration levels at surrounding sensitive land uses resulting from construction and operation of the proposed Project; identifies the potential for significant impacts; and provides mitigation to address significant impacts.

The proposed Project roadway noise levels were modeled using the Federal Highway Administration Prediction Noise Model (FHWA-RD-77-108). Noise calculation worksheets are included in **Appendix F** of this Draft EIR.

ENVIRONMENTAL SETTING

Fundamentals of Sound

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally defined as unwanted sound. Sound is characterized by various parameters that describe the physical properties of sound waves. These properties include the rate of oscillation (frequency); the distance between successive troughs or crests, the speed of propagation; and the pressure level or energy content of a given sound wave. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level.

The unit of sound pressure expressed as a ratio to the faintest sound detectable to a person with normal hearing is called a decibel (dB). Sound or noise can vary in intensity by more than 1 million times within the range of human hearing. A logarithmic loudness scale similar to the Richter scale for earthquake magnitude is used to keep sound intensity numbers at a convenient and manageable level. The human ear is not equally sensitive to all sound frequencies within the entire spectrum. Noise levels at maximum human sensitivity are factored more heavily into sound descriptions in a process called A weighting, written as dBA. Further reference to decibels in this analysis should be understood to be A-weighted.

Alternatively, a statistical description of the sound level that is exceeded over some fraction of a given observation period can also be used to describe typical time-varying instantaneous noise. This is referred to as equivalent sound level, or Leq. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and nighttime hours, State law requires that an artificial decibel increment be added to quiet time noise levels. The 24-hour noise descriptor with a specified evening and nocturnal penalty is called the community noise equivalent level (CNEL). A similar metric called the day-night level, written as Ldn, is also commonly used. In practice, CNEL and Ldn are almost identical.

Table 4.5-1: Noise Descriptors provides a summary of the noise descriptors used to measure sound levels over different periods of time.

**Table 4.5-1
Noise Descriptors**

Term	Definition
Decibel (dB)	The unit for measuring the volume of sound equal to 10 times the logarithm (base 10) of the ratio of the pressure of a measure sound to a reference pressure.
A-weighted decibel (dBA)	A sound measurement scale that adjusts the pressure of individual frequencies according to human sensitivities. The scale accounts for the fact that the region of highest sensitivity for the human ear is between 2,000 and 4,000 cycles per second (hertz).
Equivalent sound level (Leq)	The sound level containing the same total energy as a time-varying signal over a given time period. The Leq is the value that expresses the time-averaged total energy of a fluctuating sound level. Leq can be measured over any time period, but is typically measured for 1-minute, 15-minute, 1-hour, or 24-hour periods.
Community noise equivalent level (CNEL)	A rating of community noise exposure to all sources of sound that differentiates between daytime, evening, and nighttime noise exposure. These adjustments add 5 dBA for the evening, 7:00 PM to 10:00 PM, and add 10 dBA for the night, 10:00 PM to 7:00 AM. The 5 and 10 dB penalties are applied to account for increased noise sensitivity during the evening and nighttime hours. The logarithmic effect of adding these penalties to the 1-hour Leq measurements typically results in a CNEL measurement that is within approximately 3 dBA of the peak-hour Leq. ^a
Sound pressure level	Sound pressure is the force of sound on a surface area perpendicular to the direction of the sound. Sound pressure level is expressed in decibels.
Ambient noise	The level of noise that is all encompassing within a given environment, being usually a composite of sounds from many and varied sources near to and far from the observer. No specific source is identified in the ambient environment.

^a California Department of Transportation, *Technical Noise Supplement; A Technical Supplement to the Traffic Noise Analysis Protocol (Sacramento, California: November 2009), N51–N54.*

Noise sources can generally be categorized as one of two types: (1) point sources, such as stationary mechanical equipment; and (2) line sources, such as a roadway. In addition, noise can also be generated by mobile sources, such as trucks and construction equipment. Noise levels generated by a variety of activities, as shown in **Figure 4.5-1: Common Noise Levels**. As shown in this figure, noise levels up to 60 dBA are generally considered moderate by most people, with noise levels above 60 dBA considered loud.

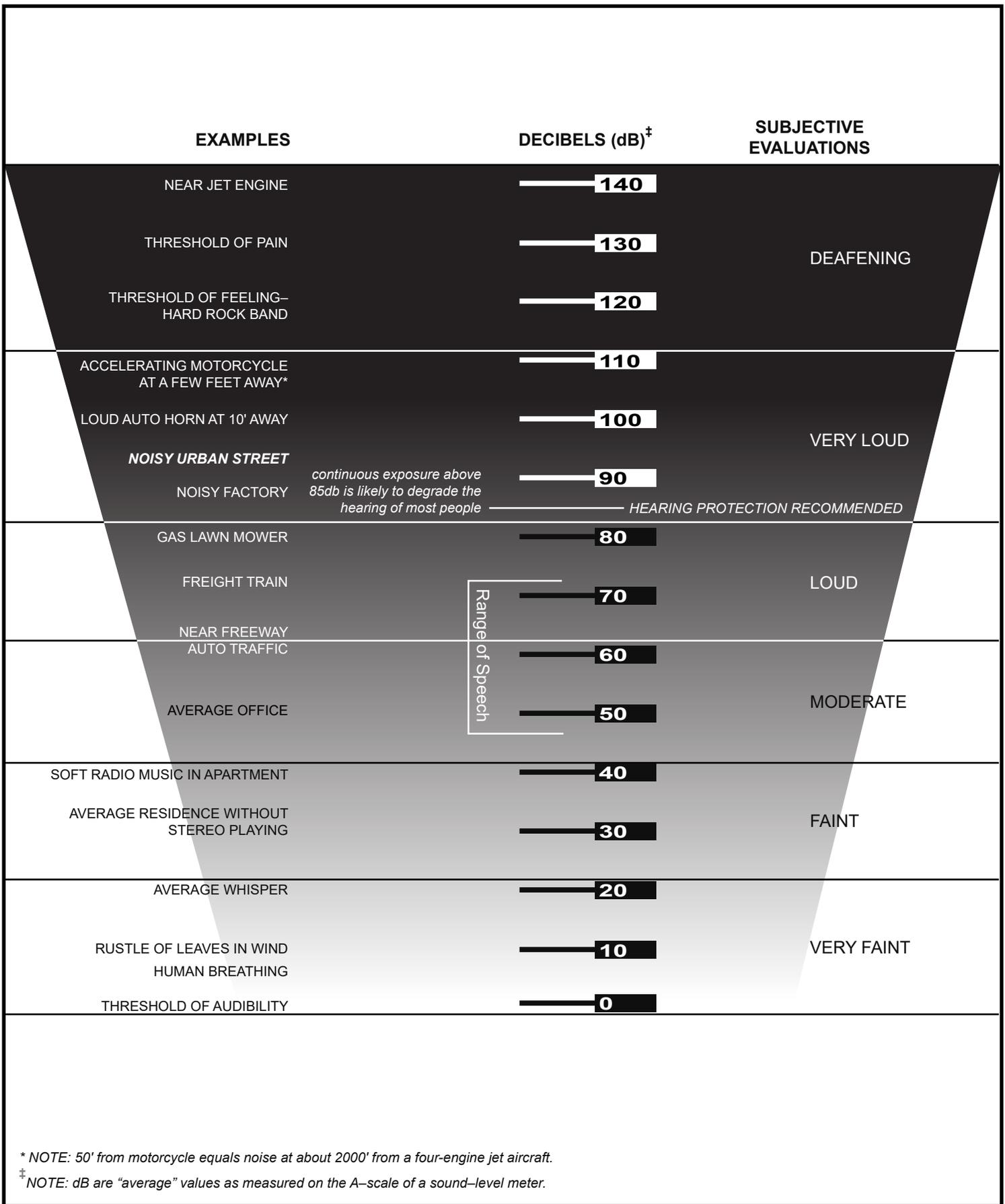


FIGURE 3

The noise level inside homes generally ranges from 30 to 45 dBA. The noise generated by speech ranges from 50 to 70 dBA. Of the typical noise events that occur in an urban environment, a loud horn from a car or a motorcycle accelerating can produce noise above 100 dBA.

Noise levels from a particular source decline as the distance to the receptor increases. Other factors, such as weather and reflecting or shielding, also help to lower intensity or reduce noise levels at any given location. A commonly used rule of thumb for roadway noise is that for every doubling of distance from the source, the noise level is reduced by about 6 dBA acoustically at “hard” locations (i.e., the area between the noise source and the receptor is nearly complete asphalt, concrete, hard-packed soil, or other solid materials) and 7.5 dBA at acoustically “soft” locations (i.e., the area between the source and receptor is normal earth or has vegetation, including grass).¹ When the noise source is a continuous line, such as vehicle traffic on a highway, sound levels decrease by about 3 dB for every doubling of distance.

Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, whereas a solid wall or berm reduces noise levels by 5 to 10 dBA. In addition, noise is substantially reduced from outdoor to indoor areas as a result of structural designs that attenuate noise. Windows are a common feature used by building occupants to control the effects of outdoor noise on interior noise levels. The exterior-to-interior reduction of noise for newer residential units is generally 20 dBA or more. The minimum attenuation of exterior-to-interior noise provided by typical structures in California is provided in **Table 4.5-2: Outside-to-Inside Noise Attenuation**.

1 United States Department of Transportation (DOT), Federal Transportation Authority (FTA), *Transit Noise and Vibration Impact Assessment* (2006), pp. 2-12 and 6-41, https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf; DOT, *FHWA Highway Traffic Noise Analysis: Abatement Policy and Guidance* (December 2011), 10.

Table 4.5-2
Outside-to-Inside Noise Attenuation

Building Type	Reduction in dBA	
	Open Windows	Closed Windows
Residences	17	25
Schools	17	25
Churches	20	30
Hospitals/Convalescent homes	17	25
Offices	17	25

Source: C. G. Gordon, et al., Highway Noise: A Design for Highway Engineers, National Cooperative Highway Research Program Report 117 (Washington, DC: Transportation Research Board, 1971).

Fundamentals of Vibration

Vibration is commonly defined as an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The peak particle velocity (PPV) or the root-mean-square (RMS) velocity is usually used to describe vibration amplitudes. PPV is defined as the maximum instantaneous peak of the vibration signal, while RMS is defined as the square root of the average of the squared amplitude of the signal. PPV is typically used for evaluating potential building damage, whereas RMS is typically more suitable for evaluating human response to ground-borne vibration. The RMS vibration velocity level can be presented in inches per second (ips) or in vibration decibels (VdB, a decibel unit referenced to 1 microinch per second). Generally, ground-borne vibration generated by man-made activities (i.e., road traffic, construction activity) attenuates rapidly with distance from the source of the vibration.

The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within buildings such as the operation of mechanical equipment, the movement of people, or the slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration from traffic is barely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity, to 100 VdB, which is the threshold where minor damage can occur in fragile buildings.

Regulatory Framework

a. Federal

There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the proposed Project. 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. OSHA is responsible for the protection against the effects of noise exposure when sound levels exceed those, listed in **Table 4.5-3: Permissible Noise Exposures for Workers**, when measured on the A scale of a standard sound level meter at slow response.²

Table 4.5-3
Permissible Noise Exposures for Workers

Work Duration per Day (hours)	Sound level (dBA)
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
0.5	110
0.25 or less	115

Source: Occupational Safety and Health Administration, "Occupational Noise Exposure,"
https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10625.

Federal Transit Administration Vibration Guidelines

The Federal Transit Administration (FTA) has published a technical manual, *Transit Noise and Vibration Impacts Assessment*, that provides ground-borne vibration impact criteria with respect to building damage during construction activities.³ Building vibration damage is measured in PPV. According to the FTA guidelines, a vibration criterion of 0.20 PPV should be considered as the significant impact level for

- 2 OSHA, "Occupational Noise Exposure,"
https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10625.
- 3 FTA, *Transit Noise and Vibration Impact Assessment*.

nonengineered timber and masonry buildings. Structures or buildings constructed of reinforced concrete, steel, or timber have a vibration damage criterion of 0.50 PPV based on the FTA guidelines.

The human reaction to various levels of vibration is highly subjective and varies from person to person.

Table 4.5-4: Ground-borne Vibration Criteria—Human Annoyance shows the FTA’s vibration criteria to evaluate vibration-related annoyance due to resonances of the structural components of a building. These criteria are based on extensive research that suggests humans are sensitive to vibration velocities in the range of 8 to 80 Hz.⁴

**Table 4.5-4
Ground-borne Vibration Criteria—Human Annoyance**

Land Use Category	Max Lv (VdB)	Description
Workshop	90	Distinctly felt vibration; appropriate to workshops and nonsensitive areas
Office	84	Felt vibration; appropriate to offices and nonsensitive areas
Residential: Daytime	78	Barely felt vibration; adequate for computer equipment
Residential: Nighttime	72	Vibration not felt, but ground-borne noise may be audible inside quiet rooms

Source: United States Department of Transportation, Federal Transportation Authority, Transit Noise and Vibration Impact Assessment (May 2006).

Note: For Max Lv (VdB), Lv is the velocity level in decibels as measured in 1/3 octave bands of frequency over the frequency ranges of 8 to 80 Hz

Structures amplify ground-borne vibration, and wood-frame buildings, such as typical residential structures, are more affected by ground vibration than are heavier buildings. The level at which ground-borne vibration is strong enough to cause architectural damage has not been determined conclusively. The most conservative estimates are reflected in the FTA standards, shown in **Table 4.5-5: Ground-borne Vibration Criteria—Architectural Damage**.⁵

4 FTA, *Transit Noise and Vibration Impact Assessment*.

5 FTA, *Transit Noise and Vibration Impact Assessment*.

**Table 4.5-5
Ground-borne Vibration Criteria—Architectural Damage**

Building Category	PPV (ips)	Lv (VdB)
I. Reinforced concrete, steel, or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: United States Department of Transportation, Federal Transportation Authority, Transit Noise and Vibration Impact Assessment (May 2006).

Note: For Max Lv (VdB), Lv = the velocity level in decibels as measured in 1/3 octave bands of frequency over the frequency ranges of 8 to 80 Hz; VdB = vibration decibels; Hz = hertz; ips = inches per second.

b. State

State Noise Standards

The State of California has adopted noise compatibility guidelines for general land use planning. The types of land uses addressed by the State and the acceptable noise categories for each land use are included in the *State of California General Plan Guidelines* guidance document, which is published and updated by the Governor’s Office of Planning Research.⁶ The level of acceptability of the noise environment is dependent on the activity associated with the particular land use. Noise exposure for single-family uses is normally acceptable when the CNEL at exterior residential locations is equal to or below 60 dBA; conditionally acceptable when the CNEL is between 55 and 70 dBA; and normally unacceptable when the CNEL exceeds 70 dBA. These guidelines apply to noise sources such as vehicular traffic, aircraft, and rail movements.

An interior CNEL of 45 dB is mandated by the State of California Noise Insulation Standards Title 24 for 2016 Building Energy Efficiency Standards for multiple family dwellings and hotel and motel rooms.⁷ Furthermore, projects must comply with the California Code of Regulations, Title 24 and Title 25 for California Building Code Interior and Exterior Noise Standards. In 1988, the State Building Standards Commission expanded that standard to include all habitable rooms in residential use, including single-family dwelling units. Because typical noise attenuation within residential structures with closed windows is at least 20 dB, an exterior noise exposure of 65 dB CNEL is generally the noise land-use compatibility guideline for new residential dwellings in California. Because commercial and industrial uses are not

6 Governor’s Office of Planning and Research, *State of California General Plan Guidelines* (2017), http://www.opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf.

7 California Code of Regulations, Public Resources Code, sec. 25402, 2016 Building Energy Efficient Standards, tit. 24, pt. 6, sec. T25–T28.

occupied on a 24-hour basis, the exterior noise exposure standard for less-sensitive land uses generally is somewhat less stringent.

