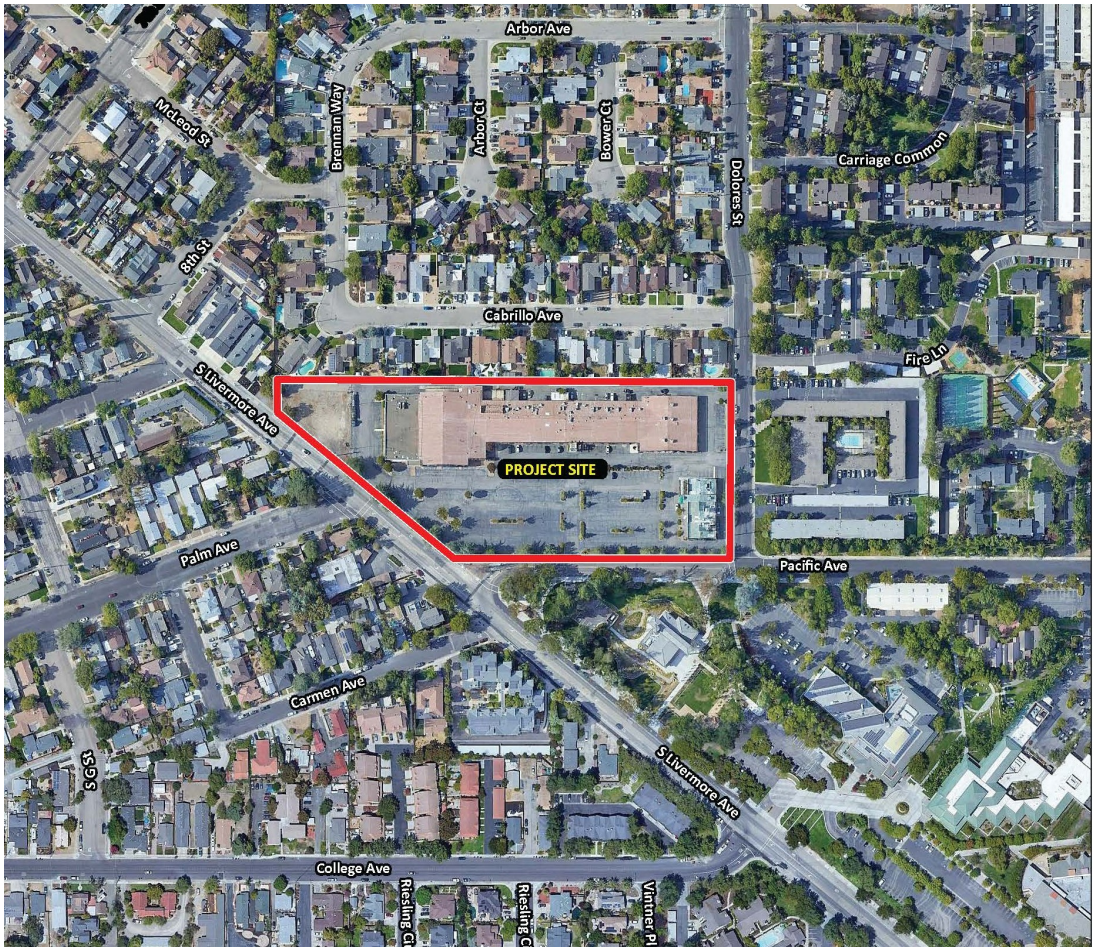
DRAFT

ENVIRONMENTAL IMPACT REPORT

PACIFIC AND LIVERMORE TOWNHOMES PROJECT

LIVERMORE, CALIFORNIA



LSA

September 2025

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DRAFT

ENVIRONMENTAL IMPACT REPORT

PACIFIC AND LIVERMORE TOWNHOMES PROJECT

LIVERMORE, CALIFORNIA

Submitted to:

Community Development Department
City of Livermore
1052 South Livermore Avenue
Livermore, California 94550

Prepared by:

LSA
2565 Alluvial Avenue, Suite 112
Clovis, California 93611
559.490.1210

Project No. CLV2201.01

LSA

September 2025

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1.0 INTRODUCTION

1.1 PURPOSE OF THIS EIR

The California Environmental Quality Act (CEQA) requires that all State and local government agencies consider the environmental consequences of programs and projects over which they have discretionary authority before taking action on them. This Environmental Impact Report (EIR) was prepared in accordance with CEQA to evaluate the potential environmental impacts associated with implementation of the Pacific and Livermore Avenue Townhomes Project (herein referred to as the proposed project) for the City of Livermore (City).

This EIR has been prepared in conformance with CEQA, California Public Resources Code Section 21000 et seq; the *State CEQA Guidelines* (California Code of Regulations Title 14, Section 15000 et seq); and the rules, regulations, and procedures for implementing CEQA as adopted by the City.

This EIR is intended to serve as an informational document for the public agency decision-makers and the public regarding the potential environmental impacts associated with construction of the proposed project. This EIR identifies potential environmental impacts resulting from the proposed project and identifies potential mitigation measures and alternatives to reduce potential environmental impacts.

Environmental impacts cannot always be mitigated to a level that is considered less than significant. In accordance with Section 15093(b) of the *State CEQA Guidelines*, if a Lead Agency, such as the City, approves a project that has significant impacts that are not substantially mitigated (i.e., significant unavoidable impacts), the Lead Agency shall state in writing the specific reasons for approving the project, based on the final CEQA documents and any other information in the public record for the project. This is identified in Section 15093 of the *State CEQA Guidelines* as "a Statement of Overriding Considerations." These potential impacts are discussed in more detail throughout Chapter 4.0 of this EIR.

1.2 ENVIRONMENTAL REVIEW PROCESS

The City of Livermore, serving as Lead Agency responsible for administering the environmental review for the proposed project, determined that preparation of an EIR was required for the proposed project.

CEQA requires that before a decision can be made to approve a project that could result in adverse physical effects, an EIR must be prepared that fully describes the environmental effects of the project. The EIR is a public information document for use by governmental agencies and the public to identify and evaluate potential environmental impacts of a project, to recommend mitigation measures to lessen or eliminate significant adverse impacts, and to examine feasible alternatives to the project. The information contained in the EIR must be reviewed and considered by the City of Livermore Planning Commission and other approving bodies prior to a decision to approve, disapprove, or modify the project.

As part of the consideration of the proposed project, a lead agency, which for this project is the City of Livermore, must prepare findings that identify that all the environmental effects of the project are supported by substantial evidence in the record. CEQA requires that agencies shall neither approve nor implement a project unless the project's significant environmental effects have been reduced to a less than significant level, essentially "eliminating, avoiding, or substantially lessening" the potentially significant impacts, except when certain findings are made. If an agency approves a project that will result in the occurrence of significant adverse impacts that cannot be mitigated to less than significant levels, the agency must state the reasons for its action in writing, demonstrating that its action is based on the EIR or other information in the record, and adopt a Statement of Overriding Considerations.

1.3 INTENDED USES OF THIS EIR

As noted above and described in the *State CEQA Guidelines*, public agencies are charged with the duty to avoid or substantially lessen significant environmental effects, where feasible. In undertaking this duty, a public agency has an obligation to balance a project's significant effects on the environment with its benefits, including economic, social, technological, legal, and other non-environmental characteristics.

This EIR is intended as an informational document to (1) evaluate the proposed project and the potential for significant impacts on the environment; (2) examine methods of reducing adverse environmental impacts; (3) identify any significant and unavoidable adverse impacts that cannot be mitigated; and (4) identify reasonable and feasible alternatives to the proposed project that would eliminate any significant adverse environmental effects or reduce the impacts to a less than significant level. The Lead Agency is required to consider the information in the EIR, along with any other relevant information, in making its decisions on the proposed project. This analysis, in and of itself, does not determine whether a project will be approved, but aids the planning and decision-making process by disclosing the potential for significant and adverse impacts.

In conformance with CEQA and the *State CEQA Guidelines*, this EIR provides objective information addressing the environmental consequences of the project and identifies possible means of reducing or avoiding significant impacts, either through mitigation measures or feasible project alternatives. The City of Livermore must certify the Final EIR prior to project approval and implementation. Under *State CEQA Guidelines* Section 15161, this is a project-level EIR. This type of EIR examines a specific project and considers potential construction and operational impacts of implementing the project.

The *State CEQA Guidelines* help define the role and standards of this EIR, as follows:

- **Information Document:** An EIR is an informational document that will inform public agency decision-makers and the public generally of the significant environmental effect(s) of a project, identify possible ways to minimize significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information that may be presented to the agency (*State CEQA Guidelines* Section 15121(a)).

- **Degree of Specificity:** The degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity that is described in the EIR. An EIR on a development project will necessarily be more detailed in its discussion of specific effects of the project than will be an EIR on the adoption of a local general plan or comprehensive zoning ordinance because the effects of the construction can be predicted with greater accuracy (*State CEQA Guidelines* Section 15146(a)).

- **Standards for Adequacy of an EIR:** An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information that 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 (*State CEQA Guidelines* Section 15151).

Section 15382 of the *State CEQA Guidelines* defines a significant effect on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project…" Therefore, in identifying the significant impacts of the project, this EIR focuses on the substantial physical effects and mitigation measures to avoid, reduce, or otherwise alleviate those effects.

1.4 PROPOSED PROJECT

The proposed project would result in the demolition of the two existing commercial building uses on the project site, and the construction of two recreational/support buildings (i.e., pool equipment and clubhouse buildings) and 115 townhouses within 15 residential buildings. The proposed project would also include approximately 55,201 square feet of landscaping, including approximately 26,052 square feet of open space, including an 8,865-square-foot community park, two 4,770 square-foot pedestrian paseos, and an approximately 1,577-square-foot club room and pool area.

The proposed project would provide a total of 268 parking spaces, including 38 guest parking spaces and 230 private parking spaces for residents. In addition, development of the project site would include infrastructure improvements for stormwater, water and wastewater services, fire protection services, and electricity services.

1.5 EIR SCOPE

A Notice of Preparation (NOP) of the EIR circulated for 30 days beginning March 3, 2025, to help identify the types of impacts that could result from implementation of the proposed project, as well as potential areas of controversy. The NOP was mailed to public agencies and organizations that may have jurisdiction over the proposed project. The NOP was posted on the City's website, and was published in the local newspaper. Additionally, a public scoping meeting to inform interested parties and the public about the proposed project was held at 7 p.m. on March 18, 2025. A total of 12 comment letters regarding the NOP were received in addition to the verbal comments provided at

the scoping session. Copies of the NOP and the comment letters are included in **Appendix A**, and are summarized below:

- **Cultural Resources:** Commenters expressed concerns about the potential for cultural resources to be present at the project site. These issues are discussed in Chapter 4.3, Cultural Resources.
- **Hazards and Hazardous Materials:** Commenters expressed concerns about the potential presence of hazardous materials on the project site. These issues are discussed in Chapter 4.6, Hazards and Hazardous Materials.
- **Land Use:** Commenters expressed concerns about impacts related to the planned land use for the project site. These issues are discussed in Chapter 4.7, Land Use.
- **Noise:** Commenters expressed concerns about an increase in noise during construction and operation of the proposed project. These issues are discussed in Chapter 4.8, Noise.
- **Project Construction:** Commenters expressed concerns about construction-related impacts including demolition and the potential for dust and other pollutants. These issues are discussed in Chapters 4.1, Air Quality, and 4.6, Hazards and Hazardous Materials.
- **Transportation:** Commenters expressed concerns about potential modifications to the vehicle circulation pattern in the surrounding area, increased traffic on streets adjacent to the project site, and the availability of public transportation access at the project site. These issues are discussed in Chapters 4.7, Land Use and Planning, and 4.9, Transportation.