The California Department of Education prepared the School Site Selection and Approval Guide. As indicated in the Education Code, Section 17251, and the California Code of Regulations, Title 5, Sections 14001 through 14012, outlines the powers and duties for the Department regarding school sites and the construction of school buildings. The California Department of Transportation considers sound at 50 dB near a school to be the point at which corrective action.⁸

c. Local

City of South Pasadena

General Plan Safety and Noise Element

The City of South Pasadena developed a Noise Element for its General Plan (1975) for use in local project planning.⁹ The goal of the Noise Element is to identify present noise levels and set forth a program for the control of noise levels that would be harmful to the health, safety and general welfare of the community. Some general objectives of the Element include limiting the noise levels within residential areas, establishing compatible land use adjacent to transportation facilities, and maintaining an ambient noise level within the City that will not be physically or psychologically detrimental to the residents of South Pasadena. Lastly, it is the objective of the element to establish appropriate standards and criteria for desirable sound levels and the identification of means available to achieve the sound levels in the community.

The League of California Cities has suggested that community ambient (average noise level of all background sounds) noise levels stay below the following levels identified in **Table 4.5-6 Community Ambient Noise Levels** shown below.

8 California Department of Education, *School Site Selection and Approval Guide* (December 28, 2017), <https://www.cde.ca.gov/ls/fa/sf/schoolsiteguide.asp>.

9 City of South Pasadena, *General Plan, "Noise Element"* (1975).

**Table 4.5-6
Community Ambient Noise Levels**

Zone	Time	Presumed Ambient Noise Level (dB(A)) ^a	
		Quiet	Slightly Noisy
R-1 and R-2	10:00 PM – 7:00 AM	45 dBA	50 dBA
	7:00 AM – 7:00 PM	55 dBA	60 dBA
	7:00 PM – 10:00 PM	50 dBA	55 dBA
R-3	10:00 PM – 7:00 AM	50 dBA	55dBA
	7:00 AM – 10:00 PM	55 dBA	60 dBA
Commercial	10:00 PM – 7:00 AM	55 dBA	60 dBA
	7:00 AM – 10:00 PM	60 dBA	65 dBA
Industrial	anytime	70 dBA	65

^a: dBA = a-weighted decibels.

Source: City of South Pasadena, General Plan, Safety and Noise Element, Table VIII-3.

Municipal Code

The South Pasadena Municipal Code (SPMC) regulates noise levels in the City.¹⁰ The SPMC makes it unlawful for any person to make any loud, unnecessary, and unusual noise that disturbs the peace or quiet of any neighborhood or causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area.

Construction noise in the City is regulated by Article 3 of the SPMC. Specifically, the SPMC states:

It is unlawful for any person to perform any construction activity within a residential zone or within 500 feet thereof on Monday through Friday before 8:00 AM and after 7:00 PM, Saturday before 9:00 AM and after 7:00 PM, and on Sundays and city recognized holidays before 10:00 AM and after 6:00 PM.

Existing Conditions

Ambient Noise Levels

Existing noise levels around the Project site were measured using a Larson-Davis Model 831 sound level meter, which satisfies the ANSI for general environmental noise measurement instrumentation and for Type 1 accuracy.¹¹ The sound level meter and microphone were mounted on a tripod 5 feet above the ground and equipped with a windscreen during all measurements. The sound level meter was set to

¹⁰ City of South Pasadena, Municipal Code

¹¹ ASHA, "American National Standard on Classroom Acoustics."

“slow” time constant mode to record noise levels using the A-weighting filter network. These measurements are representative of typical ambient noise levels at nearby commercial and residential locations.

Short-term sound monitoring was conducted at five (5) locations to measure the ambient sound environment in the Project vicinity. Measurements were taken over 15-minute intervals at each location on March 4, 2019, as indicated in **Table 4.5-7: Ambient Noise Measurements**. **Figure 4.5-2: Noise Monitoring Locations** depicts locations where ambient noise measurements were conducted. As shown in **Table 4.5-7**, ambient noise levels ranged from a low of 57.4 dBA (Site 2 and 4) to a high of 66.1 dBA along Mission Street.

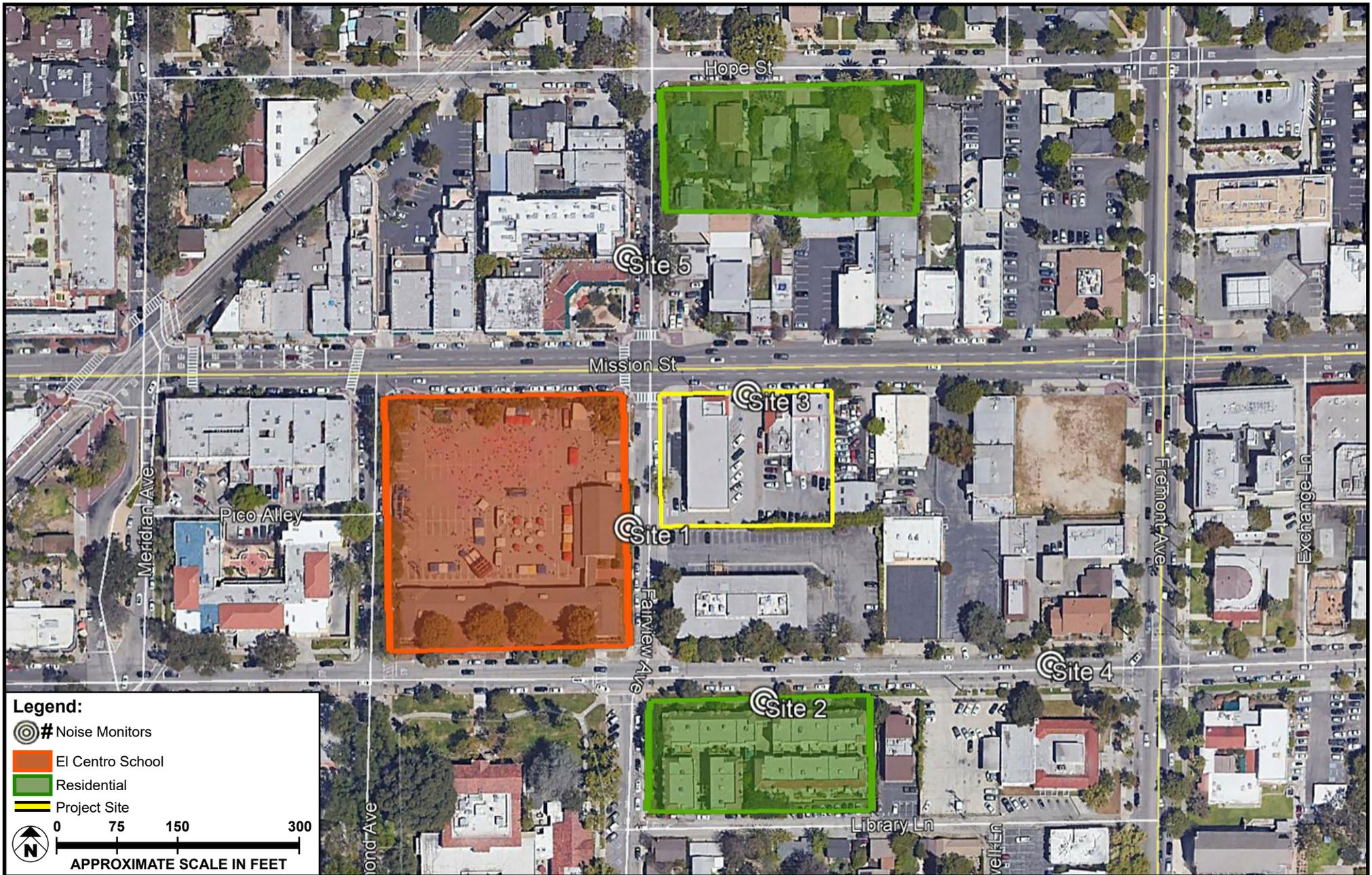
Site 1 is located on Fairview Avenue, west of the Project site between Mission Street and El Centro Street. This location is adjacent to a school, with public and residential uses to the south. Dominant noise sources at this site include pedestrian traffic and light vehicle traffic along Fairview Avenue.

Site 2 is located on El Centro Street just south of the Project site. This location is surrounded by multi-family residential uses to the south. Dominant noise sources at this site include pedestrian and vehicle traffic along El Centro Street.

Site 3 is located on Mission Street just north of the Project site. This location is surrounded by commercial uses to the north. Dominant noise sources at this site include pedestrian and vehicle traffic along Mission Street.

Site 4 is located on El Centro Street southeast of the Project site, just west of Fremont Avenue. This location is surrounded by commercial uses to the north, east, and south, with multi-family residential uses to the west. Dominant noise sources at this site include pedestrian and vehicle traffic along El Centro Street.

Site 5 is located northwest of the Project site along Fairview Avenue, north of Mission Street. This location is surrounded by commercial and residential uses. Dominant noise sources at this site include pedestrian and light vehicle traffic along Fairview Avenue.



SOURCE: Google Earth - 2019; Meridian Consultants - 2019

FIGURE 4.5-2

**Table 4.5-7
Ambient Noise Measurements**

Location Number/Description	Nearest Use	Time Period	Noise Source	dBA Leq
1 West of the Project site along Fairview Avenue between Mission Street and El Centro Street	School	1:40 PM– 1:55 PM	Pedestrian and light traffic along Fairview Avenue	57.8
2 South of the Project site along El Centro Street	Multifamily residential	1:57 PM– 2:12 PM	Pedestrian and traffic along El Centro Street	57.4
3 North of the Project site along Mission Street	Project site	2:18 PM– 2:33 PM	Pedestrian and traffic along Mission Street	66.1
4 Southeast of the Project site along El Centro Street west of Fremont Avenue	Commercial	2:57 PM– 3:12 PM	Pedestrian and traffic along El Centro Street	59.6
5 Northwest of the Project site along Fairview Avenue north of Mission Street	Commercial/ Residential	2:35 PM– 2:50 PM	Pedestrian and light traffic along Fairview Avenue	57.4

Source: Refer to **Appendix F** for noise monitoring data sheets.

Notes: dBA = A-weighted decibels; Leq = average equivalent sound level.

Vibration Conditions

Based on field observations, the primary source of existing ground-borne vibration in the vicinity of the Project site is vehicle traffic on local roadways. According to the Federal Transit Administration,¹² typical road traffic-induced vibration levels are unlikely to be perceptible by people. Trucks and buses typically generate ground-borne vibration velocity levels of approximately 63 VdB (at a 50-foot distance), and these levels could reach 72 VdB when trucks and buses pass over bumps in the road. A vibration level of 72 VdB is above the 60 VdB level of perceptibility.

Existing Roadway Noise

The estimated existing roadway noise levels are provided in **Table 4.5-8: Existing Roadway Noise Levels**. As indicated in **Table 4.5-8**, the existing modeled vehicle-generated noise levels along roadway segments near the Project site, at a distance of 75 feet from each roadway's centerline, range from a low of 54.7 dB(A) CNEL along El Centro Street east of Fair Oaks Avenue (intersection 4) during the AM peak hour to a high of 67.0 dB(A) CNEL along Fair Oaks Avenue north of Mission Street during the PM peak hour.

12 Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, FTA report no. 0123 (September 2018), accessed December 2018, https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.

**Table 4.5-8
Existing Roadway Noise Levels**

Intersection	Roadway Segment	Time Period	dBA CNEL	
1	Meridian Avenue north of Mission Street	AM	55.5	
		PM	56.0	
	Meridian Avenue south of Mission Street	AM	56.8	
		PM	56.6	
	Mission Street east of Meridian Avenue	AM	60.1	
		PM	61.1	
	Mission Street west of Meridian Avenue	AM	60.5	
		PM	61.2	
	2	Freemont Avenue north of Mission Street	AM	64.5
			PM	64.9
Freemont Avenue south of Mission Street		AM	64.4	
		PM	64.9	
Mission Street east of Freemont Avenue		AM	61.7	
		PM	62.4	
Mission Street west of Freemont Avenue		AM	61.7	
		PM	62.6	
3		Fair Oaks Avenue north of Mission Street	AM	66.5
			PM	67.0
	Fair Oaks Avenue south of Mission Street	AM	66.0	
		PM	66.7	
	Mission Street east of Fair Oaks Avenue	AM	61.9	
		PM	62.1	
	Mission Street west of Fair Oaks Avenue	AM	61.2	
		PM	62.3	
	4	Fair Oaks Avenue north of El Centro Street	AM	66.1
			PM	66.8
Fair Oaks Avenue south of El Centro Street		AM	66.2	
		PM	66.9	
El Centro Street east of Fair Oaks Avenue		AM	54.7	
		PM	57.3	
El Centro Street west of Fair Oaks Avenue		AM	56.5	
		PM	58.6	

Note: Refer to **Appendix F** for roadway noise worksheets

Note: Roadway noise levels are modeled 75 feet from the center of the roadway.

Sensitive Receptors

Certain land uses are particularly sensitive to noise and vibration. These uses include schools, residences, hospital facilities, religious facilities, and open space/recreation areas where quiet environments are necessary for the enjoyment, public health, and safety of the community. Commercial and industrial uses are not considered noise and vibration-sensitive uses.

Land uses surrounding the Project site consist of single and multifamily residential uses to the north, west, and east and a mix of residential and commercial to the south. The analysis found herein is a “worst-case scenario” for the sensitive receptors within 50 feet of the Project site.

Existing Vibration Levels

Based on field observations, the primary source of existing ground-borne vibration near the Project site is vehicle traffic on local roadways. According to the FTA, typical road traffic-induced vibration levels are unlikely to be perceptible by people. Trucks and buses typically generated ground-borne vibration velocity levels of approximately 63 VdB (at 50 feet distance), and these levels could reach 72 VdB when trucks and buses pass over bumps in the road. A vibration level of 72 VdB is above the 60 VdB level of perceptibility.

ENVIRONMENTAL IMPACTS

Methodology

Ambient Noise Measurements

Noise-level monitoring was conducted by Meridian Consultants on March 4, 2019, at three locations within the Project area vicinity, as shown in **Figure 6: Noise Monitoring Locations**. Noise-level monitoring was conducted for 15-minute intervals at each location using a Larson Davis Model 831 sound-level meter. This meter satisfies the American National Standards Institute (ANSI) standard for general environmental noise measurement instrumentation. The ANSI specifies several types of sound-level meters according to their precision. Types 1, 2, and 3 are referred to as “precision,” “general-purpose,” and “survey” meters, respectively. Most measurements carefully taken with a Type 1 sound-level meter will have a margin of error not exceeding 1 dB.

The Larson Davis Model 831 is a Type 1 precision sound-level meter. This meter meets all requirements of ANSI S1.4-1983 and ANSI1.43-1997 Type 1 standards, as well as International Electrotechnical Commission (IEC) IEC61672-1 Ed. 1.0, IEC60651 Ed 1.2, and IEC60804 Type 1, Group X standards.

The sound-level meter was located approximately 5 feet above ground and was covered with a Larson Davis windscreen. The sound-level meter was field calibrated with an external calibrator prior to operation.

Construction Scenario

Project construction is anticipated to last approximately 24 months. Construction would occur over five phases: (1) demolition; (2) grading; (3) building construction; (4) paving; and (5) architectural coating.

Each phase of construction would result in varying levels of intensity and number of construction personnel. The construction workforce would consist of approximately 10 worker trips per day and 43 total hauling trips during demolition; 5 worker trips per day and 2,963 total hauling trips during grading; 50 worker trips per day and 13 total vendor trips during building construction; 10 worker trips per day during architectural coating; and 18 worker trips per day during paving.

Ground-Borne Vibration

Ground-borne vibration impacts were evaluated by identifying potential vibration sources, estimating the distance between vibration sources and surrounding structure locations and surrounding structure locations and vibration sensitive receptors, and making a significance determination based on the significance thresholds.

City of South Pasadena Noise Element

The City of South Pasadena General Plan Safety and Noise Element establishes goals and policies to adequately protect indoor and outdoor living areas, and noise-sensitive uses such as schools and convalescent homes, from transportation noise impacts. The Noise Element considers the noise impacts of new projects involving increases in noisy activities or traffic. An increase of 3 dBA or noise in excess of 65 dBA in sensitive areas shall be considered significant.

Construction

Construction Noise

Construction activities that would occur during the construction phases (demolition, grading, building construction, architectural coating, and paving) would generate both steady-state and episodic noise that would be heard both on and off the Project site. Each phase involves the use of different types of construction equipment and, therefore, has its own distinct noise characteristics. Grading and excavation would typically include equipment such as concrete saws, dozers, and tractors/loaders/backhoes; building construction would typically include equipment such as cranes, forklifts, and tractors/loaders/backhoes; architectural coating would typically include equipment such as air compressors; and paving would typically include equipment such as concrete mixers, pavers, rollers, and tractors/loaders/backhoes. The proposed Project would be constructed using typical construction techniques; no blasting, impact pile driving, or jackhammers would be required.

Typical maximum noise levels and duty cycles of representative types of equipment that would potentially be used during construction for this proposed Project are presented in **Table 4.5-9: Typical Maximum Noise Levels for Project Construction Equipment**. Construction equipment noise would not be constant because of the variations of power, cycles, and equipment locations. For maximum noise events, this analysis considers equipment operating at the edge of the property line of the Project site.

**Table 4.5-9
Typical Maximum Noise Levels for Project Construction Equipment**

Equipment Description	Typical Duty Cycle (%)	Spec Lmax (dBA)	Actual Lmax (dBA)
Air compressor	40	80.0	77.7
Backhoe	40	80.0	77.6
Concrete mixer	40	85.0	78.8
Concrete/Industrial saw	20	90.0	89.6
Crane	16	85.0	80.6
Dozer	40	85.0	81.7
Forklift	40	85.0	N/A
Grader	40	85.0	N/A
Paver	50	85.0	77.2
Roller	20	85.0	80.0

Source: FHWA Roadway Construction Noise Model (RCNM) version 1.1

Construction Vibration

Some construction equipment can generate ground-borne noise or vibration that may affect nearby structures or residents. Large bulldozers, vibratory rollers, pile drivers, drilling equipment, and loaded trucks are examples of such equipment. Vibration levels were estimated for large bulldozers, loaded trucks, and other similar equipment using peak PPV levels in in/sec published by the Federal Transit Administration¹³ adjusted for distance to the nearest sensitive receptor.

Various types of construction equipment and their respective velocity levels are shown in **Table 4.5-10: Vibration Source Levels for Construction Equipment**. It should be noted that there is a considerable variation in reported ground vibration levels from construction activities. The data provides a reasonable estimate for a wide range of soil conditions. For purposes of this analysis, Project construction and operation producing vibration levels that exceed 0.3 in/sec would be considered significant.

13 FHWA, *Construction Noise Handbook* (2006).

Table 4.5-10
Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 feet (in/sec)	Approximate VdB at 25 feet
Air compressor	0.090	87
Backhoe	0.040	80
Cement and mortar mixer	0.040	80
Concrete saw	0.018	73
Excavator	0.040	80
Loader	0.071	85
Paver	0.063	84
Roller	0.020	74

Source: Office of Planning and Environment, Federal Transit Administration, Transit Noise and Vibration Impact Assessment, FTA-VA-90-1003-06 (May 2006), 12-9.

Roadway Noise

Noise-prediction modeling was conducted and based on vehicular traffic volumes along nearby roadway segments to determine the ambient roadway noise environment related to traffic near the Project site. The average daily trips (ADTs) for these local roadway segments were obtained from the traffic impact analysis.

Existing roadway noise levels were modeled using the Federal Highway Administration Prediction Noise Model (FHWA-RD-77-108). The model calculates the average noise level in dB(A) CNEL at a given roadway segment based on traffic volumes, vehicle mix, average speeds, roadway geometry, and site conditions. The noise model assumes a “hard” site condition (i.e., providing for the minimum amount of sound attenuation allowed by the traffic noise model), a 6.0 dB[A] noise reduction per doubling of distance and no barriers between the roadway and receivers. Traffic noise levels were calculated for sensitive receptors at distances of 75 feet from the center of the roadway. Noise levels were evaluated with respect to the following modeled traffic scenarios:

- Existing Conditions
- Existing plus Project
- Future Conditions
- Future plus Project

Thresholds of Significance

To assist in determining whether the proposed Project would have a significant effect on the environment, the City finds the proposed Project may be deemed to have a significant impact related to noise if it would:

- Threshold NOI-1:** **Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards in the local general plan or noise ordinance, or applicable standards of other agencies.**
- Threshold NOI-2:** **Generation of excessive groundborne vibration or groundborne noise levels?**
- Threshold NOI-3:** **For a project located within the vicinity of a private airstrip or airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose students or staff to excessive noise levels.**

Project Impact Analysis

- Threshold NOI-1:** **Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.**

On-Site Construction Noise

The potential noise impact generated during construction depends on the phase of construction and the percentage of time the equipment operates over the workday. However, construction noise estimates used for the analysis are representative of worst-case conditions because it is unlikely that all the equipment contained on site would operate simultaneously. As previously noted, the proposed Project would be constructed using typical construction techniques; no blasting, impact pile driving, or jackhammers would be required. As would be the case for construction of most land use development projects, construction of the proposed Project would require the use of heavy-duty equipment with the potential to generate audible noise above the ambient background noise level. The noise levels at the multifamily residential uses adjacent to the site from construction activity are shown in **Table 4.5-11: Construction Maximum Noise Estimates.**

Table 4.5-11
Construction Maximum Noise Estimates

Use	Distance from Project Site (feet)	Max Leq	Ambient Noise Leq (dBA)	Maximum Noise Increase over Ambient (without Compliance)
Site 1	40	88.5	57.8	+30.7
Site 2	195	69.7	57.4	+12.3
Site 3 ^a	--	--	--	--
Site 4	285	66.5	59.6	+6.9
Site 5	155	71.7	57.4	+14.3

Source: FHWA, RCNM, version. 1.1.

^a Located at the Project site.

Refer to **Appendix F** for Construction Noise Worksheets

Construction equipment operates at its noisiest levels for certain percentages of time during operation. Equipment such as excavators, graders, and loaders would operate at different percentages over the course of an hour.¹⁴ During a construction day, the highest noise levels would be generated when multiple pieces of construction equipment are operated concurrently. The proposed Project's estimated construction noise levels were calculated for a scenario in which a reasonable number of construction equipment was assumed to be operating simultaneously, given the physical size of the site and logistical limitations, and with the noise equipment located at the construction area nearest to the affected receptors to present a conservative impact analysis. This is considered a worst-case evaluation because the proposed Project would typically use fewer overall equipment simultaneously at any given time and, as such, would likely generate lower noise levels than reported herein.

Implementation of mitigation measure **MM NOI-1** would include noise reduction techniques which include a construction management plan specifying that all construction equipment, fixed or mobile, will be equipped with properly operating and maintained mufflers and other state-required noise-attenuation devices; identify the maximum distance between construction equipment staging areas and occupied residential areas; and require the use of electric air compressors and similar power tools. Temporary noise barriers can reduce noise level at a minimum of 10 dBA, depending on the performance standard of achieving noise-level reductions. Optimal muffler systems for all equipment and the break in line of sight to a sensitive receptor would reduce construction noise levels by approximately 10 dB or more.¹⁵ Limiting the number of noise-generating, heavy-duty off-road construction equipment (e.g., backhoes, dozers, excavators, loaders, rollers, etc.) simultaneously used on the Project site within 50 feet of off-site noise-

¹⁴ Federal Highway Administration, *Traffic Noise Model* (2006).

¹⁵ FHWA, *Special Report – Measurement, Prediction, and Mitigation*, updated June 2017, accessed December 2018, https://www.fhwa.dot.gov/Environment/noise/construction_noise/special_report/hcn04.cfm.

sensitive receptors surrounding the site to no more than one or two pieces of heavy-duty, off-road equipment would further reduce construction noise levels by approximately 10 dBA. A sign, legible at a distance of 50 feet, will be posted at the Project construction site providing a contact name and a telephone number where residents can inquire about the construction process and register complaints. This sign will indicate the dates and duration of construction activities. In conjunction with this required posting, a noise disturbance coordinator will be identified to address construction noise concerns received. The contact name and the telephone number for the noise disturbance coordinator will be posted on the sign. The coordinator will be responsible for responding to any local complaints about construction noise and will notify the City to determine the cause and implement reasonable measures to the complaint, as deemed acceptable by the City. With implementation of **MM NOI-1**, construction noise levels would be reduced by a minimum 30 dBA, thus would not increase ambient noise levels by 3 dBA or noise in excess of 65 dBA in sensitive areas.

Off-Site Construction Noise

According to the City's Safety and Noise Element, truck routes are designated to direct large trucks onto roadways constructed for that purpose. In South Pasadena, the following roadways have been designated appropriate for truck travel:

- Pasadena Avenue (West City limits to Mission Street)
- Mission Street (Pasadena Avenue to Fair Oaks Avenue)
- Fair Oaks Avenue (North City limits to Huntington Drive)
- Huntington Drive (South City limits to Garfield Avenue)
- Fremont Avenue (Huntington Drive to South City limits)

Construction of the proposed Project would require haul and vendor truck trips to and from the site to export soil and delivery supplies to the site. Trucks traveling to and from the Project site would be required to travel along a haul route approved by the City. Approximately 2,963 total hauling trips would take place during grading, which total to approximately 50 haul truck trips per workday.

Noise associated with construction truck trips were estimated using the Caltrans FHWA Traffic Noise Model based on the maximum number of truck trips in a day. Project truck trips, which include medium- and heavy-duty trucks, would generate noise levels of approximately 54.2 to 59.1 dBA, respectively, measured at a distance of 25 feet along Mission Street. As shown in **Table 4.5-7**, existing noise levels along Mission Street is 66.1 dBA. The noise-level increases from truck trips would be below the existing ambient noise level and would be below the significance threshold of 3 dBA

Roadway Noise

Existing plus Project

Table 4.5-12: Existing Plus Project, illustrates the change in CNEL from existing traffic volumes and existing plus Project traffic volumes. The difference in traffic noise between existing conditions and Project conditions represents the increase in noise attributable to Project-related traffic. As shown in **Table 4.5-12**, an increase of 3 dBA or more would not occur along roadways adjacent to sensitive uses.

Future plus Project

Table 4.5-13: Future Plus Project, illustrates the change in CNEL from future traffic volumes and future plus Project traffic volumes. The difference in traffic noise between future conditions and Project conditions represents the increase in noise attributable to Project-related traffic. As shown in **Table 4.5-13**, an increase of 3 dBA or more would not occur along roadways adjacent to sensitive uses.

Threshold NOI-2: Generation of excessive groundborne vibration or groundborne noise levels?

Construction Vibration

Table 4.5-14: Construction Vibration Levels Estimates lists the vibration source levels at varying distances of the assumed construction equipment to be used during construction. As shown in **Table 4.5-12**, air compressors are capable of producing approximately 0.193 ips PPV at 15 feet and would not generate vibration levels in excess of 0.5 ips PPV. As such, the multifamily residential units surrounding the Project site with regard to construction vibration activities would not be affected as a result of attenuation of ground-borne vibration. Furthermore, construction activities would be restricted to daytime hours, when people are the least sensitive to vibration instructions.

**Table 4.5-12
Existing Plus Project**

Intersection	Roadway Segment	Time Period	Existing	Existing plus Project	Noise-Level Increase
			dBA CNEL		
1	Meridian Avenue north of Mission Street	AM	55.5	55.6	0.1
		PM	56.0	56.0	0.0
	Meridian Avenue south of Mission Street	AM	56.8	56.8	0.0
		PM	56.6	56.6	0.0
	Mission Street east of Meridian Avenue	AM	60.1	60.2	0.1
		PM	61.1	61.2	0.1
Mission Street west of Meridian Avenue	AM	60.5	60.6	0.1	
	PM	61.2	61.3	0.1	
2	Freemont Avenue north of Mission Street	AM	64.5	64.5	0.0
		PM	64.9	64.9	0.0
	Freemont Avenue south of Mission Street	AM	64.4	64.4	0.0
		PM	64.9	64.9	0.0
	Mission Street east of Freemont Avenue	AM	61.7	61.9	0.2
		PM	62.4	62.5	0.1
	Mission Street west of Freemont Avenue	AM	61.7	61.8	0.1
		PM	62.6	62.7	0.1
3	Fair Oaks Avenue north of Mission Street	AM	66.5	66.5	0.0
		PM	67.0	67.0	0.0
	Fair Oaks Avenue south of Mission Street	AM	66.0	66.0	0.0
		PM	66.7	66.8	0.1
	Mission Street east of Fair Oaks Avenue	AM	61.9	61.9	0.0
		PM	62.1	62.1	0.0
	Mission Street west of Fair Oaks Avenue	AM	61.2	61.3	0.1
		PM	62.3	62.4	0.1
4	Fair Oaks Avenue north of El Centro Street	AM	66.1	66.1	0.0
		PM	66.8	66.9	0.1
	Fair Oaks Avenue south of El Centro Street	AM	66.2	66.3	0.1
		PM	66.9	66.9	0.0
	El Centro Street east of Fair Oaks Avenue	AM	54.7	54.7	0.0
		PM	57.3	57.3	0.0
	El Centro Street west of Fair Oaks Avenue	AM	56.5	56.7	0.2
		PM	58.6	58.7	0.1

Note: Refer to **Appendix F** for roadway noise worksheets

Note: Roadway noise levels are modeled 75 feet from the center of the roadway.

**Table 4.5-13
Future Plus Project**

Intersection	Roadway Segment	Time Period	Future	Future plus Project	Noise-Level Increase
			dBA CNEL		
1	Meridian Avenue north of Mission Street	AM	55.6	55.7	0.1
		PM	56.1	56.1	0.0
	Meridian Avenue south of Mission Street	AM	56.9	56.9	0.0
		PM	56.7	56.7	0.0
	Mission Street east of Meridian Avenue	AM	60.3	60.4	0.1
		PM	61.3	61.4	0.1
Mission Street west of Meridian Avenue	AM	60.7	60.8	0.1	
	PM	61.4	61.5	0.1	
2	Freemont Avenue north of Mission Street	AM	64.5	64.7	0.1
		PM	65.1	65.1	0.0
	Freemont Avenue south of Mission Street	AM	64.5	64.5	0.0
		PM	65.1	65.1	0.0
	Mission Street east of Freemont Avenue	AM	62.0	62.1	0.1
		PM	62.7	62.8	0.1
	Mission Street west of Freemont Avenue	AM	61.9	62.0	0.1
		PM	62.8	62.9	0.1
3	Fair Oaks Avenue north of Mission Street	AM	66.6	66.6	0.0
		PM	67.1	67.1	0.0
	Fair Oaks Avenue south of Mission Street	AM	66.1	66.1	0.0
		PM	66.9	66.9	0.0
	Mission Street east of Fair Oaks Avenue	AM	62.1	62.1	0.0
		PM	62.4	62.4	0.0
	Mission Street west of Fair Oaks Avenue	AM	61.4	61.5	0.1
		PM	62.6	62.6	0.0
4	Fair Oaks Avenue north of El Centro Street	AM	66.2	66.2	0.0
		PM	66.9	66.9	0.0
	Fair Oaks Avenue south of El Centro Street	AM	66.4	66.4	0.0
		PM	67.1	67.1	0.0
	El Centro Street east of Fair Oaks Avenue	AM	55.3	55.3	0.0
		PM	58.0	58.0	0.0
	El Centro Street west of Fair Oaks Avenue	AM	57.0	57.2	0.2
		PM	59.1	59.2	0.1

Note: Refer to **Appendix F** for roadway noise worksheets

Note: Roadway noise levels are modeled 75 feet from the center of the roadway.