This EIR analyzes the following potentially significant environmental issue topics:

- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Land Use Planning
- Noise
- Transportation
- Tribal Cultural Resources

1.6 REPORT ORGANIZATION

This EIR is organized into the following chapters:

- **Chapter 1.0, Executive Summary:** Provides a summary of the impacts that would result from implementation of the proposed project, describes mitigation measures recommended to reduce or avoid significant impacts, and describes the alternatives to the proposed project.
- **Chapter 2.0, Introduction:** Discusses the overall EIR purpose, provides a summary of the proposed project, describes the EIR scope, and summarizes the organization of the EIR.
- **Chapter 3.0, Project Description:** Provides a description of the project site, the project objectives, the proposed project, and intended uses of this EIR.

- **Chapter 4.0, Evaluation of Environmental Impacts:** Describes the following for each environmental technical topic: existing conditions (setting), potential environmental impacts and their level of significance, and mitigation measures recommended to mitigate identified impacts. Potential adverse impacts are identified by levels of significance, as follows: less than significant impact significant impact, and significant and unavoidable impact. The significance of each impact is categorized before and after implementation of any recommended mitigation measures(s). Cumulative impacts are also addressed.

- **Chapter 5.0, Alternatives:** Provides an evaluation of the alternatives to the proposed project in addition to the CEQA-required No Project alternative.

- **Chapter 6.0, CEQA Required Assessment Conclusions:** Provides an analysis of effects found not to be significant, growth-inducing impacts, unavoidable significant environmental impacts, and significant irreversible changes.

- **Chapter 7.0, Report Preparation:** Identifies preparers of the EIR, references used, and the persons and organizations contacted.

- **Appendices:** The appendices contain the NOP and comment letters on the NOP (**Appendix A**), technical calculations, and other documentation prepared in conjunction with this EIR.

1.7 PUBLIC PARTICIPATION

The *State CEQA Guidelines* encourage public participation in the planning and environmental review processes. The City will provide opportunities for the public to present comments and concerns regarding CEQA and the planning processes. These opportunities will take place during the Draft EIR public review and comment period and public hearings before the City of Livermore Planning Commission.

Following the close of the public comment period, the City will prepare written responses to all written comments received during the public comment period and will compile these comments and responses, together with any text changes to this DEIR, into a Final EIR that includes all of the information required pursuant to *State CEQA Guidelines* Section 15132. The Final EIR will be provided to all public agencies that submitted comments on this DEIR at least 10 days prior to certification of the EIR. The Final EIR shall consist of the Draft EIR; comments and recommendations received on the EIR either verbatim or in summary; a list of persons, organizations, and public agencies commenting on the EIR; the response of the City to significant environmental points raised in the review and consultation process and in comments submitted on the Draft EIR; and any other information added by the City.

The City will make findings regarding the extent and nature of the impacts as presented in the Final EIR. The Final EIR must be certified as complete by the Planning Commission prior to making a decision on the requested entitlements for the proposed project. Public input is encouraged at all public hearings regarding the proposed project.

This Draft EIR, in compliance with Section 15105 of the *State CEQA Guidelines*, has been distributed to responsible and trustee agencies, and other interested organizations, agencies, and individuals for review and comment on the adequacy of the environmental analysis. The public review and comment period for the Draft EIR would be 45 days.

Written public comments may be submitted to the Planning Division of the Community Development Department during the public review and comment period, and oral comments may be presented at the Draft EIR public hearing before the City of Livermore Planning Commission. Written comments should be delivered in person or by courier service, or be sent by mail or email to:

Jennifer Ackerman, Associate Planner
Community Development Department
Planning Division
1052 South Livermore Avenue
Livermore, CA 94550
(925) 960-4473
jjackerman@LivermoreCA.gov

2.0 SUMMARY

This chapter provides an overview of the Pacific and Livermore Avenue Townhomes Project (herein referenced as the "proposed project") and discusses the findings identified in this Environmental Impact Report (EIR), prepared pursuant to the California Environmental Quality Act (CEQA), including a discussion of project alternatives and approach to cumulative impacts analysis.

2.1 PROJECT UNDER REVIEW

This Environmental Impact Report (EIR) has been prepared to evaluate the potential environmental consequences of implementation (i.e., construction and operation) of the Pacific and Livermore Avenue Townhomes Project.

2.1.1 Proposed Project

As previously mentioned, the proposed project would result in the demolition of the two existing commercial building uses on the project site, and the construction of two recreational/support buildings (i.e., pool equipment and clubhouse buildings) and 115 townhouses within 15 residential buildings. The proposed project would also include approximately 55,201 square feet of landscaping, including approximately 26,052 square feet of open space, including an 8,865-square-foot community park, two 4,770 square-foot pedestrian paseos, and an approximately 1,577-square-foot club room and pool areas.

The proposed project would provide a total of 268 parking spaces, including 38 guest parking spaces and 230 private parking spaces for residents. In addition, development of the project site would include infrastructure improvements for stormwater, water and wastewater services, fire protection services, and electricity services.

2.2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

This summary provides an overview of the analysis contained in Chapter 4, Evaluation of Environmental Impacts, of this EIR.

2.2.1 Significant Impacts

CEQA defines a significant impact on the environment as "…a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance." As discussed in more detail in Chapter 4.0 of this EIR, impacts in the following areas would be potentially significant, but would be reduced to a less than significant level with implementation of the mitigation measures recommended in this report:

- Air Quality (fugitive dust and exposure of sensitive receptors)
- Biological Resources (nesting birds, conflict with local regulations)
- Cultural Resources (unknown archaeological resources and discovery of human remains)
- Hazards and Hazardous Materials (release of PCBs, subsurface hazardous materials)
- Noise (construction noise)

- Transportation (emergency access)
- Tribal Cultural Resources (tribal cultural resources)

All impacts associated with Energy, Greenhouse Gas Emissions, and Land Use and Planning would be less than significant and would not require mitigation.

2.2.2 Significant Unavoidable Impacts

Implementation of the proposed project would not result in any significant and unavoidable impacts.

2.2.3 Cumulative Impacts

CEQA defines cumulative impacts as "two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts." Section 15130 of the *State CEQA Guidelines* requires that an EIR evaluate potential environmental impacts that are individually limited, but cumulatively significant. These impacts can result from the proposed project when combined with other past, present, or reasonably foreseeable future projects. As described in Section 4.0 of this EIR, the cumulative impacts analysis in this EIR is based on information provided by the City on currently planned, approved, or proposed projects and regional projections for the area.

2.2.4 Alternatives to the Project

In accordance with CEQA and the *State CEQA Guidelines* (Section 15126.6), an EIR must describe a reasonable range of alternatives to the project, or to the project's location, that could attain most of the project's basic objectives while avoiding or substantially lessening any of the significantly adverse environmental effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. CEQA states that an EIR should not consider alternatives "whose effect cannot be ascertained and whose implementation is remote and speculative."

The three alternatives to the proposed project discussed and analyzed in Chapter 5.0 of this EIR are:

- The **No Project Alternative** assumes that the project site would remain unchanged from existing conditions. The project site would continue to be used solely for commercial uses and the existing commercial buildings would not be modified or demolished. No modifications to existing site access or infrastructure would take place.

- The **General Plan Compliant Alternative** is a version of the "no project" alternative (*State CEQA Guidelines* Section 15126.6(e)) that assumes the project site would be redeveloped pursuant to the current land use and zoning designations. Implementation of the General Plan Compliant Alternative assumes the project site would be built out pursuant to the current General Plan and Zoning designations. Implementation of the General Plan Compliant Alternative would require a commercial portion be added to development of the project site. This would reduce the area available for residential development and the number of available dwelling units.

- The **Reduced Development Alternative** assumes the project site would still be developed solely with residential uses but assumes a 20% reduction in the number of dwelling units, parking spaces, recreation areas, and open space. Under the Reduced Development Alternative, the number of residential development units would be reduced from 115 units to approximately 92 units, landscaped areas would be reduced from 55,201 square feet to approximately 44,161 square feet, the 8,865 square foot park would be reduced to approximately 7,092 square feet, and the total number of parking spaces would be reduced from 268 vehicle parking spaces would be reduced to approximately 214 parking spaces, including reducing the 27 electric vehicle (EV) charging spaces to 22 spaces.

2.3 SUMMARY TABLE

Information in **Table 2.A**, Summary of Impacts and Mitigation Measures from the EIR, has been organized to correspond with environmental issues discussed in Chapter 4. Table 2.A is arranged in four columns: (1) impacts, (2) level of significance without mitigation, (3) mitigation measures, and (4) level of significance with mitigation. Levels of significance are categorized as follows:

NI	No Impact
LTS	Less Than Significant
LTSM	Less Than Significant with Mitigation
S	Significant
SU	Significant Unavoidable

For a complete description of potential impacts and recommended mitigation measures, please refer to the specific topical discussions in Chapter 4.

Table 2.A: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.1: AIR QUALITY			
Impact AIR-1: The proposed project would result in a potentially significant impact related to fugitive dust in excess of applicable air quality thresholds.	S	**Mitigation Measure AIR-1: Basic Best Management Practices.** In order to meet the Bay Area Air District (Air District) fugitive dust threshold, the following Basic Best Management Practices shall be implemented by the project applicant during all phases of the project construction period, including site preparation, demolition, grading, and vertical construction of residences: ● All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. ● All haul trucks transporting soil, sand, or other loose material off-site shall be covered. ● All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. ● All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph). ● All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used ● All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. ● All trucks and equipment, including their tires, shall be washed off prior to leaving the site. ● Unpaved roads providing access to sites located 100 feet or farther from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel. ● Publicly visible signs shall be posted with the telephone number and name of the person to contact	LTSM

Table 2.A: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance after Mitigation
		at the City of Livermore regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.	
Impact AIR-2: The proposed project would result in a potentially significant impact related to 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.	S	**Mitigation Measure AIR-1** (see above)	LTSM
Impact AIR-3: The proposed project would result in a potentially significant impact related to the exposure of sensitive receptors to substantial pollutant concentrations.	S	**Mitigation Measure AIR-2: Level 3 Diesel Particulate Filters.** During construction of the proposed project, the project contractor shall ensure all off-road, diesel-powered construction equipment of 50 horsepower or more used for the project construction meets, at a minimum, the California Air Resources Board Tier 2 emissions standards equipped with Level 3 diesel particulate filters or the equivalent.	LTSM
Impact Air-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	LTS	**None Required**	LTS
4.2: BIOLOGICAL RESOURCES			
Impact BIO-1: The proposed project could potentially have a significant adverse impact on nesting birds.	S	**Mitigation Measure BIO-1:** If project activities including tree removal, demolition, or construction take place during nesting bird season (February 1 to September 15), a qualified biologist shall conduct focused surveys for active nests within 5 days prior to the initiation of project-related activities. Surveys shall be conducted in all potential habitat on and adjacent to the project site. If a lapse in project-related activities of 7 days or longer occurs, another focused survey will be required before project activities can resume. If an active nest is found, the biologist shall consult with CDFW regarding	LTSM