**Table 4.5-14
Construction Vibration Levels Estimates**

Equipment	Inches per Second PPV at Adjusted Distance			
	Site 1	Site 2	Site 4	Site 5
Air compressor	0.044	0.004	0.002	0.006
Backhoe	0.020	0.002	0.001	0.003
Cement and mortar mixer	0.020	0.002	0.001	0.003
Concrete saw	0.009	0.002	0.001	0.003
Excavator	0.020	0.003	0.002	0.005
Loader	0.035	0.003	0.002	0.004
Paver	0.031	0.001	0.001	0.001
Roller	0.010	0.001	0.000	0.001

Source: FHWA RCNM (2006).

Threshold NOI-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The Project site is located in South Pasadena. The nearest airport to the Project Site is San Gabriel Airport, located approximately 7.3 miles to the east of the Project site, and it is not within range of any airport land use plan. As such, there would be no impact.

CUMULATIVE IMPACTS

According to the Noise Study, for purposes of analysis, development of the related projects identified in Section 3, Environmental Setting will be considered to contribute to cumulative noise impacts. Noise, by definition, is a localized phenomenon and drastically reduces as distance from the source increases. As a result, only related projects and growth in the general area of the Project site would contribute to cumulative noise impacts. Cumulative construction noise impacts have the potential to occur when multiple construction projects in the local area generate noise within the same time frame and contribute to the local ambient noise environment. It is expected that, as with the proposed Project, the related projects would implement best management practices, which would minimize any noise related nuisances during construction. Therefore, the combined construction noise impacts of the related projects and the Project's contribution would not cause a significant cumulative impact.

MITIGATION MEASURES

The following noise attenuation measures shall be utilized to reduce potential significant noise impacts from construction to less than significant.

MM NOI-1: Implementation of mitigation measure **MM NOI-1** would include noise reduction techniques which include submittal of a construction management plan for approval by the City specifying that all construction equipment, fixed or mobile, will be equipped with properly operating and maintained mufflers and other state-required noise-attenuation devices; identifying the maximum distance between construction equipment staging areas and occupied residential areas; and requiring the use of electric air compressors and similar power tools. Temporary noise barriers can reduce noise level at a minimum of 10 dBA, depending on the performance standard of achieving noise-level reductions. Optimal muffler systems for all equipment and the break in line of sight to a sensitive receptor would reduce construction noise levels by approximately 10 dB or more.¹⁶ Limiting the number of noise-generating, heavy-duty off-road construction equipment (e.g., backhoes, dozers, excavators, loaders, rollers, etc.) simultaneously used on the Project site within 50 feet of off-site noise-sensitive receptors surrounding the site to no more than one or two pieces of heavy-duty, off-road equipment would further reduce construction noise levels by approximately 10 dBA. A sign, legible at a distance of 50 feet, shall be posted at the Project construction site providing a contact name and a telephone number where residents can inquire about the construction process and register complaints. This sign shall indicate the dates and duration of construction activities. In conjunction with this required posting, a noise disturbance coordinator shall be identified to address construction noise concerns received. The contact name and the telephone number for the noise disturbance coordinator shall be posted on the sign. The coordinator shall be responsible for responding to any local complaints about construction noise and shall notify the City to determine the cause and implement reasonable measures to the complaint, as deemed acceptable by the City.

With implementation of **MM NOI-1**, construction noise levels would be reduced by a minimum 30 dBA, thus the implementation of the Project would not increase ambient noise levels by 3 dBA or noise in excess of 65 dBA in sensitive areas.

¹⁶ FHWA, *Special Report – Measurement, Prediction, and Mitigation*, updated June 2017, accessed December 2018, https://www.fhwa.dot.gov/Environment/noise/construction_noise/special_report/hcn04.cfm.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

With the implementation of **MM NOI-1**, potential impacts would be reduced to less than significant.

5.0 ALTERNATIVES

5.1 INTRODUCTION

The California Environmental Quality Act (CEQA) Guidelines, Section 15126.6, provides the following framework for the formulation and analysis of alternatives in an environmental impact report (EIR):

An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a Project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. An EIR is not required to consider alternatives which are infeasible.

The CEQA Guidelines require the analysis of a “No Project” alternative, and the identification of the “environmental superior alternative.” The guidelines state: “If the environmentally superior alternative is the ‘no project alternative’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” The analysis of environmental effects of alternatives need not be as thorough or detailed as the analysis of the project itself. Rather, the CEQA Guidelines, Section 15126.6(d) state that the EIR shall include “sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project.”

5.2 SELECTION OF ALTERNATIVES

The range of alternatives required within an EIR is governed by the “rule of reason,” under CEQA Guidelines, Section 15126.6(f), which requires an EIR to set forth only those alternatives necessary to permit a reasoned choice. An EIR need not consider every conceivable alternative to a project. An EIR need not consider an alternative with an unlikely or speculative potential for implementation or an alternative that would result in effects that cannot be reasonably ascertained.

An EIR is not required to evaluate alternatives that are not feasible. The term feasible is defined in the CEQA Guidelines, Section 15364 as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” CEQA Guidelines, Section 15126.6(f)(1) provides additional factors that may be taken into account when addressing the feasibility of alternatives. These factors include site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise have access to potential alternative sites.

Reasonable alternatives are those that would attain most of the basic objectives of the Project. As described in **Section 2.0: Project Description**, the following objectives have been identified for the proposed Project:

- Maximize the development potential for the Project site based on the parameters of the Mission Street Specific Plan.
- Implement the Mission Street Specific Plan objectives for the Project site as follows:
 - a. Preserve, renovate, and reuse the historic building located at 1115 Mission Street through rehabilitation of the building for new uses.
 - b. Contribute to the development of the MSSP Core Area as a pedestrian oriented retail commercial area to include restaurants and specialty retail uses at the ground level and residential uses above.
 - c. Provide parking adequate to serve new uses and Gold Line patrons.
- Create compelling public and private open space with drought resistant landscaping, well-lit and open storefronts, and outdoor seating.
- Contribute to meeting the City's Regional Housing Needs Assessment (RHNA) goals through the construction of 36 new above moderate-income housing units.

The following alternatives were selected for evaluation:

- **Alternative 1:** No Project Alternative: This alternative considers what would be reasonably expected to occur in the foreseeable future if the Project were not approved, based on current plans and consistent with available infrastructure and community services.
- **Alternative 2:** Reduced density Alternative: This alternative considers a reduced development program as compared to the Project.

5.3 ALTERNATIVES CONSIDERED AND ELIMINATED FROM FURTHER CONSIDERATION

Section 15126.6(c) of the State CEQA Guidelines states that the EIR should identify alternatives that were considered by the lead agency but were rejected as infeasible and briefly explain the reasons underlying the lead agency's determination. 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.

Alternative locations were rejected as infeasible. The Project Applicant has submitted a request to the City to approve development of the site that is under its control. The Project Applicant does not own or control an alternative location within the vicinity for which the Project would be possible.

Alternative uses were rejected as infeasible. The underlying purpose of the Project is to redevelop the site with residential and commercial uses. Therefore, Alternatives that consider other uses would fail to meet most of the basic project objectives.

5.4 ALTERNATIVES ANALYSIS

In accordance with CEQA Guidelines Section 15126.6(d), each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less, similar, or greater than the corresponding impacts of the Project. Furthermore, each alternative is evaluated to determine whether the Project objectives would be substantially attained by the alternative.¹

5.4.1 Alternative 1—No Project Alternative

Section 15126.6(e) of the CEQA Guidelines state: “the No Project/No Build Alternative means ‘no build’ wherein the existing environmental setting is maintained.” Accordingly, the No Project Alternative assumes that no new development would occur within the Project site and the existing structures and uses would remain.

Air Quality

The No Project Alternative would not alter the existing uses or include the development of any new buildings on the site. As a result, a change in air pollutant emissions would not be generated from construction or operational activities. As such, the No Project Alternative would have equivalent energy impact as that of the Project’s less than significant impact.

Cultural Resources

The No Project Alternative would not alter the existing uses or include the development of any new buildings on the site. As a result, no change would occur in the features of 1115 Mission Street. As such, the No Project Alternative would result in a lesser impact on cultural resource, though the Project would have a less than significant impact.

Energy

The No Project Alternative would not alter the existing uses or include the development of any new buildings on the site. As a result, no change in energy consumption would occur on the site. While the existing uses would consume less overall energy than the Project, the Project would be designed to meet or exceed the current building efficiency standards and therefore would have reduced per capita energy

1 State of California, CEQA Guidelines Section 15126.6(c)

usage. As such, the No Project Alternative would have equivalent energy impact as that of the Project's less than significant impact.

Land Use and Planning

The No Project Alternative would not alter the existing uses or include the development of any new buildings on the site. Though this would avoid the land use changes proposes, the No Project Alternative would also not be as consistent with the City's policy objectives for the Mission Street Specific Plan. As such, the No Project Alternative would have a greater, though still less than significant impact, as that of the Project's less than significant impact.

Noise

The No Project Alternative would not alter the existing uses or include the development of any new buildings on the site. As a result, no change in noise sources would be created. As such, the No Project Alternative would avoid the construction noise impact of the Project.

Relationship to Project Objectives

For the most part, the No Project Alternative would reduce environmental impacts when compared to the proposed Project, including avoiding the construction noise impact of the Project. However, a No Project Alternative would not satisfy the underlying purpose of the Project and would not achieve any of the Project objectives.

5.4.2 Alternative 2— Reduced Density Project

This alternative would result in a smaller new structure and less alteration of 1115 Mission Street. A Reduced Density Project could feature two-stories instead of three and not include the addition to the rear of 1115 Mission Street. As such, it would feature 18 units instead of 36.

Air Quality

The Reduced Density Alternative would generate less construction activity and less operational activity. As a result, less air pollutant emissions would not be generated. However, the Project would have less than significant impacts on air quality. As such, the Reduced Density Alternative would have a reduced impact but would not avoid any significant impacts associated with the Project.

Cultural Resources

The Reduced Density Alternative would result in less alteration to the features of 1115 Mission Street. However, the Project would have less than significant impacts on historic resources. As such, the Reduced

Density Alternative would have a reduced impact but would not avoid any significant impacts associated with the Project.

Energy

The Reduced Density Alternative would generate less construction activity and less operational activity. As a result, less energy would be consumed on site. However, the Project would have less than significant impacts on energy. As such, the Reduced Density Alternative would have a reduced impact but would not avoid any significant impacts associated with the Project.

Land Use and Planning

The Reduced Density Alternative would generate less construction activity and less operational activity. As a result, less energy would be consumed on site. However, the Project would have less than significant impacts on energy. As such, the Reduced Density Alternative would have a reduced impact but would not avoid any significant impacts associated with the Project. Furthermore, the Reduced Density Alternative would not be as consistent with the City's policy objectives for the Mission Street Specific Plan as would the Project.

Noise

The Reduced Density Alternative would generate less construction activity and therefore construction noise would be of shorter duration or reduced intensity. However, construction noise impacts would still be significant, due to the proximity of sensitive receptors and the general noise characteristics of construction activity. The Reduced Density Alternative would still require mitigation similar to that described for the Project. As such, the Reduced Density Alternative would have a reduced impact but would not avoid any significant impacts associated with the Project.

Relationship to Project Objectives

For the most part, the Reduced Density Alternative would result in lesser environmental impacts compared to the proposed Project, though the impacts of the Project would not be entirely avoided. A Reduced Density Alternative would satisfy the underlying purpose of the Project but would not fully achieve the Project objectives.

5.4.3 Environmentally Superior Alternative

Section 15126.6(e)(2) of the State CEQA Guidelines requires that an EIR identify an environmentally superior alternative among the alternatives evaluated. If the "no project" alternative is the environmentally superior alternative, the EIR must identify another environmentally superior alternative among the remaining alternatives.

While the No Project Alternative would avoid the impacts of the Project on the environment, it would also not achieve any of the Project's beneficial effects associated with the efficiency of the new buildings and fulfillment of the goals of the Mission Street Specific Plan. The No Project Alternative would also not meet any of the Project objectives.

A Reduced Density Alternative would both reduce the level of development and would therefore result in reduced construction noise impacts as compared to the Project, though it would still result in significant impacts and comparable mitigation measures as the Project. Though a Reduced Density Alternative could be considered environmentally superior, it would not satisfy the Project objectives as fully as the Project would and impacts would be similar after mitigation. Furthermore, an alternative reduced in scale sufficiently to avoid the potential construction noise impacts of the Project would not be economically viable.²

2 Section 15126.6(f)(1) of the CEQA Guidelines states that among the factors that may be taken into account when addressing the feasibility of alternatives is economic viability.

6.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

INTRODUCTION

Section 15128 of the State CEQA Guidelines requires an EIR to briefly describe any possible significant effects of a project that were determined not to be significant and were, therefore, not discussed in detail in the EIR. The items listed below were scoped out of the EIR.

AESTHETICS

CEQA Section 21099(d)(1) states, “Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment.” Section 21099(a) provides the following definitions of the terms “infill site” and “transit priority area”:

(4) “Infill site” means a lot located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses.

(7) “Transit priority area” means an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations.

The proposed mixed-use project would be located on a previously developed site that is surrounded by developed land and that is located approximately 0.14 miles from the Metro Gold Line South Pasadena Station. Therefore, the project is on an infill site in a transit priority area; consequently, the aesthetic and parking impacts of the project cannot be considered significant impacts pursuant to CEQA. The analysis of aesthetic impacts below is presented for disclosure purposes.

Threshold: Have a substantial adverse effect on a scenic vista?

While there are no specifically designated scenic vistas in South Pasadena (City), the Open Space and Resource Conservation Element of the City’s General Plan states, “the hillsides and ridgelines of South Pasadena provide a scenic backdrop for the entire community.” The Open Space and Resource Conservation Element further stresses “protecting the ‘view shed,’ both from and to these hillsides,” with the following policy and strategy:

Policy 6.2: Discourage grading on ridgelines and other significant topographic features including knolls, ridge tops, saddles, treelines, significant stands of trees, and natural vegetation

which damage the integrity of hillside areas, in order to provide off-site views.

Strategy 6.3: Develop and maintain standards and regulations that retain native vegetation and that protect the “view shed” both from and to hillsides.

The Project site is within a flat built out portion of the City and not in a hillside area. Therefore, the proposed Project would not affect any scenic vistas of hillsides.

As such, impacts would be less than significant.

Threshold: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The only roadway within or adjacent to South Pasadena is that identified in the California Scenic Highways Program is Arroyo Seco Parkway (Interstate 110), which has been designated a historic parkway by Caltrans in 2015.¹ Arroyo Seco parkway is approximately 0.25 miles away from the Project site. In addition, according to the City’s General Plan, no officially designated state scenic routes or highways occur near the Project site. As such, no impact would occur.

Threshold: In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point).

The Project site currently consists of three buildings. The proposed Project would retain the two-story portion of the building that faces Mission Street, remove two-thirds of the existing one-story warehouse to the rear of the same building and construct a maximum 32-foot-high two story multifamily residential and commercial mixed use building on this portion of the Project site incorporating the rehabilitated two story building retained facing Mission Street. The remaining two existing buildings would be demolished, and an up to 40-foot high three-story multi-family residential and commercial mixed-use building would be constructed. The Proposed Project would consist of 7,394 square feet of commercial space along the Mission Street and Fairview Avenue frontages and 36 residential units on the upper levels and in the interior of the site comprising 33,281square feet.

¹ California Department of Transportation, “District 7 Projects,” accessed March 2019, <http://www.dot.ca.gov/dist07/travel/projects/details.php?id=6>

The Project site lies along the south side of Mission Street and is located within South Pasadena's General Plan designated Mission West Historic Business District, which defines the aesthetic character of the area. The historic district comprises the City's commercial core and includes commercial buildings located along Mission Street, the former South Pasadena Bank at the southwest corner of El Centro Street and Diamond Avenue, the South Pasadena Public Library, and a variety of other resources including the Meridian Iron Works, a watering trough and wayside station.

Land use surrounding the site includes one- and two-story commercial buildings along Mission Street, many of which are historic, ground-floor storefronts and dining patios facing the sidewalk: Le Car, a one-story foreign and domestic auto dealer is to the east of the Project site; Mission Wines, a two-story commercial building is located directly north of the Project site, Collins Collins Muir + Stewart LLC, a two-story law firm is located to the south of the Project site; and the one story South Pasadena Unified School District and parking lot is located to the west of the Project site.

While the proposed buildings are larger in height and mass than most of the surrounding buildings, they are not out of scale or character for the Mission Street area. This is demonstrated by the fact that several three-story buildings already exist in the area, including the Golden Oaks apartment building, a mixed-use building fronting on Fairview Avenue, the Mission Meridian Village, and a mixed-use building at the corner of Mission Street and Fremont Avenue. Furthermore, the proposed façade along Mission Street would be divided into multiple storefront and pedestrian openings, creating a rhythm that is consistent with other existing buildings along Mission Street.

In terms of uses, the mixed residential and commercial nature of the proposed buildings is consistent with the surrounding area, which contains a mix of commercial, residential, and institutional uses, with commercial uses primarily occurring at the ground-floor level along Mission Street. The Project is consistent with this arrangement, with commercial and residential uses and facades at the ground level along Mission Street.

Given that the Project's architectural style designed with brick is consistent with the surrounding area, the scale of the proposed buildings is similar to other existing buildings in the area, and the proposed mixed-use nature of the Project is consistent with surrounding the Mission West Historic Business District, the proposed Project would not substantially degrade the existing visual character or quality of the site or its surroundings. As such, impacts would be less than significant.

Threshold: Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

The Project site and its surroundings are currently urbanized and contain various forms of on-and off-site lighting. The proposed Project would introduce additional light sources in the form of security lighting, landscape, building accent lighting, and vehicle lighting. The proposed courtyard would also include safety lighting and pedestrian light standards. Building accent lighting is also proposed along the Mission Street frontage. The proposed type and intensity of lighting would be a slight increase over existing lighting but would be consistent with surrounding lighting along Mission Street. In addition, the proposed Project lighting is required to comply with the City's Municipal Code Section 36.300.090, which requires that all outdoor lighting be "shielded or recessed so that direct glare and reflections are confined to the maximum extent feasible within the boundaries of the site and shall be directed downward and away from adjoining properties and public rights-of-way." With the required compliance with the outdoor lighting standards in the Municipal Code, the proposed Project would not create a new source of substantial light that would adversely affect day or nighttime views of the area. As such, impacts regarding lighting would be considered less than significant.

The proposed Project has the potential to create glare from windows installed in the proposed buildings, including from the proposed storefront windows along Mission Street. However, the City's Municipal Code Section 36.300.110 requires that glare be shielded to prevent emission of glare beyond the property line. With the compliance of the Project with this performance standard of the Municipal Code, the proposed Project would not create a new source of substantial glare, which would adversely affect day or nighttime views in the area. As such, impacts regarding glare would be considered less than significant.

AGRICULTURE AND FORESTRY RESOURCES

Threshold: 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 site and surrounding area are characterized by features typical of the urban landscape and include retail-commercial and residential uses. No farmland, agricultural land, or related operations are found in the area or on the Project site. The maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency do not indicate any farmland on or in close proximity to the Project site. Implementation of the Project would not involve changes that could result in conversion of farmland to nonagricultural uses because no agricultural uses or farmland are near the Project site. Therefore, no conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use would occur. As such, no impacts would occur.

Threshold: Conflict with existing zoning for agricultural use or a Williamson Act contract.

As previously noted, the Project Site and surrounding development are fully developed and are not currently used for agricultural uses. The Project Site is not designated or zoned for agricultural use, used for agriculture, or subject to a Williamson Act contract. Therefore, the proposed Project would not conflict with any uses zoned for agricultural uses or subject to any Williamson Act contracts. As such, no impacts would occur.

Threshold: 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)).

As defined by the Public Resources Code (PRC) Section 12220(g), forestland is land that can support 10 percent native tree cover of any species under natural conditions and that allows for management of one or more forest resources. Given that minimal vegetative cover is found on the Project Site and the site is not zoned as forestland, the proposed Project would not affect any forestlands as defined by the PRC.

A Timberland Production Zone is defined by the Government Code Section 51104(g) as an area that is zoned for the sole purpose of growing and harvesting timber. Because the Project Site does not contain any timber resources, nor is it zoned as a timberland or timberland production area, the proposed Project would not conflict with timberland or Timberland Production areas. As such, no impacts would occur.

Threshold: **Result in the loss of forest land or conversion of forest land to non-forest use.**

The Project Site is located in an urbanized area of the City and is not zoned or designated for forest or timberland, nor is it used for forestry operations. Therefore, it would not result in the loss of forestland or result in the conversion of forestland to non-forest uses. As such, no impacts would occur.

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

As previously noted, the Project Site does not contain any farmland or forestland. Development of the proposed Project would occur on the same site that currently contains the existing buildings for Amy's Playground, La Fiesta Restaurant, and a commercial gymnasium and which is adjacent to urban uses, which are located in a disturbed and developed area. As such, the proposed Project would not result in the loss of Farmland or forestland or the conversion of Farmland or forestland to non-forest uses. As such, no impacts would occur.

BIOLOGICAL RESOURCES

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

Much of the local area, including the Project site, has been developed or landscaped and supports largely nonnative plant communities and species. Therefore, only a limited number of plant species, which flourish in urban environments, can be found, none of which are considered Rare or Endangered. Suitable habitat for sensitive mammal, reptile, amphibian, or fish species does not exist on the Project site or within the surrounding area, and no species were observed in the vicinity. Consequently, impacts would be less than significant. As such, impacts would be less than significant.

Threshold: 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 US Fish and Wildlife Service.

The Project Site is not located in a riparian or wetland habitat.² The nearest wetland is located approximately 0.88 miles away at Arroyo Seco, and the nearest riparian habitat is located approximately 0.75 miles away at the Arroyo Park. The majority of the local area, including the Project site, has been developed or landscaped and supports largely nonnative plant communities and species. Therefore, only a limited number of plant species, which flourish in urban environments, can be found, none of which are considered Rare or Endangered. Suitable habitat for sensitive mammal, reptile, amphibian, or fish species does not exist on the Project site or within the surrounding area, and no species were observed in the vicinity. As such, impacts would be less than significant.

Threshold: Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.), through direct removal, filling, hydrological interruption, or other means.

As mentioned previously, the Project site is not located on federally protected wetlands.³ The nearest wetland is located approximately 0.88 miles away at Arroyo Seco. Implementation of the proposed Project would avoid excavation or disturbance of Arroyo Seco. As such, the proposed Project would not have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means. As such, impacts would be less than significant.

Threshold: 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.

Development of the Project The local area consists of established, highly urbanized, and developed properties. The Project site and the immediate area are almost entirely paved or otherwise developed, and do not contain native resident or migratory species or native nursery sites. In addition, there are no wildlife migration corridors in the Project area. No impact related to the movement of fish or wildlife

2 United States Fish and Wildlife Service, *National Wetlands Inventory*, ver. 2, accessed November 2017, <https://www.fws.gov/wetlands/data/mapper.HTML>.

3 United States Fish and Wildlife Service, *National Wetlands Inventory*, ver. 2, accessed November 2017, <https://www.fws.gov/wetlands/data/mapper.HTML>.

species or migration corridors would result from implementation of the Project. As such, impacts would be less than significant.

Threshold: **Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.**

Chapter 34, Trees and Shrubs, of the SPMC contains guidelines for the protection and removal of trees. These trees are defined as heritage trees (as established by the South Pasadena Planning & Building Department), native species (including California Walnut, Sycamore, Christmas Berry, Blue Elderberry, and Mexican Elderberry), and trees that are 12 inches or more in diameter. Trees on the Project site are ornamental types and include such species as palm and eucalyptus. No conflict with local policies or ordinance protecting biological resources would occur with implementation of the Project. As such, impacts would be less than significant.

Threshold: **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 located within an area covered by any adopted Habitat Conservation Plans, Natural Community Conservation Plans, or any other approved local, regional, or State habitat conservation plans.⁴ As such, implementation of the proposed Project would not conflict with any provisions related to such plans. As such, no impacts would occur.

GEOLOGY AND SOILS

Threshold: **Directly or indirectly cause 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?**

A Geotechnical Engineering Report was conducted by Terracon Consultants, Inc. on July 2, 2018, it is included as **Appendix G** of this Draft EIR. The Project Site is located within the City of South Pasadena of Los Angeles County. As provided in the Geotechnical Report, the type and magnitude of seismic hazards

4 California Department of Fish and Wildlife, "NCCP Plan Summaries," accessed April 2018, <https://www.wildlife.ca.gov/conservation/planning/nccp/plans>.

affecting the site are dependent on the distance to causative faults, the intensity, and the magnitude of the seismic event. As calculated using the UCSG United Hazard Tool, the Elysian Park Fault is considered to have the most significant effect at the site from a design standpoint. The fault is located approximately 4 miles from the Project site and has a maximum credible earthquake magnitude of 6.5.⁵ The Project Site does not contain an active or potentially active earthquake fault and is not within the boundaries of any special studies zone, such as the State of California Earthquake Fault Zone (formerly known as the Alquist-Priolo Special Studies Zone). While the Project Site is not located within a special studies zone, the site is located in a seismically active area, as is the majority of Southern California. However, the proposed Project would be built in accordance with State building code, which would include the incorporation of seismic standards appropriate to the Project Site and its seismic design category. As such, impacts would be less than significant.

Threshold: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

As with any site in the Southern California region, the Project site is susceptible to strong seismic ground shaking in the event of a major earthquake. Nearby active faults include the Hollywood, Santa Monica, Newport-Inglewood, and Upper Elysian Blind Thrust Faults. These faults can produce strong seismic ground shaking at the Project site. On-site structures would be required to be constructed to comply with the California Building Code (CBC). With adherence to the CBC, design and construction of the proposed development would be engineered to withstand the expected ground acceleration that may occur at the Project site. The calculated design base ground motion for the site consider the soil type, potential for liquefaction, and most current and applicable seismic attenuation methods available. In addition, Project construction would be subject to review and approval by City building and safety officials. As such, impacts would be less than significant.

Threshold: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

As stated previously, A Geotechnical Engineering Report was conducted on July 2, 2018 included in **Appendix G** of this Draft EIR. Based on the results of the borings, subsurface conditions encountered on the Project site generally consist of predominantly medium dense to very dense sand with variable amounts of silt and clay to the maximum depth explored at 92 feet below ground surface. Liquefaction refers to loose, saturated sand or gravel deposits that lose their load-supporting capability when subjected

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to intense ground shaking during earthquakes. Liquefaction is generally known to occur in saturated or near-saturated cohesionless soils at depths shallower than about 50 feet. Groundwater was not encountered in the field exploratory borings and is believed to be at least 100 feet below grade. Therefore, liquefaction potential at the site is considered minimal, and dynamic settlement of the on-site soils is anticipated to be negligible. As such, impacts would be less than significant.

Threshold: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

The topography of the Project site and its immediate built-out environment is relatively flat and, thus, devoid of any distinctive landforms. No known landslides have occurred near the Project site, nor is the Project site in the path of any known or potential landslides. As such, impacts would be less than significant.

Threshold: Result in substantial soil erosion or the loss of topsoil.

Erosion is the movement of rock fragments and soil from one place to another. Precipitation, running water, waves, and wind are all agents of erosion. Significant erosion typically occurs on steep slopes where stormwater and high winds can carry topsoil down hillsides. The Project Site and surrounding areas are urbanized and relatively flat, with minimal rises or changes in elevation. No major slopes or bluffs are on or adjacent to the site.

Construction activities associated with the proposed Project may result in wind- and water-driven erosion of soils due to grading activities if soil is stockpiled or exposed during construction. This impact is considered short-term in nature because the site would expose small amounts of soil only during construction activities. Any potential erosion impacts would be reduced by implementation of stringent erosion controls imposed by the City through grading permit regulations. The Project would also be required to adhere to SCAQMD Rule 403—Fugitive Dust, which would further reduce the impact related to soil erosion to less than significant.

Runoff would be captured through the planters and other water-retention features associated with the proposed Project to convey stormwater runoff on site to surrounding storm drains. As a result, the proposed Project would not require any substantial changes to the existing drainage pattern of the Project Site or the area that would cause substantial erosion or loss of topsoil. As such, impacts would be less than significant.

Threshold: 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.

The Project Site is located within the City of South Pasadena of Los Angeles County. As provided in the Geotechnical Report (**Appendix G**), the type and magnitude of seismic hazards affecting the site are dependent on the distance to causative faults, the intensity, and the magnitude of the seismic event. As calculated using the UCSG United Hazard Tool, the Elysian Park Fault is considered to have the most significant effect at the site from a design standpoint. The fault is located approximately 4 miles from the Project site and has a maximum credible earthquake magnitude of 6.5.⁶ The Project Site does not contain an active or potentially active earthquake fault and is not within the boundaries of any special studies zone, such as the State of California Earthquake Fault Zone (formerly known as the Alquist-Priolo Special Studies Zone). While the Project Site is not located within a special studies zone, the site is located in a seismically active area, as is the majority of Southern California. However, the proposed Project would be built in accordance with State building code, which would include the incorporation of seismic standards appropriate to the Project Site and its seismic design category. As such, impacts would be less than significant.

Threshold: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.

The Project Site has previously been mass graded/compacted and developed with commercial and restaurant buildings, as well as the associated parking areas. Expansive soils are surface deposits rich in clays that expand when wet and shrink when dried. When these soils swell, the change in volume can exert detrimental stresses on buildings and cause structural damage. As indicated in the Geotechnical Report (**Appendix G**), the soils underlying the Project Site are considered to have a low expansion potential. To minimize damage due to geologic hazards, design and construction of the Proposed Project would comply with applicable building codes and would adhere to the design recommendations presented within the Geotechnical Report. As such, impacts related to expansive soil would be less than significant.

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Threshold: 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.

Implementation of the proposed Project would continue to utilize the existing wastewater infrastructure that serves the Project Site and would not use septic tanks or alternative wastewater disposal systems. As such, no impacts would occur.

Threshold: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The Project Site is located within the City of South Pasadena of Los Angeles County. As provided in the Geotechnical Report (**Appendix G**), the Elysian Park Fault is considered to have the most significant effect at the site from a design standpoint. The fault is located approximately 4 miles from the Project site. The Project Site does not contain an active or potentially active earthquake fault and is not within the boundaries of any special studies zone, such as the State of California Earthquake Fault Zone (formerly known as the Alquist-Priolo Special Studies Zone). While the Project Site is not located within a special studies zone, the site is located in a seismically active area, as is the majority of Southern California. However, the proposed Project would be built in accordance with State building code, which would include the incorporation of seismic standards appropriate to the Project Site and its seismic design category. As such, impacts would be less than significant.

GREENHOUSE GAS EMISSIONS

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

Greenhouse gas (GHG) emissions refer to a group of emissions that are believed to affect global climate conditions. These gases trap heat in the atmosphere, and the major concern is that increases in GHG emissions are causing global climate change. Global climate change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation, and temperature.

There are no federal, State, or local adopted thresholds of significance for addressing an institutional project's GHG emissions. The California Air Pollution Control Officers Association suggests making significance determinations on a case-by-case basis when no significance thresholds have been formally adopted by a lead agency. Assessing the significance of a project's contribution to cumulative global climate change involves: (1) evaluating the project's sources of GHG emissions; and (2) considering project consistency with applicable emission reduction strategies and goals, such as those set forth by the lead agency or other regional or State agency.