Table 2.A: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance after Mitigation
		appropriate action to comply with the Fish and Game Code of California. The qualified biologist shall observe any identified active nests prior to the start of any construction-related activities to establish a behavioral baseline of adults and any nestlings. Once work commences, all active nests should be continuously monitored for a minimum of three consecutive workdays by the biologist to detect any signs of disturbance and behavioral changes as a result of project activities. In addition to direct impacts, such as nest destruction, nesting birds might be affected by noise, vibration, odors and movement of workers or equipment. If signs of disturbance and behavioral changes are observed at any time, the biologist shall cease work causing that behavioral change and shall contact the CDFW for guidance. Active nest sites and protective buffer zones shall be designated as "Environmentally Sensitive Areas" where no project-related activities or personnel may enter until the biologist determines that the young have fully fledged and will no longer be adversely affected by the project. These designated areas shall be protected during project activities by surrounding the nest site with a wildlife- safe fence or flagging barrier. The Qualified Biologist and/or Biological Monitor shall determine the necessary buffer distance to protect nesting birds based on existing site conditions (such as construction activity and line of sight). Buffer distance shall be increased to provide sufficient protection of nesting birds and their natural behaviors, as needed.	
Impact BIO-2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community	NI	None Required	NI

Table 2.A: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance after Mitigation
identified in local or regional plans, policies, regulations or by the California Department of Fish and **Wildlife or US Fish and Wildlife Service?**			
Impact BIO-3: Would the project 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?	NI	None Required	NI
Impact Bio-4: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	NI	None Required	NI
Impact BIO-5: The proposed project would have a potential conflict with a local policy or ordinance protecting a biological resource.	S	**Mitigation Measure BIO-2:** Final landscape plans shall be submitted for approval and review by the City of Livermore Planning Division prior to issuance of any grading, trenching, encroachment, demolition, or building permit for development. Final landscape plans shall clearly identify all "protected trees," as defined in the Tree Protection Ordinance, and all trees to be removed from the project site and the size, location, type, value of trees and specify the species of all replacement trees. **Mitigation Measure BIO-3:** The project applicant shall implement all tree protection measures recommended in the Arborist Report (**Appendix E**) prepared for the project which are designed to help mitigate or avoid impacts to trees being retained. The project Arborist should be consulted in the event that any recommendations cannot be feasibly implemented.	LTSM
Impact BIO-6: Would the project conflict with the provisions of an adopted Habitat	NI	None Required	NI

Table 2.A: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance after Mitigation
Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?			
4.3: CULTURAL RESOURCES			
Impact CUL-1: Would the project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5.	NI	None Required	NI
Impact CUL-2: The project could result in a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	S	**Mitigation Measure CUL-1: Unknown Archaeological Resources**. In the event that archaeological resources are discovered during excavation, grading, or construction activities, work shall cease within 50 feet of the find until a qualified archaeologist has evaluated the find in accordance with federal, State, and local guidelines to determine whether the find constitutes a "unique archaeological resource," as defined in Section 21083.2(g) of the California Public Resources Code (PRC). The Applicant and its construction contractor shall not collect or move any archaeological materials and associated materials. Construction activity may continue unimpeded on other portions of the project site. Any found deposits shall be treated in accordance with federal, State and local guidelines, including those set forth in PRC Section 21083.2, and shall be assessed, handled, and treated consistent with accepted standards, such as the Secretary of the Interior's standards and guidelines for archaeology and historic preservation. Prior to commencement of grading activities, the Director of the City of Livermore (City) Community Development Department, or designee, shall verify that all project grading and construction plans include specific requirements regarding California PRC (Section 21083.2[g]) and the treatment of archaeological resources as specified above.	LTSM

Table 2.A: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact CUL-3: The project could disturb human remains, including those interred outside of formal cemeteries.	S	**Mitigation Measure CUL-2: Cultural Resources Monitoring and Accidental Discovery, Human Remains.** In the event that human remains are encountered on the project site, work within 50 feet of the discovery shall be redirected and the County Coroner notified immediately consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e). State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which shall determine and notify a Most Likely Descendant (MLD). With the permission of the property owner, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the City of Livermore shall consult with the MLD as identified by the NAHC to develop an agreement for treatment and disposition of the remains. Prior to the issuance of grading permits, the Director of the City of Livermore Community Development Department, or designee, shall verify that all grading plans specify the requirements of CCR Section 15064.5(e), State Health and Safety Code Section 7050.5, and PRC Section 5097.98, as stated above.	LTSM

Table 2.A: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.4: Energy			
Impact EN-1: Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	LTS	None Required	LTS
Impact EN-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	LTS	None Required	LTS
4.5: Greenhouse Gas Emissions			
Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	LTS	None Required	LTS
Impact GHG-2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases.	LTS	None Required	LTS
4.6: HAZARDS AND HAZARDOUS MATERIALS			
Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	LTS	None Required	LTS
Impact HAZ-2a: Demolition or renovation activities may result in the release of PCBs into the environment.	S	**Mitigation Measure HAZ-1: Hazardous Building Materials Survey.** Prior to issuance of demolition or renovation permits for existing structures, the project sponsor shall perform a comprehensive Hazardous Building Materials Survey (HBMS) for the structures to be affected, which shall be prepared and signed by a qualified environmental professional, documenting the presence or lack thereof of polychlorinated biphenyls (PCBs) containing equipment and materials, and any other hazardous building materials. The HBMS shall include abatement specifications for the stabilization and/or removal of the identified hazardous building materials in accordance with all applicable laws and regulations. The project sponsor shall implement the	LTSM

Table 2.A: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance after Mitigation
		abatement specifications and shall submit to the City evidence of completion of abatement activities prior to demolition or renovation of the existing structures.	
Impact HAZ-2b: Subsurface hazardous materials may be released into the environment during construction and operation of the project.	S	**Mitigation Measure HAZ-2: Soil and Groundwater Management Plan.** The project sponsor shall engage with the appropriate regulatory agency (e.g., the San Francisco Bay Regional Water Quality Control Board [RWQCB] or Department of Toxic Substances Control [DTSC]) to provide oversight of additional subsurface investigation at the project site, preparation and implementation of a Soil and Groundwater Management Plan (SGMP), and the implementation of remedial actions, as necessary, at the project site. The additional subsurface investigation activities shall include additional investigation of potential contamination source areas to define the extent of subsurface contamination at the project site. The SGMP shall outline soil and groundwater management protocols that would be implemented during redevelopment of the project site to ensure that construction workers, the public, future occupants, and the environment would not be exposed to hazardous materials that may be present in the subsurface of the project site. The SGMP shall include, at a minimum, the following procedures to be implemented during construction: ● Health and safety requirements for construction workers that may handle contaminated soil or groundwater ● Guidelines for controlling airborne dust, vapors, and odors ● Air monitoring requirements for volatile organic compounds (VOCs) during construction ● Regulatory notification requirements if undocumented contamination or features of environmental concern (e.g., underground storage	LTSM

Table 2.A: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance after Mitigation
		tanks [USTs] or clarifiers/sumps/vaults and associated piping) are encountered ● Inspection and sampling protocols for contaminated soil or groundwater by a qualified environmental professional ● Guidelines for groundwater dewatering, treatment, and disposal to ensure compliance with applicable regulations/permit requirements ● Guidelines for the segregation of contaminated soil, stockpile management, characterization of soil for off-site disposal or on-site reuse, and importing of clean fill material The report(s) documenting additional investigation activities and the SGMP shall be submitted to the regulatory oversight agency for review and approval prior to the City issuing demolition or grading permits for the project. Remedial actions that may be required for the project could include, but would not necessarily be limited to, removal of hazardous materials containers/features (e.g., USTs, piping, clarifiers/sumps/vaults), removal and off-site disposal of contaminated soil or groundwater, in-situ treatment of contaminated soil or groundwater, or engineering/institutional controls (e.g., installation of vapor intrusion mitigation systems and establishing deed restrictions). If remedial actions are required for the project, the project sponsor shall submit to the City evidence of approval from the regulatory oversight agency for any proposed remedial action plans prior to the City issuing demolition, grading, or building permits that would be required for the remedial action. The project sponsor shall document the implementation	

Table 2.A: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance after Mitigation
		of the SGMP during construction and the completion of remedial actions. The project sponsor shall submit to the City evidence of approval from the regulatory oversight agency for the implementation of the SGMP and completion of any remedial actions prior to the City issuing a certificate of occupancy for the project site.	
Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	LTS	None Required	LTS
Impact HAZ-4: The project could 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 create a significant hazard to the public or the environment.	S	**Mitigation Measure HAZ-2.** (See Above)	LTSM
Impact HAZ-5: For a project located within an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	LTS	None Required	LTS
Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	LTS	None Required	LTS
Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	LTS	None Required	LTS
4.7: Land Use and Planning			
Impact LU-1: Eliminate or reduce existing levels of connectivity within Livermore or other community.	LTS	None Required	LTS

Table 2.A: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact LU-2: Result in a conflict between the proposed project and the provisions of the following planning and policy documents, due to any of the significant impacts identified in this EIR: Livermore General Plan, Livermore Zoning Ordinance, Plan Bay Area 2050	LTS	None Required	LTS
4.8: NOISE			
Impact NOI-1: The proposed project would result in potentially significant impacts related to construction noise levels in excess of existing ambient noise levels in the project vicinity.	S	**Mitigation Measure NOI-1: Construction Noise and Vibration**. Prior to issuance of grading permits, the City of Livermore (City) Director of Community Development Department, or designee, shall verify that grading and construction plans include the following requirements: ● Construction equipment, fixed or mobile, shall be equipped with properly operating and maintained noise mufflers consistent with manufacturers' standards. ● Construction staging areas shall be located away from off-site sensitive uses, including residential uses located directly north of the project site, during the later phases of project development. ● The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from noise-sensitive receptors nearest the project site. ● The construction contractor shall use on-site electrical sources to power equipment rather than diesel generators where feasible. ● A sign, legible at a distance of 50 feet, shall also be posted at the construction site. All notices and the signs shall indicate the dates and duration of construction activities, as well as provide a telephone number for the "noise disturbance coordinator." ● A "noise disturbance coordinator" shall be established. The disturbance coordinator shall be responsible for responding to any local complaints	LTSM

Table 2.A: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance after Mitigation
		about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler) and shall be required to implement reasonable measures to reduce noise levels. All signs posted at the construction site shall list the telephone number for the disturbance coordinator.	
Impact NOI-2: Generation of excessive groundborne vibration or groundborne noise levels?	LTS	None Required	LTS
Impact 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?	LTS	None Required	LTS
4.9: TRANSPORTATION			
Impact TRA-1: Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	LTS	None Required	LTS
Impact TRA-2: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	LTS	None Required	LTS
Impact TRA-3: The proposed project could potentially increase hazards related to inadequate site access and circulation.	S	**Mitigation Measure TRA-1:** The proposed project would be required to adopt the recommendations outlined in the Transportation Analysis prepared for the proposed project including: ● Include 25 feet of red curb to the west and 50 feet of red curb to the east of the driveway on Pacific Avenue and 20 feet of red curb to the south of the driveway on Dolores Street. ● Include a turnaround space for residential guests at the end of the parking aisle in the southeast corner of	LTSM

Table 2.A: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance after Mitigation
		the project site, adjacent to the EVA access on Dolores Street. ● Provide a minimum of eight short-term bicycle parking spaces for guest in well-lit, highly visible locations on site.	
Impact TRA-4: Result in inadequate emergency access**?**	LTS	None Required	LTS
4.10: TRIBAL CULTURAL RESOURCES			
Impact TCR-1: The proposed project could potentially impact tribal cultural resources through unknown discovery of tribal cultural resources.	S	**Mitigation Measure CUL-1** and **Mitigation Measure CUL-2** (see above).	LTSM

3.0 PROJECT DESCRIPTION

The following describes the proposed Pacific and Livermore Townhomes Project (project) that is the subject of this Environmental Impact Report (EIR) prepared pursuant to the California Environmental Quality Act (CEQA). The proposed project would result in demolition of two existing commercial buildings on the project site and construction of 15 residential buildings totaling 115 units and two recreational/support buildings (pool equipment and clubhouse buildings), landscaping, parking, paseos, and an interior park. The City of Livermore (City) is the lead agency for review of the project under CEQA.

3.1 PROJECT SITE

The following describes the project location, existing conditions, surrounding land uses, and regulatory setting.

3.1.1 Project Location

The approximately 6.54-acre project site is located at 2930 Pacific Avenue in Livermore, Alameda County, California (Assessor's Parcel Numbers [APNs] 98A-412-106-5, -106-8, -106-3, and -106-6). The project site is located in central Livermore, in an area primarily consisting of residential, commercial, and institutional uses. The project site is bounded by single-family residential uses to the north, Dolores Street to the east, Pacific Avenue to the south, and South Livermore Avenue to the west.

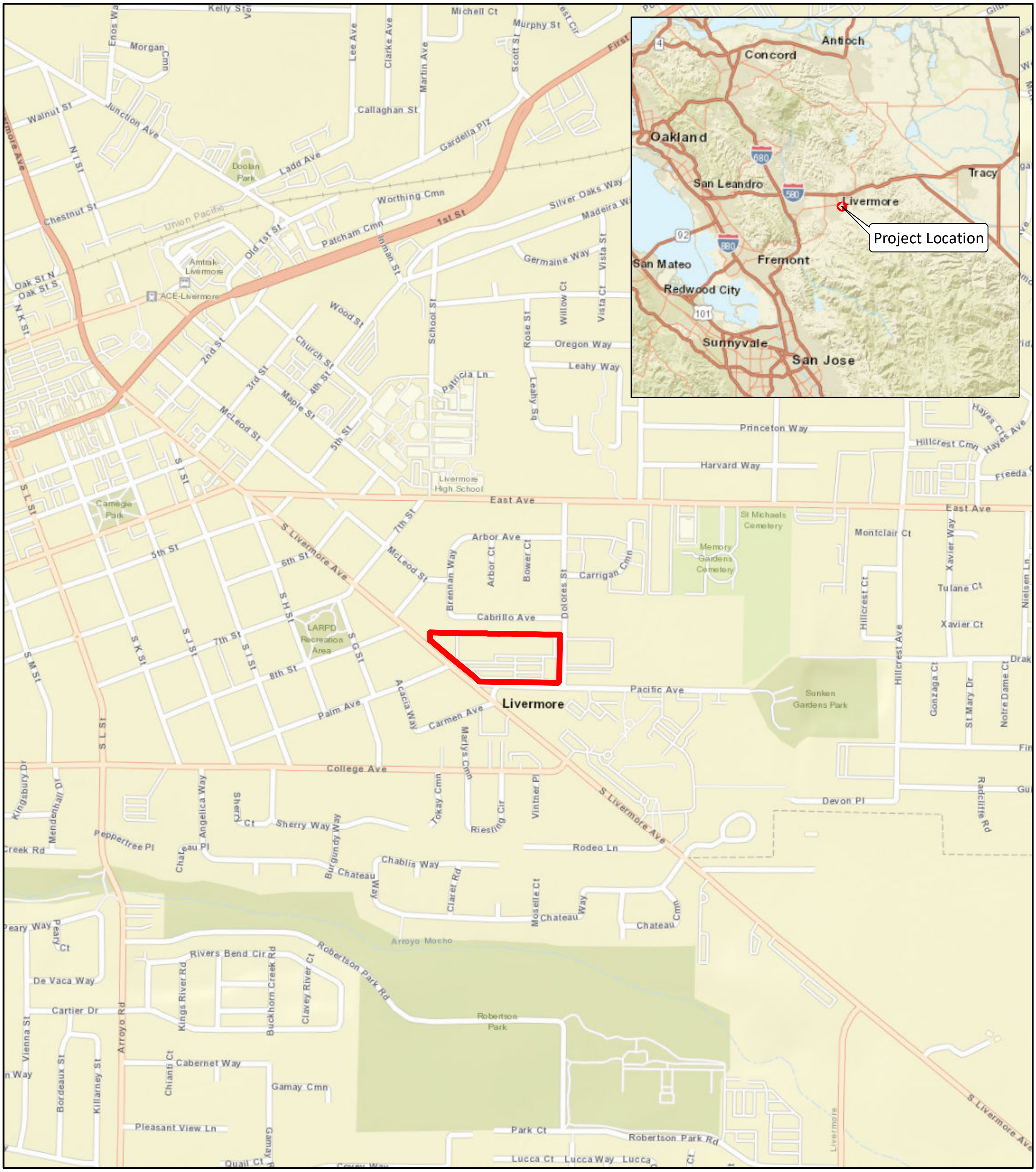
Regional vehicular access to the project site is provided by Interstate 580 (I-580) on- and off-ramps that are located approximately 2 miles north of the project site, along North Livermore Avenue, and State Route 84 (SR-84) (also locally named Isabel Avenue in Livermore), which is accessed approximately 2.6 miles to the west of the project site from East Stanley Boulevard. Bus stops located along Pacific Avenue provide transit access to the project site. **Figure 3-1** shows the regional and local context of the project site. **Figure 3-2** is an aerial photograph of the project site and the vicinity.

3.1.2 Site Characteristics and Existing Conditions

As shown on **Figure 3-3**, the generally level project site is currently developed with two commercial buildings associated with the former Livermore Town Center, totaling approximately 66,328 square feet in size, which are located along the northern and eastern property lines. Since construction in 1959, the existing buildings have been occupied by various commercial uses and are currently occupied by retail and restaurant uses. The remainder of the project site is covered with surface parking and ornamental landscaping except for the northwest corner, which is currently a vacant lot that was previously occupied by a gas station that has since been demolished.

Approximately 71 mature trees are planted throughout the project site, including in planters within the surface parking lot and along the western, southern, and eastern boundaries of the project site.

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LEGEND

Project Site

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FIGURE 3-1

Pacific and Livermore Townhomes Project

Project Location and Regional Vicinity

SOURCE: Esri World Street Map (2025)

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FIGURE 3-2

Project Site Boundary

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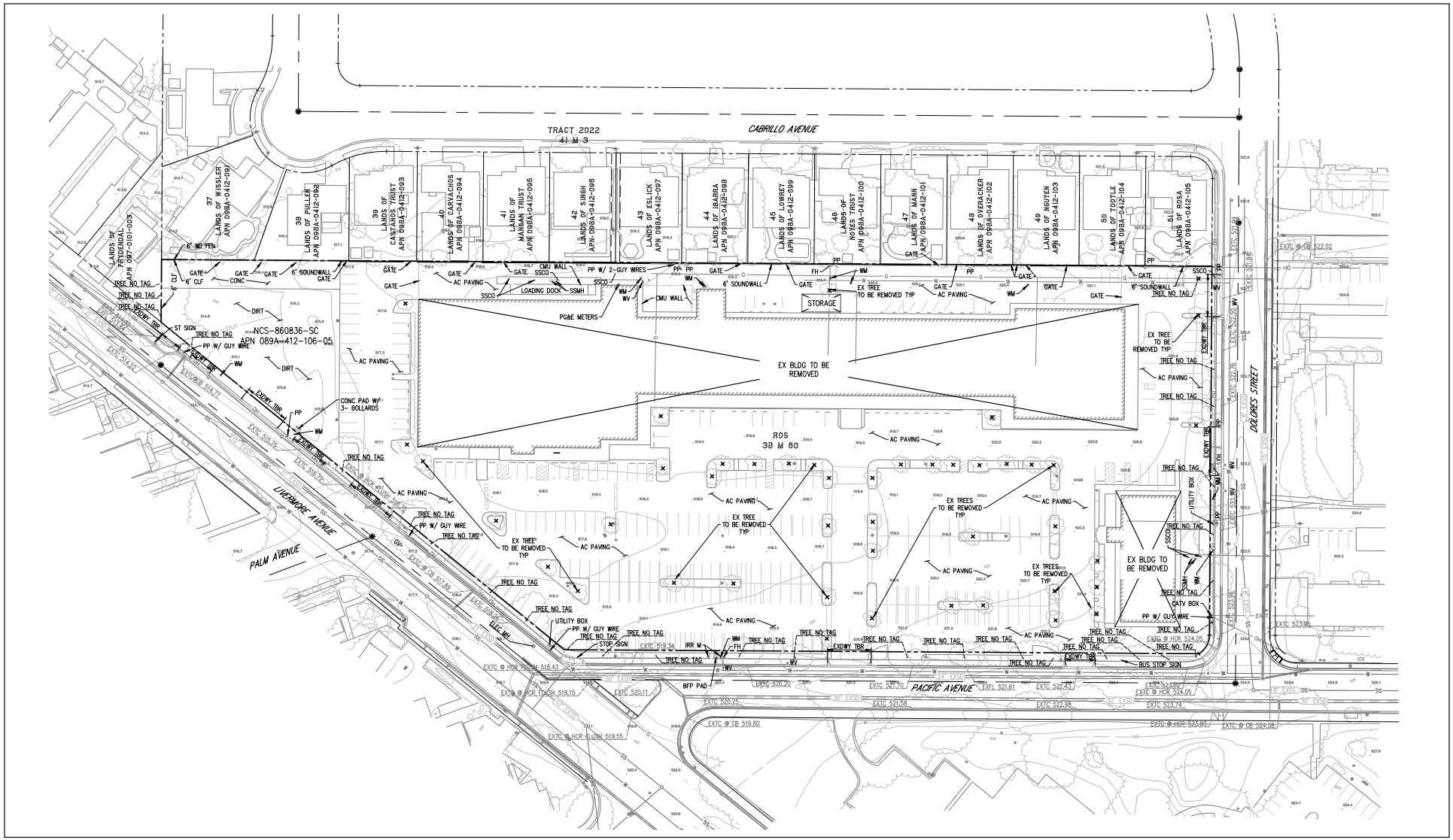
SOURCES: Google Earth; LSA, 2022

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Pacific and Livermore Townhomes Project

Aerial Photograph of the Project Site and Surrounding Land Uses

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FIGURE 3-3

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Pacific and Livermore Townhomes Project
Existing Conditions

SOURCE: Swenson; CEA Inc.
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A former gas station operated at the project site from approximately 1963 to 1988. Three underground storage tanks (USTs) (two 10,000-gallon gasoline tanks and one 500-gallon waste oil tank) were removed from the project site by the early 1990s. The project site is also listed on the State Water Resources Control Board (SWRCB) GeoTracker database as a Cleanup Program Site related to a previous dry cleaner use that operated from approximately 1966 to 2010.[1]

3.1.3 Surround Land Uses

The project site is located in central Livermore in an area primarily consisting of residential and commercial uses, as well as some institutional uses, as further described below:

- **North of the Project Site.** The project site is bordered to the north by single-family residential uses. Farther north is East Avenue, along which are a mix of residential and commercial uses, as well as Livermore High School, a Livermore Valley Joint Unified School District (LVJUSD) school serving grades 9 through 12.

- **East of the Project Site.** The project site is bounded on the east by Dolores Street, across which are multifamily residential uses, two cemeteries, and the East Avenue Middle School, an LVJUSD school serving grades 6 through 8. Farther east are the Arroyo Bike Trail, Livermore Skatepark, and single-family residential uses.

- **South of the Project Site.** The project site is bordered to the south by Pacific Avenue, across which is the Livermore Civic Center, which includes various City departments (e.g., City Hall, the Police Department, and the Civic Center Branch of the Livermore Public Library). Farther south are uses generally consisting of single-family residences, agricultural facilities, and open space and recreational uses.

- **West of the Project Site.** The project site is bordered to the west by South Livermore Avenue, across which land uses predominantly consist of single-family residential uses with some institutional uses intermixed. Bothwell Recreation Center and Park is located west of the project site, as well as the Del Valle Continuation School, an LVJUSD school serving grades 9 through 12.