Section 15064.4 of the CEQA Guidelines Amendments serves to assist lead agencies in determining the significance of the impacts of GHGs. As required in Section 15064.4 of the CEQA Guidelines, this analysis includes an impact determination based on the following: (1) an estimate of the amount of GHG emissions resulting from the Project; (2) a qualitative analysis or performance-based standards; (3) a quantification of the extent to which the Project increases GHG emissions as compared to the existing environmental setting; and (4) the extent to which the Project complies with regulations or requirements adopted to implement a Statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The proposed Project would result in short-term emissions of GHGs during construction. Site- or Project-specific data were used in the CalEEMod model where available. Although GHGs are generated during construction and are accordingly considered one-time emissions, it is important to include construction related GHG emissions when assessing the long-term GHG emissions associated with a project. Current practice is to annualize construction related GHG emissions over a project's lifetime in order to include these emissions as part of a project's annualized lifetime total emissions so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies. A project lifetime has generally been defined as 30 years; therefore, the proposed Project's estimated construction GHG emissions have been annualized over a 30-year period and are included in the annualized operational GHG emissions.

Area source emissions would be generated by the consumption of natural gas for space and water heating devices. The proposed Project would also result in GHG emissions due to area source emissions from natural gas, electricity demand, water consumption, and solid waste generation.

The annual net GHG emissions associated with the construction and operation of the Project are provided in **Table 6.0-1: Estimated Greenhouse Gas Emissions**. As shown in **Table 6.0-1** below, the net total increase in emissions is 257 MTCO₂e per year, well below the recommended SCAQMD screening threshold of 3,000 MTCO₂e. Therefore, construction and operation of the proposed Project would not result in any significant increase in GHG emissions.

Table 6.0-1
Estimated Greenhouse Gas Emissions

GHG Emissions Source	Emissions (MTCO ₂ e/year)
Construction (amortized)	19
Operational (mobile) sources*	516
Area sources	8
Energy	190
Waste	12

GHG Emissions Source	Emissions (MTCO ₂ e/year)
Water	22
Annual Total	767
<i>Existing</i>	510
Net Total	257

Source: CalEEMod

Totals in table may not appear to add exactly due to rounding in the computer model calculations.

MTCO₂e = metric tons of carbon dioxide emissions.

Refer to **Appendix A.4 (Proposed Annual)**, Section 2.2 Overall Operational.

Threshold: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

AB 32, the California Global Warming Solutions Act of 2006, focuses on reducing GHG emissions in California. GHGs, as defined under AB 32, include carbon dioxide (CO₂), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. In November 2017, CARB adopted an updated Climate Change Scoping Plan, which details strategies to meet that goal. The Climate Change Scoping Plan also recommends energy-efficiency measures in buildings such as maximizing the use of energy efficient appliances and solar water heating, as well as complying with green building standards that result in decreased energy consumption compared to Title 24 building codes. In addition, the Climate Change Scoping Plan encourages the use of solar photovoltaic panels and other renewable sources of energy to provide clean energy and reduce fossil fuel-based energy.

The proposed Project would be designed in accordance with the 2016 Title 24 Energy Efficiency Standards, which represent an approximate improvement of 30 percent beyond the 2008 Standards that were used in assumptions for the City's 2013 CAP GHG analysis. Conformance with the 2016 Standards is consistent with the City's objectives to reduce GHG emissions to meet regional and Statewide emission reduction targets. Therefore, the proposed Project does not interfere with the State's implementation of (i) Executive Order B-30-15 and Senate Bill 32's target of reducing Statewide GHG emissions to 40 percent below 1990 levels by 2030 or (ii) Executive Order S-3-05's target of reducing Statewide GHG emissions to 80 percent below 1990 levels by 2050 because it does not interfere with the State's implementation of GHG reduction plans described in the CARB's updated Scoping Plan.

Therefore, the proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Impacts would be less than significant.

HAZARDS AND HAZARDOUS MATERIALS

Threshold: **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.**

The proposed Project involves the operation of a new mixed-use building consisting of residential and commercial uses. The types and amounts of hazardous materials that would be used during operation of the Project would be typical of those in a mixed-use project (e.g., cleaning solvents, pesticides for landscaping, painting supplies). Construction of the proposed Project would also involve the temporary use of potentially hazardous materials, including vehicle fuels, paints, oils, and transmission fluids. However, all potentially hazardous materials would be used and stored in compliance with applicable federal, State, and local regulations. Additionally, the South Pasadena Fire Department (SPFD) would have the authority to perform inspections and enforce federal and State laws governing the storage, use, transport, and disposal of hazardous materials and wastes.⁷ The proposed Project would not create a significant hazard through the routine transport, use, or disposal of hazardous materials. As such, impacts would be less than significant.

Threshold: **Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.**

As discussed above, compliance with federal, state, and local laws and regulations relation to transport, storage, disposal, and sale of hazardous materials would minimize any potential for accidental release or upset of hazardous materials.

As discussed above, operation of the Project would use limited quantities of potentially hazardous materials typical of those used in residential and commercial uses, including cleaning agents and paints. Although it does not propose any industrial uses, the Project would involve uses that typically do not generate large quantities of hazardous materials or wastes; moreover, these materials present a low risk for hazards exposure. Additionally, as with Project construction, all hazardous materials and/or waste on the Project site would be acquired, handled, used, stored, and disposed of in accordance with all applicable federal, state, and local requirements, such as those administered by the LACFD and the Occupational Safety and Health Administration. Therefore, with implementation of appropriate hazardous materials management protocols on the Project site and compliance with all applicable local, state, and federal laws and regulations relating to environmental protection and the management of

7 City of South Pasadena, "Safety and Noise Element," accessed February 2019, <http://www.southpasadenaca.gov/home/showdocument?id=213>

hazardous materials, as well as adherence to manufacturer's instructions for the safe handling and disposal of hazardous materials, the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. As such, impacts associated with the use, storage, handling, and disposal would be less than significant.

Threshold: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

The closest school to the Project site is the Colonial House Preschool, located just 275 feet away at 1124 Mission Street. As discussed above, construction of the Project would involve the use of those hazardous materials that are typically necessary for construction of a mixed-use building containing residential and commercial uses. As such, the transport, use, and disposal of construction-related hazardous materials would occur in conformance with all applicable local, state, and federal regulations governing such activities. In addition, construction of the Project would involve the demolition of a majority of the existing structures. The removal of any asbestos-containing materials would be required to comply with all applicable existing rules and regulations, including SCAQMD Rule 1403 (Asbestos Demolition and Renovation Activities) and Cal/OSHA regulations regarding lead-based paint. Thus, construction activities associated with 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. As such, impacts would be less than significant.

Threshold: 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.

As noted earlier, a Geotechnical Engineering Report was conducted for the Project site by Terracon Consultants, Inc., in July 2018, as included in **Appendix G** of this Draft EIR. The Geotechnical Engineering Report was conducted in general accordance with ASTM Standard Practice E 1527-13 and the United States Environmental Protection Agency (USEPA) All Appropriate Inquiries Standard. The Geotechnical Engineering Report did not identify any relevant regarding the presence of underground storage tanks (USTs) or monitoring wells on the Project Site. The Project Site is not included on a list of hazardous materials sites. The Geotechnical Engineering Report concluded that there are no recognized RECs, HRECs, CRECs connected to the Project Site. Impacts would be less than significant.

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

The Project site is not located within 2 miles of a public airport. The closest airport is the San Gabriel Airport located in El Monte approximately 7.32 miles east of the Project site. Given the distance between the San Gabriel Airport and the Project site, the Project would not be impacted by a safety hazard or excessive noise. As such, there would be no impacts.

Threshold: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The Proposed Project will be designed, constructed, and maintained in accordance with applicable standards associated with vehicular access, ensuring that adequate emergency access and evacuation will be provided.

Construction of the Project may require temporary and/or partial street closures on Mission Street due to construction activities. While such closures may cause temporary inconvenience, they would not be expected to substantially interfere with emergency response or evacuation plans. However, the construction contractor would be required to notify the SPPD and SPFD if construction activities would impede movement for first emergency response vehicles. The Project Applicant would also be required to develop an emergency response plan in consultation with the SPFD. The emergency response plan shall include but not be limited to the following: mapping of emergency exits, evacuation routes for vehicles and pedestrians, location of nearest hospitals, and fire stations. Implementation of these requirements would be incorporated as a typical condition of approval. As such, impacts would be less than significant.

Threshold: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

The Project area is not located in a designated wildland area that may contain substantial forest fire risks or hazards. In addition, the City does not identify the Project Site to be located within a City-designated Fire Hazard Area.⁸ The Proposed Project would not result in impacts related to exposing people or structures to adverse effects from wildfires. As such, no impact would occur.

8 CalFire "Very High Fire Hazard Severity Zones in LRA," http://frap.fire.ca.gov/webdata/maps/los_angeles/LosAngelesCounty.pdf

HYDROLOGY AND WATER QUALITY

Threshold: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

Construction Impacts

During construction and demolition activities stormwater runoff from the Project site could cause erosion and/or transport sediment off site and into municipal storm drain systems. Thus, pollutant discharges associated with the storage, handling, use, and disposal of chemicals, adhesives, coatings, lubricants, and fuel could result in adverse impacts to water quality. Construction activity would be required to comply with SPMC Chapter 23: Stormwater and Urban Runoff Pollution Control. This section requires stormwater runoff containing sediment, construction materials or other pollutants from a construction site to be reduced to the maximum extent practicable. As required under the NPDES, the proposed Project would have to comply with the Multiple Separate Storm Sewer System (MS4) Permit issued by the Los Angeles RWQCB, which would require implementation of BMPs to mitigate the effects of erosion and inherent potential for sedimentation and other pollutants entering the stormwater system by retaining, treating, or infiltrating polluted runoff on site. Implementation of the MS4 and compliance with the NPDES and City discharge requirements would ensure that construction of the proposed Project would not violate any water quality standards and/or discharge requirements, or otherwise substantially degrade water quality.

Operation Impacts

Operation of the proposed Project would introduce sources of potential stormwater pollution that are typical of commercial and residential uses. Stormwater runoff from precipitation events could carry urban pollutants into municipal storm drains, however during operation the Project would be required to comply with SPMC Chapter 23: Stormwater and Urban Runoff Pollution Control.

The proposed Project would generate wastewater that would be conveyed via municipal sewage infrastructure maintained by the City of Los Angeles Bureau of Sanitation to the Hyperion Treatment Plant (HTP), a public facility subject to the state's wastewater treatment requirements. The proposed Project would generate wastewater similar to that generated by existing mixed-use buildings throughout the City. The proposed Project would be subject to the Water and Sewer Impact fee as detailed in the SPMC Chapter 16B. The purpose of the fee is to mitigate unfavorable impacts on the City's water and sanitary sewer systems attributed to new development.

Compliance with existing regulations, such as the MS4, including the implementation of BMPs, would ensure that operation of the proposed Project would not violate any water quality standards or waste

discharge requirements. Construction and operation of the proposed Project would not violate any water quality standards or waste discharge requirements. As such, impacts would be less than significant.

Threshold: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

The Project site currently consists of three buildings and primarily consists of impervious surfaces, with limited landscaping characterized by ornamental trees and shrubs. Implementation of the proposed Project would not result in a substantial change in the amount of pervious and impervious surface across the Project site nor would it impede sustainable groundwater management of the basin. Groundwater was not encountered in the test borings up to 92 bgs. Based on the County of Los Angeles, Department of Public Works groundwater data, the groundwater level in the Project vicinity ranges between 94.3 and 123.8 feet bgs between 1980 and 2007.⁹ Similar to existing conditions, redevelopment of the Project site would result in a negligible amount of on-site groundwater recharge opportunities and would not impact groundwater wells, change the rate or direction of flow of groundwater, impact groundwater recharge areas, or impede sustainable groundwater management of the basin. While the proposed Project involves the construction of a 2-level subterranean parking garage at a depth of approximately 20 feet, these excavation activities are not likely to interfere with the groundwater table. As such, Impacts would be less than significant.

Threshold: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on or off site.

The Project site is located in a highly urbanized area. There are no natural watercourses on the Project site or in the vicinity. As discussed above, the Project site is developed with paved surfaces, and current stormwater runoff flows to the local storm drain system. As such, the proposed Project would not result in a substantial alteration to the existing drainage pattern or to any drainage course; therefore, no erosion or siltation impacts related to such alterations would occur. As such, impacts would be less than significant.

⁹ County of Los Angeles, Department of Public Works, groundwater monitoring well No 4067FF. The well is located about 6,940 feet northwest of the Project site.

Threshold: **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on or off site.**

The proposed Project would not result in substantial alteration of existing drainage patterns or any alterations to a drainage course, river, or stream. Grading and construction activities on the Project site may temporarily alter the existing drainage patterns of the site and reduce off-site flows. However, construction and operation of the proposed Project would not result in a significant increase in site runoff or any changes in the local drainage patterns that would result in flooding on or off site. As such, impacts would be less than significant.

Threshold: **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would 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.**

The proposed Project would not result in a significant increase in site runoff, or any changes in the local drainage patterns. Runoff from the Project site currently is and would continue to be collected on the site and directed toward existing storm drains having adequate capacity in the Project vicinity. The proposed Project is required to implement BMPs, such as use of flow-through planter boxes, vegetative swales, semi pervious surfaces, or infiltration trenches, to retain runoff. The proposed Project includes approximately 10,375 square feet of common open space, including a residential courtyard and landscaped common areas and decks, that would capture and filter a portion of runoff from the Project site. As such, impacts would be less than significant.

Threshold: **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would impede or redirect flood flows.**

As stated previously, the proposed Project would not substantially alter the existing on-site drainage pattern of the Project site. Development of the proposed Project would not substantially change the existing impervious surfaces on site and would not result in substantial drainage pattern changes or result in an increase in surface runoff. Further, the proposed landscaping features are designed to reduce runoff, and it is expected that implementation of the proposed Project would result in a reduced rate and volume of runoff from existing conditions.

Additionally, the proposed Project is not located in a 100-year flood hazard area, as such it would not impede or redirect flood flows.¹⁰ The proposed Project would not be subject to flooding. As such, no impact would occur.

Threshold: In a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

Due to the distance of the Project site from the Pacific Ocean, which is located approximately 20 miles to the southwest, virtually no risk of on-site hazard due to tsunamis (seismically induced waves) exists. No enclosed water bodies exist near the Project site that could place the site at risk from inundation due to a seiche (large waves that occur within a land-locked water body, such as a lake or a reservoir. The Project site is relatively flat and is surrounded by urban development. Therefore, the risk of mudflows is considered low. As such, impacts would be less than significant.

Threshold: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Construction of the proposed Project, such as grading and trenching activities, could potentially degrade water quality through erosion and subsequent sedimentation. However, the proposed Project would implement BMPs and comply with all federal, State, and local regulations governing stormwater discharge. In addition, the proposed Project would incorporate landscaping throughout the project and other water-retention features to convey stormwater runoff on site to surrounding storm drains. As such, the proposed Project would not include potential sources of contaminants that could potentially degrade water quality.

MINERAL RESOURCES

Threshold: 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.

According to the City, the State Division of Mines and Geology has not designated any lands in South Pasadena as a classified mineral resource deposit area.¹¹ As such, it is unlikely that the Project Site and surrounding areas contain any mineral resources of significance. The proposed Project would be implemented in a developed urban area of the City and would not disrupt any mining operations. As such, no impacts would occur.

10 Federal Emergency Management Agency, "FEMA Floor Map Service Center" accessed April 2019, <https://msc.fema.gov/portal/search#searchresultsanchor>.

11 City of South Pasadena, General Plan, "Open Space & Resource Conservation Element."

Threshold: **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.**

As noted above, the Project site is not located within a Mineral Resource Zone 2 (MRZ-2) Area. The Project site is not designated as a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. No impacts would occur.

POPULATION AND HOUSING

Threshold: **Induce substantial unplanned 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).**

In October 2008, SCAG approved and adopted the 2008 Regional Comprehensive Plan (RCP) for the SCAG Region—Helping Communities Achieve a Sustainable Future.¹² The 2008 RCP is a long-term comprehensive plan that provides a strategic vision for handling the region’s land use, housing, economic, transportation, environmental, and overall quality-of-life needs. The 2008 RCP was intended to serve as an advisory document for local agencies in the SCAG region. The following principles are based on the region’s adopted Compass Growth Vision Principles for Sustaining a Livable Region:

- Improve mobility for all residents. Improve the efficiency of the transportation system by strategically adding new travel choices to enhance system connectivity in concert with land use decisions and environmental objectives.
- Foster livability in all communities. Foster safe, healthy, walkable communities with diverse services, strong civic participation, affordable housing and equal distribution of environmental benefits.
- Enable prosperity for all people. Promote economic vitality and new economies by providing housing, education, and job training opportunities for all people.
- Promote sustainability for future generations. Promote a region where quality of life and economic prosperity for future generations are supported by the sustainable use of natural resources.