3.1.4 Regulatory Setting

The project site is designated Neighborhood Mixed Low Density (NML) and is a Transfer Development Credits (TDC) Receiver Site (K) in the City's General Plan. The Neighborhood Mixed-Use (NMU) zoning designation is intended to help improve the pedestrian orientation of Livermore's neighborhoods by providing neighborhood commercial services within walking distance of existing residents and integrating housing with commercial development on a single site.

[1] State of California. 2025. *State Water Resources Control Board GeoTracker.* Website: https://geotracker.waterboards.ca.gov/profile_report?global_id=T10000008716&mytab=esidata&subcmd=edfsummarytable#esidata (accessed February 2025).

The NML designation allows a maximum floor area ratio (FAR) of 0.3 for commercial development and a baseline density of 2 to 3 dwelling units per acre or 12 to 15 dwelling units per acre when developers choose to comply with the City's TDC Ordinance.

Each residential land use designation subject to the TDC provisions contains a baseline density achievable without the need to comply with the City's TDC Ordinance. Applicants who wish to exceed this baseline density must comply with the City's TDC Ordinance by purchasing transferable development credits or paying an in-lieu fee.

The project site is located within the NMU zoning district. The intent of the NMU zoning district is to reinforce the walkability and identity of neighborhoods by providing a pedestrian-oriented main street shopping environment that provides day-to-day amenities and services and a variety of urban housing options within Livermore. Development within the NMU zone is regulated by a required mix of T4 Main Street (T4MS), T4 Main Street-Open (T4MS-O), T4 Neighborhood (T4N), and T4 Neighborhood-Open (T4N-O) transect zones. Allowed building types within T4MS and T4MS-O transect zones include commercial blocks and live/work and T4 and T4O allow (but are not limited to) live/work townhouses, courtyard apartments, and fourplexes.

On March 1, 2023, the Project Sponsor submitted a preliminary application pursuant to Senate Bill (SB) 330 to the City to redevelop the project site exclusively with residential townhomes. This application established the Project Applicant's "Builder's Remedy" rights pursuant to the Housing Accountability Act (Government Code Section 65589.5). If a local jurisdiction has not adopted a housing element in substantial compliance with State law, applicants may propose eligible housing development projects that do not comply with either the zoning or general plan. Pursuant to the Housing Accountability Act, a local jurisdiction may be required to approve an eligible housing development project because it cannot make any of the five required findings contained in Government Code Section 65589.5. In July 2023, prior to the City having a certified Housing Element, the Project Applicant submitted a full application to develop the project site with 115 residential townhomes; as such, although inconsistent with the project site's existing general plan land use designation and zoning, the proposed project is allowed under the Housing Accountability Act.

3.2 PROJECT OBJECTIVES

CEQA Guidelines Section 15124(b) states that an EIR project description must include "[a] statement of objectives sought by the proposed project. The statement of objectives should include the underlying purpose of the project." The proposed project objectives are outlined below.

- Provide a combination of residential units mix on a desirable stie compatible with surrounding residential development.
- Diversify the City's existing housing stock by providing various housing product types and densities to meet a range of housing needs for the City of Livermore residents.
- Provide more outdoor recreational opportunities in the City by providing new open spaces.
- Design the structures and site improvements to be sensitive to the surrounding neighborhoods.
- Better utilize an urban area in the City that is currently underutilized.

3.3 PROPOSED PROJECT

This section provides a description of the proposed project as identified in the application materials submitted by the Project Applicant to the City, dated January 31, 2024.[2] The proposed project would result in the demolition of the existing commercial buildings on the project site, the construction of 15 residential buildings totaling 115 units, pool area and associated pool equipment, and clubhouse buildings totaling approximately 1,577 square feet, landscaping, paseos, guest parking, and an interior park. The proposed project would also include new frontage improvements such as curb, sidewalk, gutter, and streetlights.

Figure 3-4 depicts the overall proposed conceptual site plan for the proposed project. **Figure 3-5, Figure 3-6, Figure 3-7, and Figure 3-8** depict the typical site cross sections and showcase elevations for proposed two- and three-story buildings, and the proposed conceptual landscape plan is shown in **Figure 3-9.**

3.3.1 Building Program

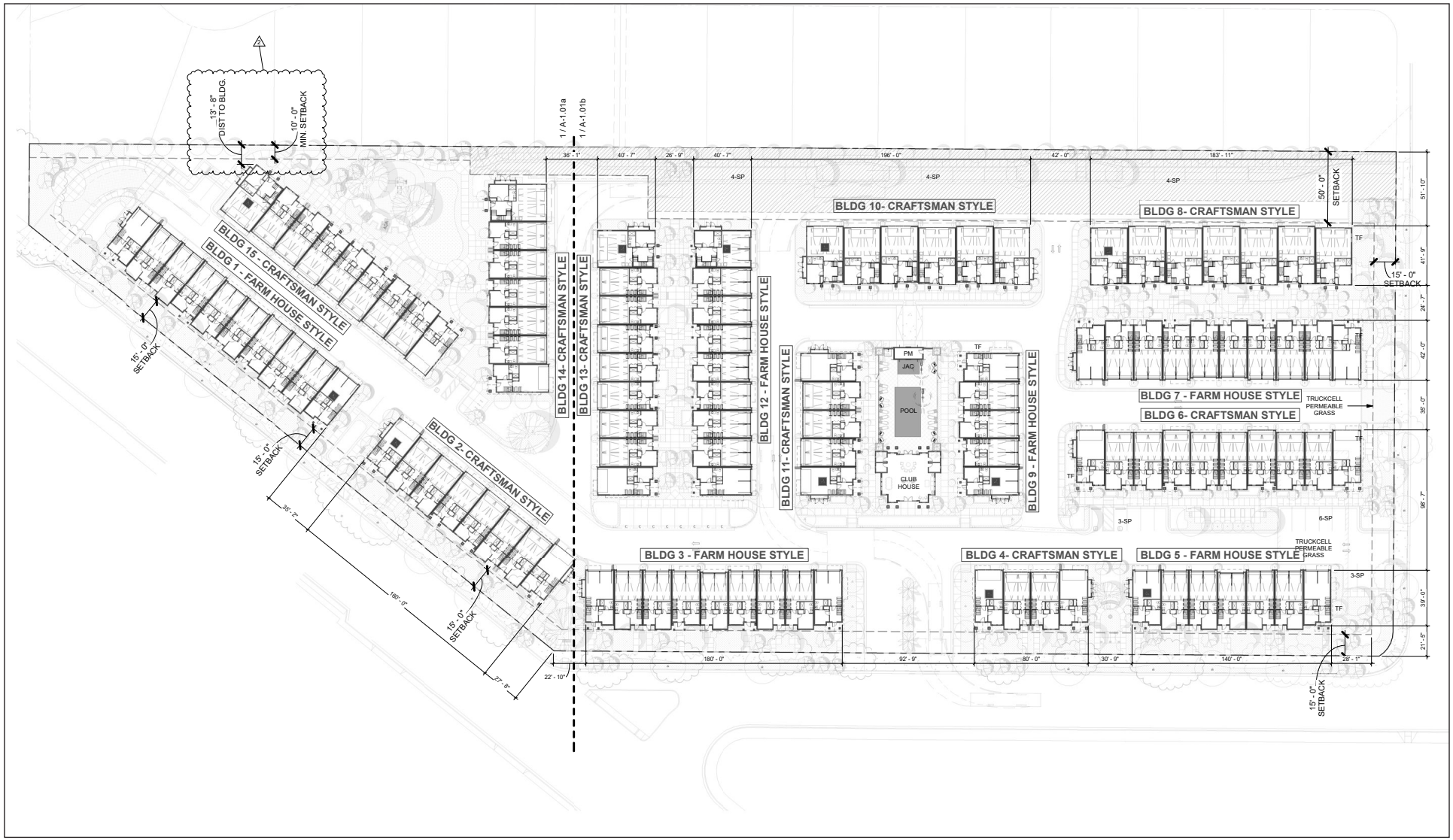
The proposed project would result in the redevelopment of the project site with 15 residential buildings (Buildings 1 through 15) and two recreational/support buildings (pool equipment and clubhouse buildings).

The proposed pool equipment and clubhouse buildings would be located in the center of the project site, directly north of the entrance driveway on Pacific Avenue, as shown on **Figure 3-4**. The pool equipment building would be approximately 187 square feet in size, and the clubhouse building would be approximately 1,390 square feet in size. The pool equipment and clubhouse buildings would be single story and approximately 12 feet 10 inches in height and 23 feet in height, respectively.

Buildings 1 through 15 would be located throughout the project site and would consist of 98 townhouses in three-story buildings and 17 townhouses in two-story buildings. The two-story buildings would generally be located along the northern boundary of the project site, and the three-story buildings would be intermixed in the center and along the southern boundary. The proposed two-story townhouse units would include three bedrooms and would be an average of approximately 2,038 square feet in size. Meanwhile, the proposed three-story townhouse units would include four bedrooms and a balcony and would be an average of approximately 2,169 square feet in size. The two-story townhouses would be a maximum of approximately 29 feet 8 inches in height to the top of the roof, and the three-story townhouses would be approximately 36 feet 8 inches in height to the top of the roof.

[2] It should be noted that project plans, including total building square footage, parking count, and other project elements may be subject to refinement prior to City action on project entitlements. The analysis in this Initial Study is conservative and evaluates the maximum development potential for the proposed project.

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FIGURE 3-4

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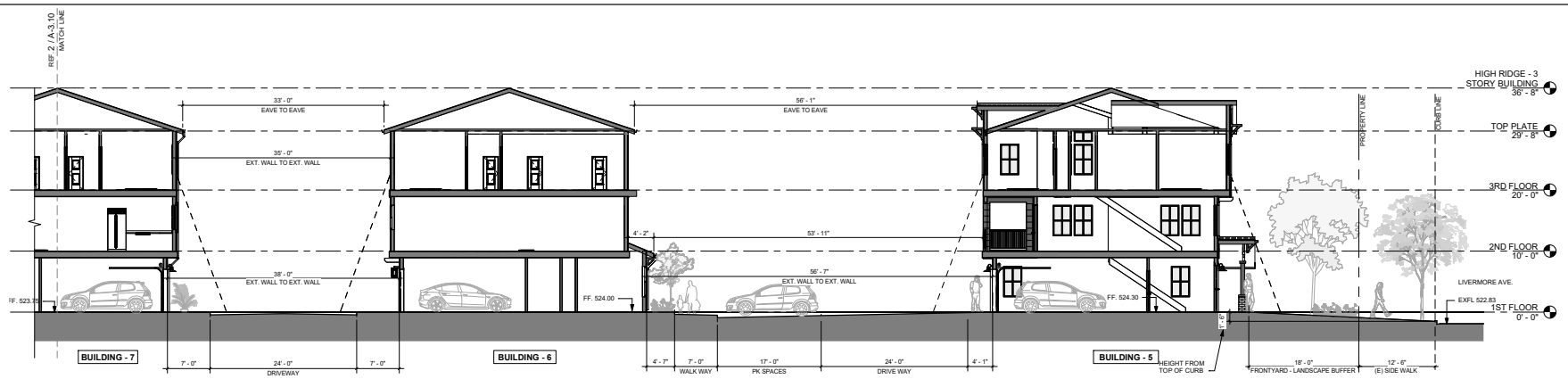
SOURCE: Swenson; CEA Inc