In April 2012, SCAG adopted the Regional Transportation Plan 2012-2035 Sustainable Communities Strategy (RTP/SCS).¹³ As a designated Metropolitan Planning Organization (MPO) under federal law, SCAG is responsible for developing and adopting a long-range RTP every four years. The plan evolved out of a massive outreach undertaking involving a broad range of stakeholders across the region to update the shared vision for the region’s sustainable future. The RTP/SCS includes a strong commitment to reduce

¹² Southern California Association of Governments, 2008 Regional Comprehensive Plan.

¹³ Southern California Association of Governments (SCAG), Regional Transportation Plan 2012-2035 Sustainable Communities Strategy, adopted April 2012.

emissions from transportation sources to comply with Senate Bill 375, improve public health, and meet the National Ambient Air Quality Standards set forth by the federal Clean Air Act. The RTP/SCS focuses on the interconnected components of economic, social, and transportation investments required to achieve a sustainable regional multimodal transportation system. The goals and policies of the RTP/SCS require the participation of individual municipalities and multilevel investment of stakeholders throughout the region.

The Project site currently consists of three buildings. The proposed Project would retain the two-story portion of the building that faces Mission Street, remove two-thirds of the existing one-story warehouse to the rear of the same building and construct a maximum 32-foot-high two story multifamily residential and commercial mixed use building on this portion of the Project site incorporating the rehabilitated two-story building retained facing Mission Street. The remaining two existing buildings would be demolished, and an up to 40-foot high three-story multi-family residential and commercial mixed-use building would be constructed. The Proposed Project would consist of 7,394 square feet of commercial space along the Mission Street and Fairview Avenue frontages and 36 residential units on the upper levels and in the interior of the site comprising 33,281square feet.

The Project site is zoned for the proposed uses and the existing infrastructure supports this level of development. According to the South Pasadena General Plan, the average household size for occupied units is 2.46. As such, the construction of 36 residential units would result in an estimated 89 new residents in the City of South Pasadena. The 2010 Census shows that the total population of the City was 25,619 people.¹⁴ An increase of 89 residents to the City would not represent a significant growth in population. Furthermore, the increase in residential population on the site is consistent with the build out projections of the City's General Plan. As such, the Project would not cause unexpected growth (i.e., new housing or employment generators). The Project would not accelerate development in an undeveloped area that exceeds growth projections that would result in an adverse physical change in the environment or introduce unplanned infrastructure that was not previously evaluated in the adopted Community Plan or General Plan. The Project would be consistent with the goals and strategies of SCAG's Regional Comprehensive Plan, the Compass Growth Vision Strategy, and the 2012 RTP/SCS. As such, impacts would be less than significant.

14 City of South Pasadena, General Plan, "Housing Element."

Threshold: **Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.**

As mentioned previously, the Project consists of the partial demolition of one existing building and total demolition of the remaining buildings on the site and the construction of new two-and three story 36-unit mixed-use residential and commercial buildings. Construction of the proposed Project would not result in the displacement of substantial numbers of existing people and housing, but rather create new housing opportunities within the City. As such, there would be no impacts.

No impacts would occur.

PUBLIC SERVICES

Threshold: **Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection.**

Fire protection and emergency medical services in the City of South Pasadena are provided by the South Pasadena Fire Department (SPFD). The nearest fire station to the Project Site is located at 817 Mound Avenue, approximately 0.18 miles northeast of the Project Site. The Project site currently consists of three buildings. The proposed Project would retain the two-story portion of the building that faces Mission Street, remove two-thirds of the existing one-story warehouse to the rear, and build an up to 32-foot two-story multi-family residential/commercial mixed use building on this portion of the site and demolish two existing buildings and construct an up to 40 foot high three story residential/commercial mixed use building on the remainder of the parcel. The Proposed Project would consist of 7,394 square feet of commercial space along the Mission Street and Fairview Avenue frontages and 36 residential units on the upper levels and in the interior of the site comprising 33,281square feet.

As described previously, the 89 residents generated by the proposed Project would be within the growth projections contained in SCAG's 2016–2040 RTP/SCS. Therefore, the proposed Project would not place an unanticipated burden on fire protection services. The proposed Project would be required to adhere to all Fire Code requirements. With adherence to existing regulations, the proposed Project would not result in the need for new or expanded fire facilities. As such, impacts would be less than significant.

Threshold: **Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection.**

Police protection services in the City of South Pasadena are provided by South Pasadena Police Department (SPPD), located at 1422 Mission Street, approximately 0.14 miles northeast of the Project site, adjacent to South Pasadena City Hall. Police protection services include emergency and nonemergency police response, routine police patrols, investigative services, traffic enforcement, traffic investigation, and parking code enforcement. The Project site currently consists of three buildings. The proposed Project would retain the two-story portion of one building that faces Mission Street, remove two-thirds of the existing one-story warehouse to the rear, and build a two-story multi-family residential/commercial building on this portion of the site, and demolish the remaining two buildings and construct a three-story residential/commercial mixed use building on the remainder of the parcel. In addition, as described under the **Population and Housing** section, the proposed Project would be within the growth projections contained in the City's General Plan and SCAG's 2016–2040 RTP/SCS. Therefore, the proposed Project would not place an unanticipated burden on police protection services. As such, impacts are less than significant.

Threshold: **Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools.**

The South Pasadena Unified School District (SPUSD) provides public school services to City residents for grades kindergarten through 12. The Project site is served by the following SPUSD schools: Arroyo Vista Elementary located at 335 El Centro Street; Marengo Elementary located at 1400 Marengo Avenue; Monterey Hills Elementary located at 1624 Via Del Rey; South Pasadena Middle School located at 1500 Fair Oaks Avenue; and South Pasadena High School located at 1401 Fremont Avenue.

The proposed Project would include 36 residential units that would generate approximately 89 residents into the City. The proposed Project would not result in a significant increase in demand for school services. As such, impacts would be less than significant.

Threshold: **Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks.**

The proposed Project would include 36 residential units that would generate approximately 89 residents into the City. This increase in residential population would contribute incrementally toward impacts to the demand for the City's existing parks and recreational facilities. The proposed Project would incrementally increase the use of and demand for parks and recreational facilities. The proposed Project would include public and resident courtyards, as well as private balconies for select units. Additionally, the Project will provide green roofs over the roof deck drains. In total, the open space area provided is 11,686 square feet.

Moreover, any additional demand would be met through payment of Quimby Act and public open space development fees for new residential and nonresidential fees in accordance with the Open Space and Resource Conservation Element of the General Plan. These fees are intended to be used for the acquisition, improvement, and expansion of public parks and/or recreational facilities. As such, impacts would be less than significant.

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

The proposed Project result in an incremental population increase of approximately 89 residents, which would be within growth projections for the City. Therefore, the proposed Project would not substantially increase demand for public facilities and services, including libraries and City administrative services, that would require the construction of new or expanded facilities. As such, impacts would be less than significant.

RECREATION

Threshold: **Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.**

The City contains six parks with a total acreage of 92.2 acres.¹⁵ The Project site currently consists of three buildings. The proposed Project would retain the two-story portion of a building that faces Mission Street, remove two-thirds of the existing one-story warehouse to the rear, and build a two-story multi-family residential building on this portion of the Project site. The remaining two existing buildings would be demolished, and a new three story residential/commercial mixed-use building would be constructed on the remainder of the Project site. Construction and operation of the proposed Project would not remove and/or demolish any existing neighborhood or regional parks and/or recreational facilities. The proposed Project would incrementally increase the use of and demand for parks and recreational facilities. However, drought-tolerant and ornamental landscaping with high-efficiency irrigation features would be placed throughout the Project site to provide shading opportunities and erosion control. The proposed Project would include public and resident courtyards, as well as private balconies for select units. Additionally, the Project will provide green roofs over the roof deck drains. In total, the open space area provided is 11,686 square feet.

In addition, while the proposed Project would have the potential to increase the use of park and recreational facilities, it would not do so to the extent that parks would undergo substantial physical deterioration or require the need for expansion. Furthermore, the Project applicant would be required to pay Quimby Act and public open space development fees in accordance with the Open Space and Resource Conservation Element of the General Plan, which would be used by the City to acquire parkland as it becomes available and/or to expand and maintain existing recreational facilities.¹⁶ Payment of required these development impact fees would reduce any demand on park and recreational facilities. As such, impacts would be less than significant.

Threshold: **Would the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.**

As mentioned previously, the proposed Project would contain open space amenities for residents, including public and resident courtyards, as well as private balconies for select units. Additionally, the

¹⁵ City of South Pasadena, General Plan, "Open Space and Resource Conservation Element"

¹⁶ City of South Pasadena, General Plan, "Open Space and Resource Conservation Element"

Project will provide green roofs over the roof deck drains. All recreational facilities associated with the proposed Project would be developed on site and are evaluated as part of the proposed Project. As described above, the proposed Project would contribute to an incremental increase on the City's recreational facilities and would not result in the construction of new or the expansion of existing facilities. As such, impacts would be less than significant.

TRANSPORTATION

The following section summarizes and incorporates by reference information from the Traffic Study, dated January 2017, (Traffic Study), prepared by Gibson Transportation Consulting, Inc., for the proposed Project. The Traffic Study is included as **Appendix X** to this Draft EIR. The report analyzes traffic impacts for the anticipated Project opening in 2020.

Threshold: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

The Project site is located at 1001-1115 Mission Street at the southeast corner of Mission Street and Fairview Avenue. Regional access to the Project site will be provided by the Harbor Freeway (SR-110), which is located approximately 0.5 miles north of the Project site. Local street access is provided by Fairview Avenue adjacent to the Project site on the west and from Mission Street adjacent to the Project site on the north.

Local bus service to the Project site is provided along Mission Street. Additionally, there is pedestrian access within public sidewalks along Mission Street connecting the downtown area. On street bicycle access is provided throughout the City. The proposed Project would not conflict with any adopted policies, plans, or programs regarding alternative transportation because no changes to the existing transportation policies, plans, or programs would result from Project implementation.

Based on the 2010 Congestion Management Program for the Los Angeles County (CMP), the City has established the following traffic thresholds of significance to determine whether a Project has a traffic impact at a signalized study intersection or roadway segment and may require mitigation:

- A significant Project-related impact would occur at a signalized study intersection of the addition of Project-generated trips reduces the peak hour LOS of the study intersection from an acceptable operation (LOS A, B, C, or D) to a deficient operation (LOS E or F); or
- A significant Project-related impact would occur at a signalized study intersection already operating at a deficiency (LOS E or F) prior to Project traffic if the addition of Project traffic increases the demand at the intersection by two percent of capacity (volume-to-capacity (V/C) greater or equal to 0.02).

- A significant Project-related impact would occur on a roadway segment if the addition of Project-generated trips reduces the peak hour LOS of the study intersection from an acceptable operation (LOS A, B, C) to a deficient operation (LOS D, E, or F); or
- A significant Project-related impact would occur on a roadway segment already operating at a deficiency (LOS D, E, or F) prior to Project traffic if the addition of Project traffic increases the demand at the intersection by two percent of capacity (V/C greater or equal to 0.02).

The intersection level of service (LOS) rating is based on an intersection's average control delay, expressed in seconds per vehicle, which are found in **Table 6.0-2: LOS Definitions for Intersections**.

Table 6.0-2
LOS Definitions for Intersections

LOS	Description	Signalized V/C ratio
A	Excellent. No vehicle waits longer than one red light and no approach phase is fully used.	0.000–0.600
B	Very good. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.	0.601–0.700
C	Good. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	0.701–0.800
D	Fair. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	0.801–0.900
E	Poor. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	0.901–1.000
F	Failure. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.	> 1.000

Source: Transportation Research Board Special Report 209, Highway Capacity Manual 2000 (refer to Appendix H).

Estimated Trip Generation

Trip-generation estimates for the Proposed Project were calculated using the trip generation rates contained in *Trip Generation, 9th Edition* (Institute of Transportation Engineers, 2012).¹⁷ **Table 7-3: Trip Generation Estimates**, summarizes the trip generation rates used to arrive at the Proposed Project's trip generation estimates for the daily peak-hour periods.

¹⁷ Institute of Transportation Engineers, Trip Generation Manual, 9th ed., 2012.

**Table 6.0-3
Trip Generation Estimates**

Land Use	AM Peak-Hour Volumes			PM Peak-Hour Volumes			Daily Trips
	In	Out	Total	In	Out	Total	Total
Existing to be removed							
Specialty Retail	25	28	53	22	17	39	341
<i>Transit/Walk-In Reduction (5%)</i>	(1)	(1)	(2)	(1)	(1)	(2)	(17)
High Turnover (Sit-Down) Restaurant	10	9	19	10	7	17	226
<i>Transit/Walk-in Reduction (5%)</i>	(1)	(0)	(1)	(1)	(0)	(1)	(11)
Existing Use Subtotal	9	9	18	9	7	16	215
Proposed Project							
Apartments	4	14	18	14	8	22	239
<i>Transit/Walk-in Reduction (5%)</i>	(0)	(1)	(1)	(1)	(0)	(1)	(12)
Specialty Retail	8	8	16	7	5	12	103
<i>Transit/Walk-in Reduction (5%)</i>	(0)	(0)	(0)	(0)	(0)	(0)	(5)
High Turnover (Sit-Down) Restaurant	13	10	23	13	8	21	272
<i>Transit/Walk-in Reduction (5%)</i>	(1)	(1)	(2)	(1)	(0)	(1)	(14)
Café	16	15	31	7	8	15	143
<i>Transit/Walk-in Reduction (5%)</i>	(1)	(1)	(2)	(0)	(0)	(0)	(7)
Proposed Project Subtotal	719	39	44	83	39	29	68
Net Total Project Trips:	30	35	65	30	22	52	504

Source: Gibson Transportation Consulting, Inc., Traffic Study, January 2017 (refer to Appendix H).

As shown in **Table 6.0-3**, the proposed Project would generate a net total of approximately 504 trip-ends per day with 65 AM peak hour trips (30 in bound trips and 35 outbound trips) and 52 PM peak hour trips (with 30 in bound trips and 22 outbound trips). The Traffic Study analyzed the proposed Project's forecasted traffic impacts, including existing conditions, existing plus Project conditions, opening year (2020) with and without Project conditions, and horizon year (2040) conditions with and without the proposed Project.

Construction Traffic

The proposed Project would require the use of trucks during site clearing and grading and the use of a variety of other construction vehicles throughout the construction of the Proposed Project. The addition of these vehicles into the street system would contribute to increased traffic in the Project vicinity. The haul trips would occur outside of the peak hours and during the permissible hauling hours identified in the haul route to be approved by the City. The proposed Project's construction trip traffic would be less than the operational traffic and would be temporary in nature. Therefore, it is not anticipated that construction of the proposed Project could contribute to a significant increase in the overall congestion in the Project vicinity. In addition, any truck trips would be limited to the length of time required for the Project's construction. A construction work site traffic control plan would be submitted to the City for review and approval prior to the start of any construction work. The plan would show the location of any roadways or sidewalk closures, traffic detours, hours of operation, protective devices, warning signs, and access to abutting properties.

Operational Traffic

The analyzed locations are shown in the Traffic Study and correspond to locations where potential traffic impacts from the proposed Project are most likely to occur. The intersections identified for analysis are as follows:

1. Meridian Avenue and Mission Street
2. Freemont Avenue and Mission Street
3. Fair Oaks Avenue and Mission Street
4. Fair Oaks Avenue and El Centro Street

Project Impacts

Existing Conditions without Project

As discussed in the Traffic Study and shown below in **Table 6.0-4: Existing Intersection Levels of Service**, the intersection operations analysis of existing conditions without the proposed Project indicates that the Fair Oaks Avenue and Mission Street intersection are currently operating at an unacceptable LOS of F during the AM peak hour.