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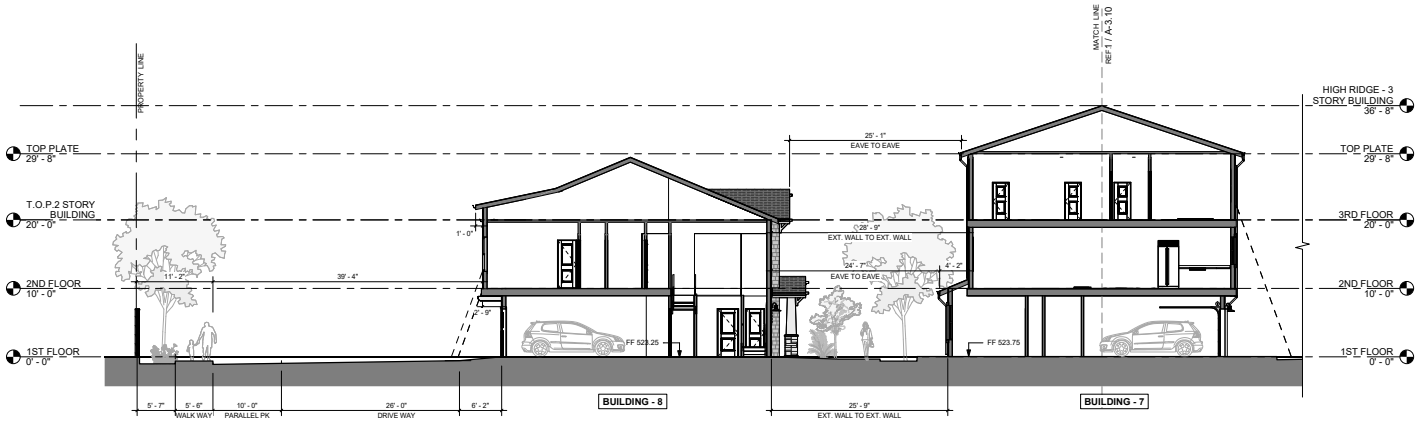
Pacific and Livermore Townhomes Project

Proposed Conceptual Site Plan

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1 TYPICAL SITE SECTION FROM LIVERMORE AVENUE - BLDG. 5, 6 & 7
1/8" = 1'-0"



2 TYPICAL SITE SECTION FROM S LIVERMORE AVENUE - BLDG. 7 & 8
1/8" = 1'-0"

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FIGURE 3-5

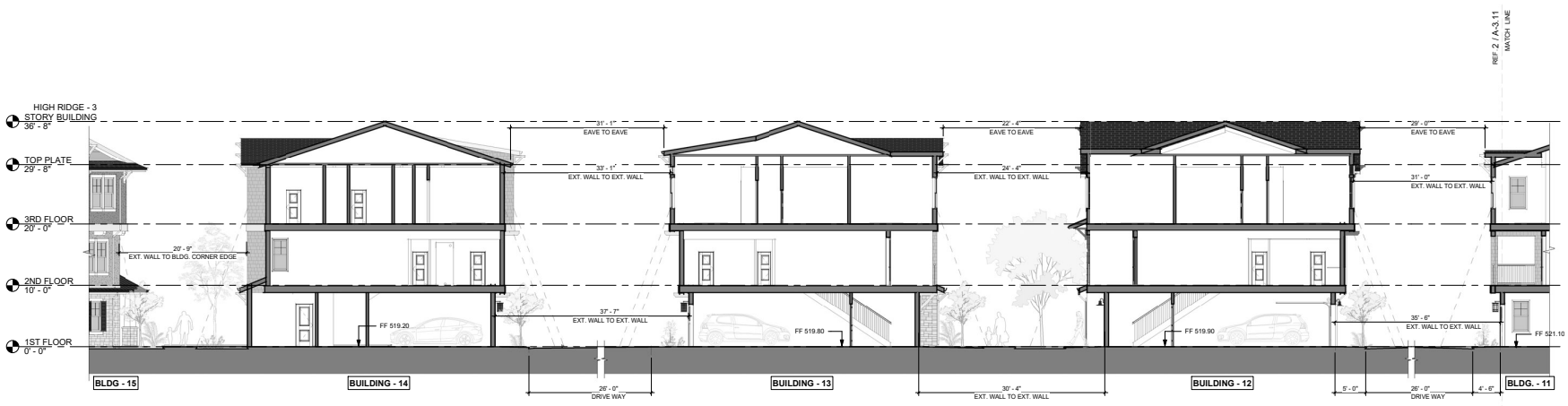
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Pacific and Livermore Townhomes Project
Proposed Typical Cross Sections

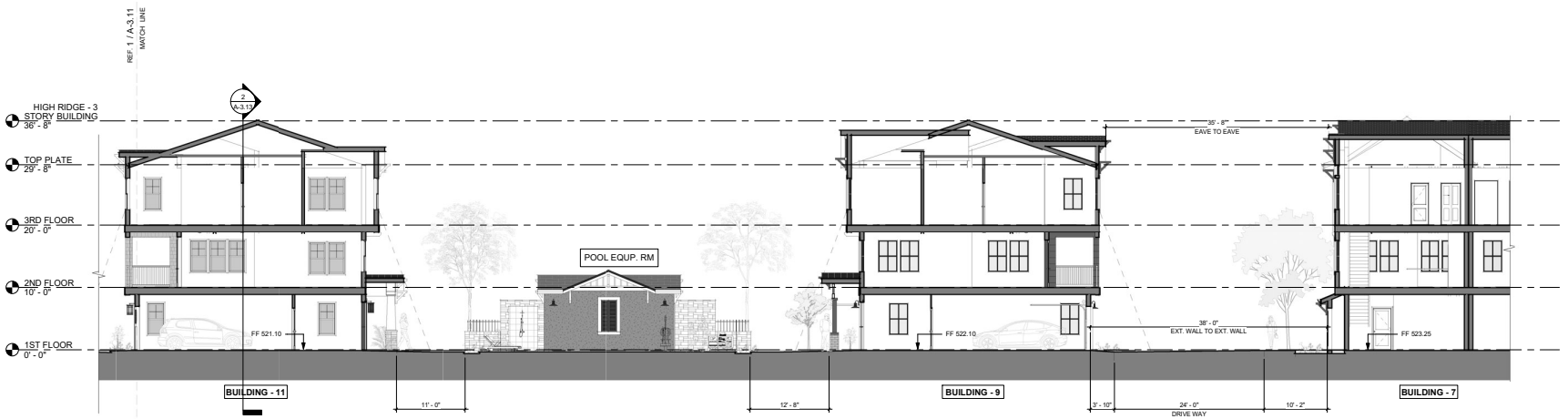
SOURCE: Swenson; CEA Inc.

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1 TYPICAL SITE SECTION WEST TO EAST - BLDG. 11, 12, 13, 14, 15
1/8" = 1'-0"



2 TYPICAL SITE SECTION WEST TO EAST - BLDG. 7, 9, 11
1/8" = 1'-0"

LSA

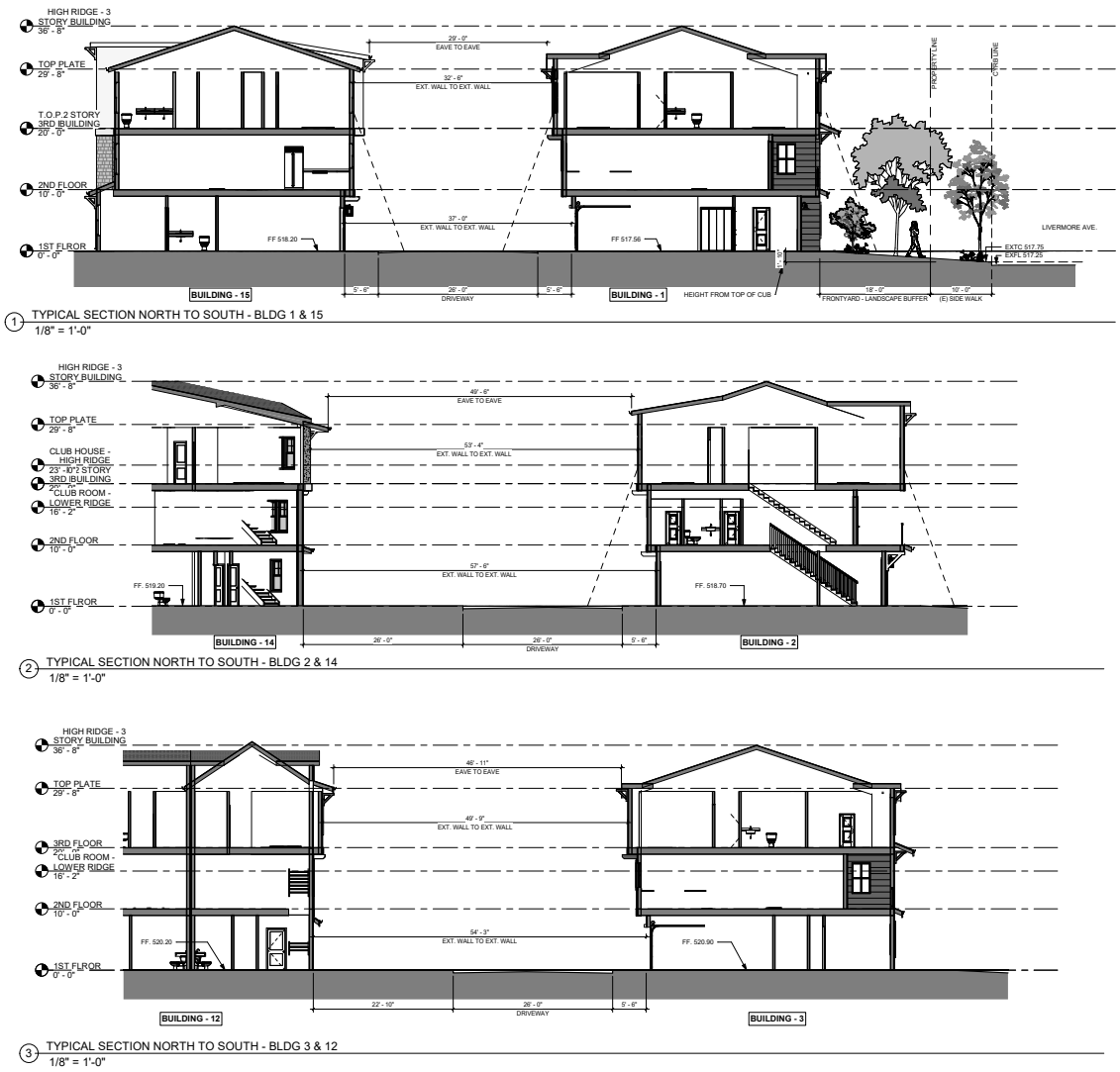
FIGURE 3-6

0 16 32
FEET

Pacific and Livermore Townhomes Project
Proposed Typical Cross Sections

SOURCE: Swenson; CEA Inc.
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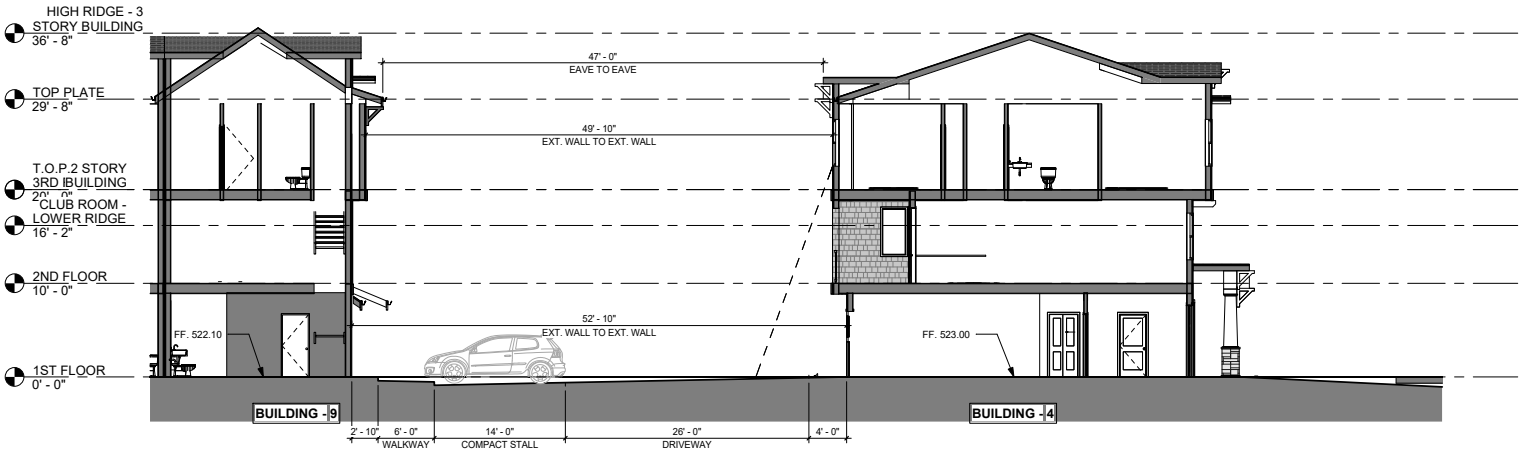
FIGURE 3-7

0 18 34
FEET

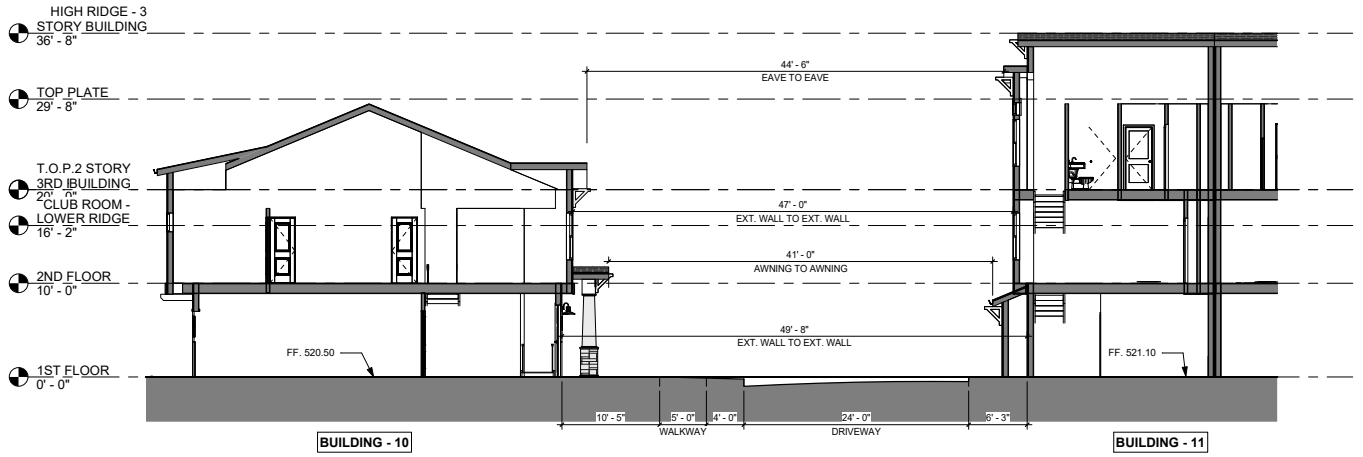
Pacific and Livermore Townhomes Project
Proposed Typical Cross Sections

SOURCE: Swenson; CEA Inc.
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1 TYPICAL SECTION NORTH TO SOUTH - BLDG 4 & 9
1/8" = 1'-0"



2 TYPICAL SECTION NORTH TO SOUTH - BLDG. 10 - 11
1/8" = 1'-0"

LSA

FIGURE 3-8

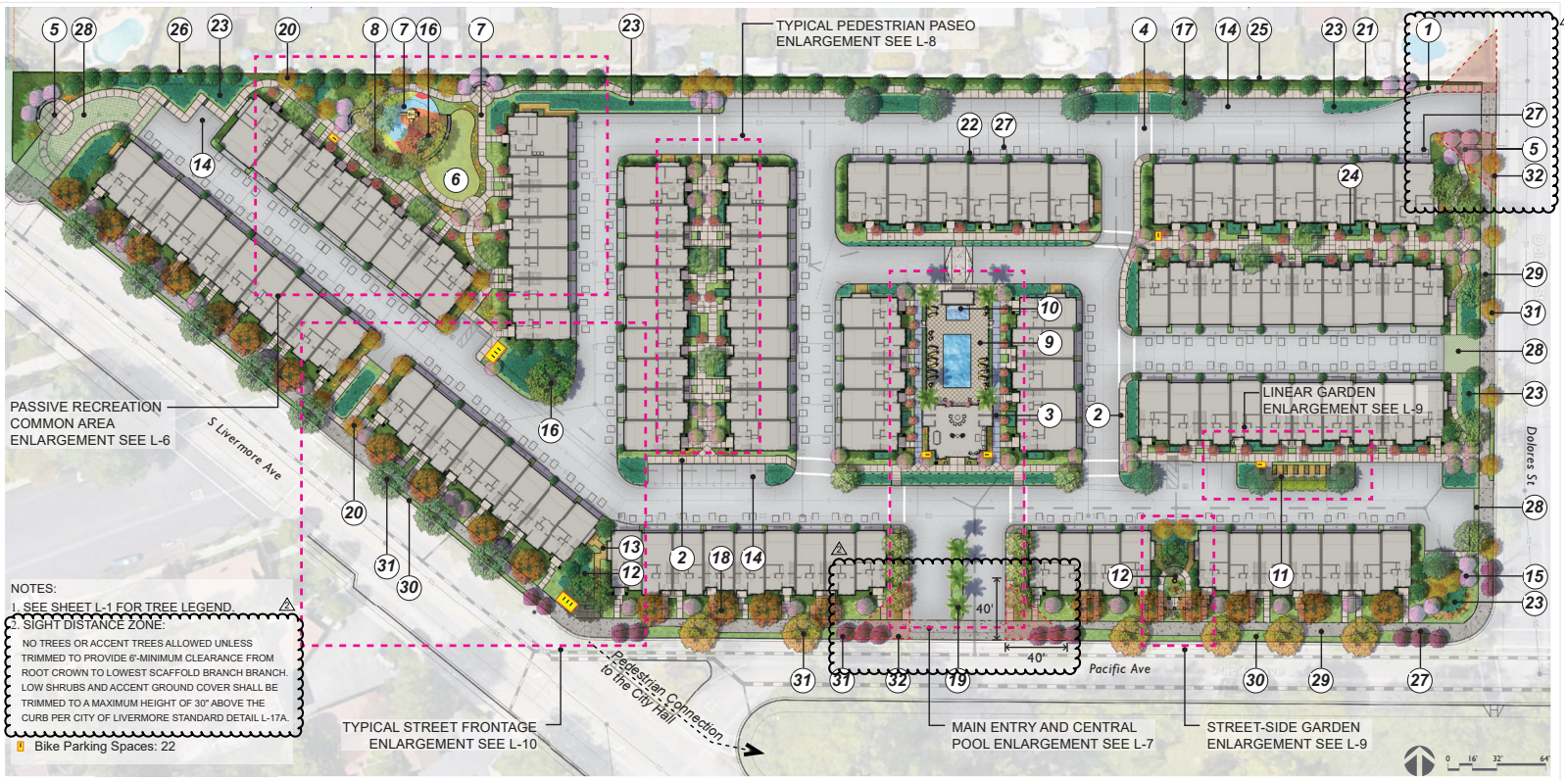
0 13 26
FEET

Pacific and Livermore Townhomes Project
Proposed Typical Cross Sections

SOURCE: Swenson; CEA Inc.

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1. Perimeter Walkway
2. Pedestrian Concrete Paving
3. Pedestrian Pervious Concrete
4. Pedestrian Crossing
5. Node with Accent Tree
6. Passive Recreation Common Area
7. Tot Lot
8. Picnic Area In Decomposed Granite With Shade Trees
9. Pool Deck with tables and lounge chairs Covered Pool Amenity Space with lounge seating and dining tables
10. Spa
11. Garden Plots with Orchard Trees, Benches, and Decomposed Granite Paving
12. Street-Side Garden with Public Art
13. Decomposed Granite Paving Access to Utility Closet
14. Residential Parking Spaces
15. Accent Trees and Shrubs at Street Corner
16. Specimen Tree
17. Shade Trees at Residential Parking
18. Shade Trees at Street Frontage
19. Main Entry Palm Tree
20. Columnar Tree
21. Evergreen Screening Tree
22. Evergreen Columnar Shrub Tree at Garage
23. Stormwater Treatment Area
24. Flow-Through Stormwater Treatment Planters
25. Existing Wall to Remain
26. New Wood Fence
27. Fire Ladder Pad, Typ.
28. Truckcell Permeable Grass at Entry of EVA
29. Street Sidewalk, 5' Min. S.C.D.
30. Off-Site Parkway Planting
31. Off-Site Street Tree
32. 40' MIN. SIGHT DISTANCE ZONE

LSA

FIGURE 3-9

0 64 128
FEET

SOURCE: Swenson; Gates + Associates

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Pacific and Livermore Townhomes Project
Proposed Conceptual Landscape Plan

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3.3.2 Open Space and Landscaping

The total landscaped area provided for the project site would be approximately 55,201 square feet. Total open space provided would be approximately 26,052 square feet and would include an approximately 8,865-square-foot community park with a tot lot and picnic area; an approximately 4,770-square-foot pedestrian paseos between Buildings 7 and 8 and between Buildings 12 and 13; and an approximately 3,200-square-foot central pool area with a pool, spa area, and lounge seating.

The remaining 9,217 square feet of open space on the project site would consist of a perimeter walkway along the northern and eastern boundaries and other landscaped areas throughout the project site. Of the existing 71 trees on and around the perimeter of the project site, 70 would be removed. Approximately 405 new trees would be planted throughout the project site. Landscaping and other plantings would be provided throughout the project site as well.

3.3.3 Access, Circulation, and Parking

Pedestrian access to the project site would be provided by the existing sidewalks along South Livermore Avenue, Pacific Avenue, and Dolores Street. Pedestrian access to the residential buildings would be provided by the perimeter walkway (which would also connect to the interior park), the pedestrian paseos, and pedestrian paths and sidewalks along the internal roadways. Due to existing and projected traffic volumes, a Rectangular Rapid Flashing Beacon (RRFB) would be installed at the crosswalk on the north side of the intersection of Palm and South Livermore Avenues, and the southern crossing would be removed.

Vehicular access to the project site would be provided via one existing driveway along Pacific Avenue, and one driveway along Dolores Street. These driveways would provide access to internal roadways that would provide vehicular access to residential uses. The existing driveway on South Livermore Avenue would be converted to provide pedestrian access for residents of the project site, and an Emergency Vehicle Access (EVA) driveway would be constructed on Livermore Avenue at the northwest corner of the site. The existing left turn lane and parking spaces on Livermore Avenue would re-purposed to provide a buffer for the existing Class II bike lane. Additionally, two driveways on Dolores Street would be repurposed and solely provide pedestrian and emergency vehicle access. Approximately 38 guest surface parking spaces would be provided within the project site, which would include 27 standard parking spaces, 8 compact parking spaces, and 3 parking spaces that would be compliant with the Americans with Disabilities Act (ADA). Additionally, each proposed townhouse will be equipped with 2 vehicle parking spaces, totaling 230 parking spaces. Therefore, a total of 268 vehicle parking spaces would be provided with the project; 27 of the total parking spaces available will have electric vehicle (EV) charging capabilities.