Table 6.0-4
Existing Intersection Levels of Service

Study Intersection	AM Peak Hour		PM Peak Hour	
	V/C	LOS	V/C	LOS
Meridian Avenue Mission Street	0.331	A	0.369	A
Freemont Avenue Mission Street	0.719	C	0.727	C
Fair Oaks Avenue Mission Street	1.045	F	0.811	D
Fair Oaks Avenue El Centro Street	0.773	C	0.668	B

Source: Gibson Transportation Consulting, Inc., Traffic Study, January 2017 (refer to Appendix H).

Existing Conditions with Project

As shown in **Table 6.0-5**, the proposed Project is not forecasted to change any existing LOS measurements from existing conditions. As such, impacts would be less than significant.

**Table 6.0-5
Existing with Project Intersection Levels of Service**

Study Intersection	AM Peak Hour		PM Peak Hour	
	V/C	LOS	V/C	LOS
Meridian Avenue Mission Street	0.337	A	0.375	A
Freemont Avenue Mission Street	0.722	C	0.729	C
Fair Oaks Avenue Mission Street	1.051	F	0.819	D
Fair Oaks Avenue El Centro Street	0.777	C	0.672	B

Source: Gibson Transportation Consulting, Inc., Traffic Study, January 2017 (refer to Appendix H).

Threshold: **Conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b).**

CEQA Guidelines Section 15064.3 (b) (1) states that “Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact.” The Project is located approximately 0.14 miles from the Metro Gold Line South Pasadena Station and is within a mixed-use downtown area. As such, it is not expected that the Project would result in an increase in average vehicle miles traveled, and impacts would be less than significant.

Threshold: **Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).**

The project Site is currently zoned for mixed use commercial and residential development. All Project designs would be subject to review by the City. Additionally, the proposed Project would be expected to comply with all requirements of the California Building Codes and the South Pasadena Municipal Code and adopted engineering standards to ensure building safety. As such, impacts would be less than significant.

Threshold: **Result in inadequate emergency access.**

The Proposed Project would provide adequate access to the Project Site, including access for emergency vehicles. Construction activities that may temporarily restrict vehicular traffic would be required to implement adequate and appropriate measures to facilitate the passage of persons and vehicles through and around any required road closures. Adherence to these requirements would ensure that adequate emergency access is provided. As such, impacts would be less than significant.

TRIBAL CULTURAL RESOURCES

Threshold: **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:**

- **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or**
- **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe**

Assembly Bill (AB) 52 establishes a formal consultation process for California Native American tribes to identify potential significant impacts to TCRs, as defined in PRC Section 21074 as part of CEQA. The procedures under AB 52 offer the tribes an opportunity to take an active role in the CEQA process to protect TCRs. PRC Section 21080.3.1 and 21080.3.2 requires public agencies to consult with tribes identified by the Native American Heritage Commission for the purpose of mitigating a project's potential impacts to TCRs. Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice. Currently no tribes have requested from the City to be notified. Impacts would be less than significant.

UTILITIES AND SERVICE SYSTEMS

Threshold: Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities or relocation of which could cause significant environmental effects?

Water in the City is supplied by the City of South Pasadena Water Division (SPWD). The City purchases water from the City of Pasadena through any of three interconnections to serve a small portion of the City's service area. The three interconnections have a total capacity of approximately 2.8 million gallons per day (mgd) or 3,226 acre-feet per year (afy).¹⁸

The Project site is in a developed, urbanized portion of South Pasadena that is served by existing water and sewer mains. As shown in **Table 6.0-6: Estimated Water Demand**, it is estimated that the proposed Project would have a net daily water demand of 5,507.1 gallons, or 5.9 afy. This would not result in a significant impact to the City and would not result in the need for new water facilities.

Wastewater entering the County's Joint Water Pollution Control Plant (JWPCP) in Carson undergoes treatment and disinfection before being distributed throughout the service area. The JWPCP is one of the largest wastewater treatment plants in the world and is the largest of the Sanitation Districts' wastewater treatment plants. The facility provides both primary and secondary treatment for approximately 260 mgd and has a total permitted capacity of 400 mgd.¹⁹ As shown in **Table 6.0-6: Estimated Sewage Generation** below, it is estimated that the Project would generate 7,696 gallons per day (gpd) and 4.8 afy of net new wastewater. Given the available capacity of the JWPCP, the Project would not require construction of new wastewater treatment facilities or the expansion of existing facilities.

**Table 6.0-6:
Estimated Water Demand**

Land Use	Quantity	Demand Factor (gpd/unit) ^a	Daily Demand (gpd)	Annual Demand (afy)
Residential: 1-Bedroom	24 du	137.5 gpd/du	3,300	3.7
Residential: 2-Bedroom	12 du	187.5 gpd/du	2,250	2.5
Commercial	7,335 sf	62.5/1,000 gpd/ksf	458.4	0.5

¹⁸ City of South Pasadena, 2015 Urban Water Management Plan, June 2016, <https://www.southpasadenaca.gov/home/showdocument?id=2905>

¹⁹ Sanitation Districts of Los Angeles County, Joint Water Pollution Control Plant (JWPCP), accessed June 2019, <https://www.lacsd.org/wastewater/wwfacilities/jwpcp/>

Total			6,258.4	6.7
<i>Existing</i>	12,020.8	62.5/1,000 gpd/ksf	751.3	0.8
Net Total			5,507.1	5.9

Notes: du = dwelling unit; afy = acre-feet per year; gpd = gallons per day; sf = square feet, ksf = thousand square feet.

^a 125 percent sewage generation loading factor; Los Angeles Bureau of Sanitation, Sewage Generation Factors (April 2012).

**Table 6.0-7:
Estimated Sewage Generation**

Land Use	Quantity	Demand Factor (gpd/unit) ^a	Daily Demand (gpd)	Annual Demand (afy)
Residential: 1-Bedroom	24 du	110 gpd/du	2,640	3
Residential: 2-Bedroom	12 du	150 gpd/du	1,800	2
Commercial	7,335	50/1,000 gpd/ksf	366.8	0.4
Total			8,297	5.4
<i>Existing</i>	12,020.8	50/1,000 gpd/ksf	601	0.6
Net Total			7,696	4.8

Notes: du = dwelling unit; afy = acre-feet per year; gpd = gallons per day; ksf = thousand square feet.

The Project Site is located in an urbanized location that is currently served by stormwater infrastructure. The Project Site would include permeable paving and landscaping throughout the site to mitigate run off. As such, the volume of stormwater runoff during peak events would not increase and the construction of new stormwater drainage facilities or expansion of existing facilities would not be required.

The Project Site is located in a developed, urbanized setting that is served by existing electric power, natural gas and telecommunications services. In the context of the greater Los Angeles service area, the Project would not be a substantial source of new demand for electrical or telecommunications services. Electricity for the City is provided by the Clean Power Alliance. The Clean Power Alliance purchases clean power and Southern California Edison (SCE) delivers it.²⁰ New connections would be established for the Project; however, no substantial electrical, gas, or telecommunications infrastructure is present on or adjacent to the Project site that would need to be relocated to accommodate the Project.

²⁰ Clean Power Alliance, "About Us", accessed June 2019, <https://cleanpoweralliance.org/about-us/>

Threshold: Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Water service is provided by the SPWD. The proposed Project would not directly require or result in the construction of potable water treatment facilities because it would connect into these existing water services.

According to the City's 2015 Urban Water Management Plan (UWMP), the City's projected supply for water during a single dry season was 3,904 afy for 2015. The UWMP projects adequate water supplies through 2040, where supply is projected to be 4,143 afy.²¹ The Project demand for 5.9 afy would be well within the available capacity during a single dry year in 2015. Therefore, it is expected that the SPWD has sufficient water supplies available to serve the proposed Project. Furthermore, as previously stated, the Project applicant would be required to adhere to current standards, including the California Green Building Code, that would reduce demand on local water supplies. Thus, SPWD has sufficient water supplies available to serve the proposed Project from existing entitlements and resources, and no new or expanded entitlements are needed. As such, impacts would be less than significant.

Threshold: Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Wastewater flows from the Project site would be conveyed to the JWPCP through existing sewer lines. Operation of the proposed Project would result in an increase in the amount of wastewater generated on the Project site compared to the existing conditions. As stated above, the JWPCP has the capacity to serve the Project's projected wastewater demand, in addition to the provider's existing commitments. As such, impacts would be less than significant.

Threshold: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Solid waste generated within the City is disposed of at privately owned landfill facilities throughout Los Angeles County. The City contracts Athens Services to collect, transport, and dispose of solid waste for all residential and commercial uses.²² The solid waste is collected and taken to Athens's recycling facility, the

²¹ City of South Pasadena, 2015 Urban Water Management Plan, June 2016, <https://www.southpasadenaca.gov/home/showdocument?id=2905>

²² City of South Pasadena, Street and Sewer Division, accessed June 2019, <https://www.southpasadenaca.gov/government/departments/public-works/street-and-sewer-division>

City of Industry Materials Recovery Facility. Food waste is processed and transported to Athens’s compost facility in Victorville, American Organics. Remaining waste that cannot be recycled is disposed on a regular basis to one of four facilities within Los Angeles County.

Table 6.0-8: Los Angeles In-County Class III Landfills shows four landfills located in the County that accept waste from the City and, therefore, could serve the Project site. Based on the combined 2016 average daily disposal rate of 14,122 tons per day, the landfills that accept solid waste from the City have a combined estimated remaining capacity of approximately 85.45 million tons, with remaining life spans ranging between 21 and 25 years. The capacity estimates are conservative because they do not reflect expansions that either have been recently approved or are currently being pursued.

**Table 6.0-8
Los Angeles In-County Class III Landfills**

Landfill	Maximum Daily Capacity (tons)	2016 Average Daily Disposal (tons/day)	Total Disposal Yearly Equivalent (million tons)	2016 Remaining Permitted Capacity (million tons)	Remaining Life (years)
Antelope Valley Landfills I and II ^a	1,800	1,582	0.494	12.89	23
Chiquita Canyon Landfill ^b	6,000	4,544	1.418	–	–
Lancaster Landfill	3,000	500	0.172	10.45	25
Sunshine Canyon Landfill ^c	12,100	7,496	2.339	62.11	21
Total	22,900	14,122	4.423	85.45	

Source: County of Los Angeles, Countywide Integrated Waste Management Plan: 2016 Annual Report, (September 2017), Appendix E-2, Table 1.

^a The City of Palmdale approved the expansion of Antelope Valley Landfill, which consolidates Unit 1 and Unit 2, on June 9, 2011.

^b An expansion of the landfill was recently approved by the Los Angeles County Board of Supervisors in July 2017 (Conditional Use Permit [CUP] No. 2004-00042-[5]). CUP limits waste disposal to 12,000 tons per day, Monday through Saturday, for a total maximum disposal capacity of 60 million tons. The CUP expires July 2047 or when the maximum capacity is reached, whichever is sooner.

^c Sunshine Canyon Landfill is located partially within the City of Los Angeles and partially within unincorporated Los Angeles County. Both portions of the landfill accept waste generated within the City of West Hollywood. On December 31, 2008, operations in the Sunshine Canyon County Landfill and the Sunshine Canyon City Landfill were combined into one to what is known as the Sunshine Canyon City/County Landfill.

Of the various landfills serving the City, Sunshine Canyon Landfill is the largest recipient of nonhazardous solid waste disposal materials (i.e., Class III waste materials). This landfill had a remaining capacity of 62.11 million tons in 2016, with an expected life expectancy of 21 years. The maximum daily capacity for the landfill is 12,100 tons per day, and the 2016 disposal rate was 7,496 tons per day.²³ As shown in **Table 6.0-**

23 County of Los Angeles, County of Los Angeles Integrated Waste Management Report: 2016 Annual Report (September 2017), Appendix E-2, Table 1.

9: Estimated Operational Solid Waste Generation, the Project’s net generation of solid waste is projected to be 286.2 pounds per day, or less than 0.01 percent of the available daily disposal capacity at Sunshine Canyon Landfill.

In addition, the County will continue to address landfill capacity through the preparation of annual County of Los Angeles Integrated Waste Management Plan (CoIWMP) reports. The preparation of each annual CoIWMP report provides sufficient lead time (15 years) to address potential future shortfalls in landfill capacity.

**Table 6.0-9
Estimated Operational Solid Waste Generation**

Type of Use	Size	Waste Generation Rate ^a (lb./unit/day)	Total Solid Waste Generated (lb./day)
Residential	36 du	8.6 lb./du	309.6
Commercial	7,335	5 lb./ksf/day	36.7
Total			346.3
<i>Existing</i>	<i>12,020.8</i>	<i>5 lb./ksf/day</i>	<i>60.1</i>
Net Total			286.2

Notes: ksf = thousand square feet; lb. = pounds.

CalRecycle, “Estimated Solid Waste Generation Rates” (2018), <https://www2.calrecycle.ca.gov/wastecharacterization/general/rates>. Waste generation includes all materials discarded, whether or not they are later recycled or disposed of in a landfill.

As such, construction and operation of the proposed Project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Impacts would be less than significant.

Threshold: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The proposed Project would generate solid waste during both construction and operation that is typical of the development of a mixed-use project comprising residential and commercial uses. The proposed Project would fully comply with all federal, state, and local statutes and regulations regarding proper disposal. As such, impacts would be less than significant.

WILDFIRES

If located in near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

Threshold: **Substantially impair an adopted emergency response plan or emergency evacuation plan?**

The Project is not located in or near state responsibility areas of lands classified as very high fire hazard severity zones.²⁴ The Project would not impair an adopted emergency reasonable plan or emergency evacuation plan. As such, there would be no impact.

Threshold: **Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutants concentrations from a wildfire or the uncontrolled spread of a wildfire?**

The Project is not located in or near state responsibility areas of lands classified as very high fire hazard severity zones. The Project is located on relatively flat land and would not change or exacerbate current risks of wildfire or pollutant concentrations from a wildfire to project occupants. As such, there would be less a less than significant impact.

Threshold: **Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?**

The Project is not located in or near state responsibility areas of lands classified as very high fire hazard severity zones. The Project would not require the installation or maintenance of any infrastructure or utility improvements or additions. As such impacts related to infrastructure modifications increasing fire risk would not result in any impacts. As such, no impact would occur, and no mitigation measures are necessary.

²⁴ CalFire, Wildland Hazard and Buildings Codes, "Los Angeles County FHSZ Map," accessed June 2019, https://www.fire.ca.gov/fire_prevention/fhsz_maps_losangeles

Threshold: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The Project is not located in or near state responsibility areas of lands classified as very high fire hazard severity zones. As previously discussed in sections **Hazards and Hazardous Materials** and **Hydrology and Water Quality**, the Project is not located near a potential flooding, landslide area, or would result in potential drainage changes. As such, the Project would result in no impact and no mitigation measures are necessary.

7.0 LIST OF PREPARERS

This EIR was prepared by the City of South Pasadena Planning and Building Department with the assistance of Meridian Consultants; persons contacted, report preparers, and consultants are identified below, along with agencies and individuals that provided information used to prepare this EIR.

LEAD AGENCY

City of South Pasadena
Planning and Building Department
1414 Mission Street
South Pasadena, CA 91030

EIR PREPARER

Meridian Consultants LLC

920 Hampshire Road, Suite A5
Westlake Village CA 91361

HISTORIC CONSULTANT

ESA Associates

626 Wilshire Boulevard Suite 1100
Los Angeles, CA 90017

GEOTECHNICAL CONSULTANT

Terracon Consultants, Inc

1421 Edinger Avenue, Suite C
Tustin, CA 92780

TRAFFIC CONSULTANT

Gibson Transportation Consulting, Inc

555 West 5th Street, Suite 3375
Los Angeles, California 90013

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