Currently, bus stops along Pacific Avenue provide transit access to the project site. The Livermore Amador Valley Transit Authority (LAVTA) has determined that the project would be required to install an approved bus shelter at the Pacific Avenue transit stop. Additional transit stops are located eastbound across Pacific Avenue, and northbound on Dolores Street.

3.3.4 Lighting

The proposed project would introduce a total of 3 new exterior lights along the project frontage on South Livermore Avenue and Pacific Avenue. Additionally, the proposed project would include approximately 112 interior lights associated with private street lighting and private lighting systems.

3.3.5 Utilities and Infrastructure

The existing project site includes approximately 255,432 square feet of impervious surfaces and approximately 29,530 square feet of pervious surfaces. The proposed project would result in a net decrease in impervious surface coverage of approximately 37,910 square feet (13.3 percent) compared to existing conditions for a total of 217,522 square feet of impervious surface and 67,440 square feet of pervious surface.

As reflected on the plans dated July 21, 2023, the project would preserve an existing wall along the project site's northern boundary and would also install new 6-foot-high wooden fences along the project site's northern boundary. Additionally, 5-foot-high ornamental metal fencing would be installed along the proposed pool area.

3.3.5.1 Water and Wastewater

Water supply for the proposed project would be provided by the California Water Service (Cal Water) Livermore District, and wastewater services would be provided by the City of Livermore through the Public Works Department. The proposed project would install 8-inch-diameter water pipelines within the project site to connect to an existing 6-inch-diameter water main along South Livermore Avenue and an existing 8-inch-diameter water main along Dolores Street. Additionally, the project would install 6- and 8-inch-diameter sanitary sewer pipelines within the project site to connect to an existing 10-inch-diameter sanitary sewer main on South Livermore Avenue.

3.3.5.2 Stormwater

The City of Livermore Water Resources Division is responsible for stormwater infrastructure within city limits. Furthermore, the City is a member of the Alameda County Clean Water Program, which provides stormwater management for the area of the project site. Stormwater from the project site would drain towards the southern and western portions of the project site through proposed 8-, 12-, 15-, and 18-inch-diameter storm drains. From there, stormwater would drain to the existing 21-inch-diameter storm drain located along South Livermore Avenue and the existing 24-inch-diameter storm drain located along Pacific Avenue. Bioretention areas would also be incorporated into the landscape design of the proposed project to provide appropriate vegetation and water quality treatment in vegetated areas. Further, the on-site stormwater would be collected and treated consistent with Alameda County National Pollutant Discharge Elimination System (NPDES) C.3 requirements for Low Impact Development (LID).

3.3.5.3 Solid Waste

Solid waste and recycling pickup and disposal in Livermore is provided by Livermore Sanitation Inc., who will also serve the project site.

3.3.5.4 Fire Protection

Fire protection services and other life safety services are provided to the project site by the Livermore-Pleasanton Fire Department (Fire Department). The proposed project would include the installation of 10 new fire hydrants around the perimeter and within the project site and would install 4-inch-diameter fire service connections to connect fire protection infrastructure to the water supply system proposed for the project, which draws from existing water mains along South Livermore Avenue and Dolores Street. Fire rescue ladder pads would be installed throughout the project site, adjacent to proposed residential units, and sufficient turning radius would be provided for fire truck access on the project entrance driveway on Pacific Avenue and on internal roads.

3.3.5.5 Electricity and Natural Gas

Electricity services would be provided to the project site by Pacific Gas & Electric Company (PG&E). Overhead power lines currently exist along the northern boundary of the project site, along the project frontage with Dolores Street, and along the project frontage with South Livermore Avenue. PG&E has identified that during construction of the proposed project, 12 existing power poles would be removed and power lines along South Livermore Avenue, Dolores Street, and along the project site's northern boundary would be undergrounded. The project would be constructed using all electric appliances and no natural gas connections are proposed as part of the project.

3.3.6 Demolition, Grading, and Construction

The proposed project would include demolition of the existing buildings and surface parking lots on the project site. Construction debris, such as old foundations, pavements, and structures, would be collected and hauled off site for disposal. Approximately 1,400 tons of construction and demolition waste, 600 tons of trash, 100 tons of metal, 3,000 tons of asphalt, and 2,500 tons of concrete would be generated by the proposed project, and approximately 75-percent of those materials would be recycled. Approximately 5,624 cubic yards of soil would be imported to the project site in addition to 3,957 cubic yards of cut, for a total of 9,581 cubic yards of fill.

If approved, construction of the proposed project is anticipated to begin January 2026. Overall, construction of the proposed project is anticipated to last approximately 20 months and is anticipated to be fully operational and occupied by August 2027.

3.4 PROJECT APPROVALS

A number of permits and approvals would be required to allow development of the proposed project. As lead agency for consideration of the proposed project, the City of Livermore would be responsible for the majority of the approvals required for project development. Other agencies may also have some authority related to the proposed project and its approvals. A list of required permits and approvals, including the discretionary actions described above, that may be required by the City and other agencies is provided in **Table 1.A**.

Table 1.A: Anticipated Permits and Approvals for Project Implementation

Lead Agency	Permit/Approval
City of Livermore	● Environmental Review ● Sanitary Sewer Service Connection ● Subdivision ● Site Plan Design Review
Other Agencies and Public Utilities	
Bay Area Air Quality Management District (BAAQMD)	● Permits for on-site generators and other utility equipment
Livermore-Pleasanton Fire Department	● Review/approve fire truck access and site fire flow design
Pacific Gas and Electric Company (PG&E)	● Reconnection of electricity
California Water Service (Cal Water)	● Connection to water system

Source: Compiled by LSA (2024).

4.0 EVALUATION OF ENVIRONMENTAL IMPACTS

This chapter contains an analysis of each potentially significant environmental impact that has been identified for the proposed Pacific and Livermore Townhomes Project (project). The following discussion describes (1) how a determination of significance is made, (2) the environmental issues addressed in this chapter, (3) the context for the evaluation of cumulative effects, (4) the format of the topical issue section, and (5) an evaluation of each potentially significant impact in Sections 4.1 through 4.10.

DETERMINATION OF SIGNIFICANCE

The California Environmental Quality Act (CEQA) defines a significant effect as a substantial, or potentially substantial, adverse change in the environment.[1] The "environment" means the physical conditions, which exist in the area including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. The *State CEQA Guidelines* direct that this determination be based on scientific and factual data. The impact evaluation in this chapter is prefaced by criteria of significance, which are the thresholds for determining whether an impact is significant. These criteria of significance are based on the CEQA Guidelines and applicable City of Livermore (City) policies.

In determining whether a project's impacts are significant, an Environmental Impact Report (EIR) ordinarily compares the environmental conditions with the proposed project with existing environmental conditions, which are referred as the "baseline" for the impact analysis. This EIR compares the potential environmental impacts of the proposed project with the baseline environmental conditions in existence at the time that the Notice of Preparation (NOP) was published on March 3, 2025.

ISSUES ADDRESSED IN THE DRAFT EIR

Sections 4.1 through 4.10 of this chapter describe the environmental setting of the proposed project as evaluated in this EIR and the impacts that are expected to result from implementation of the proposed project. The following issues are evaluated in the EIR, and mitigation measures are proposed to reduce potential impacts, where appropriate:

4.1 Air Quality
4.2 Biological Resources
4.3 Cultural Resources
4.4 Energy
4.5 Greenhouse Gas Emissions
4.6 Hazards and Hazardous Materials
4.7 Land Use and Planning
4.8 Noise
4.9 Transportation
4.10 Tribal Cultural Resources

[1] Public Resources Code Section 21068.

ENVIRONMENTAL SETTING

This chapter was prepared in accordance with *State CEQA Guidelines* Section 15125, which states, "An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. The environmental setting will normally constitute the baseline physical conditions by which a Lead Agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to provide an understanding of the physical effects of the proposed project and its alternatives."

The NOP of the EIR for the proposed project was published on March 3, 2025. Each of the environmental topical sections in this chapter includes a discussion of physical conditions in the vicinity of the project site on or around this date.

CUMULATIVE ANALYSIS CONTEXT

CEQA defines cumulative impacts as "two or more individual effects which, when considered together, are considerable, or which can compound to increase other environmental impacts." Section 15130 of the *State CEQA Guidelines* requires that an EIR evaluate potential environmental impacts when the project's incremental effect is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of "reasonably foreseeable probable future" projects, per CEQA Section 15355. Cumulative impacts can result from a combination of the proposed project together with other closely related projects that cause an adverse change in the environment. Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

The methodology used for assessing cumulative impacts typically varies depending on the specific topic being analyzed. CEQA requires that cumulative impacts be discussed using either a list of past, present, and probable future projects producing related or cumulative impacts, or 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. This EIR uses both approaches to evaluate cumulative impacts, and the particular approach used depends on the topical area under consideration. Refer to the cumulative discussion in the individual topic sections for further discussion and the identification of the cumulative study area for each topic. An analysis of the cumulative impacts associated with the projects identified below and the proposed project is provided in the cumulative impact discussion under each individual impact category in Chapter 4.0.

- **Pacific Avenue Senior Housing Project:** This project is located at 3701 Pacific Avenue, approximately 0.2 miles southeast of the project site. The project would consist of a 140-unit senior apartment development currently being graded at the end of Pacific Avenue. The project would include primarily one-bedroom apartments, constructed in two phases, with approximately 79 affordable homes.[2]

- **East Avenue Townhomes Project:** This project is located at the southeast corner of East Avenue and Dolores Street, approximately 0.15 miles northeast of the project site. The project would consist of a 13-unit multi-family, townhome-style apartment complex. In addition to the units, which will range in size from three to four bedrooms, the project would include reconstruction of the curb, gutter, and sidewalk along the frontages of east Avenue and Dolores Street.[3]

- **Sunken Gardens Bicycle Pump Track Project:** This project is located at 3800 Pacific Ave adjected to the proposed Pacific Avenue Senior Housing Project. The project would construct a pump track for bikes, scooters, wheelchairs at the current skate park located at the end of Pacific Avenue south of East Avenue Middle School.

FORMAT OF ISSUE SECTIONS

Each environmental topical section comprises three primary parts: (1) Environmental Setting, (2) Regulatory Setting, and (3) Impacts and Mitigation Measures. An overview of the general organization and the information provided in the two parts is provided below:

- **Environmental Setting.** The Environmental Setting section for the environmental topic generally provides a description of the applicable physical setting (e.g., existing land uses, existing traffic conditions) for the project site.

- **Regulatory Setting.** The Regulatory Setting for the environmental topic provides an overview of applicable federal, State, and local laws, regulations, and plans or guidelines that are relevant to the proposed project.

- **Impacts and Mitigation Measures.** The Impacts and Mitigation Measures section for the environmental topic presents a discussion of the impacts that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine whether an impact is significant. The latter part of this section presents the impacts from the proposed project and mitigation measures, as appropriate. Cumulative impacts are also addressed.

Impacts are numbered and shown in bold type, and the corresponding mitigation measures are numbered and identified. Impacts and mitigation measures are numbered consecutively and begin

[2] Satellite Affordable Housing Associates. Pacific Avenue Senior Apartments 0 Phase I. Website: https://www.sahahomes.org/properties/pacific-avenue-senior-apartments-%E2%80%93-phase-i (accessed August 20, 2025).

[3] Livermore Vine. Livermore Planning Commission advances 13-unit housing development. Website: https://www.livermorevine.com/land-use/2025/06/24/livermore-planning-commission-advances-13-unit-housing-development/ (accessed August 20, 2025).

with an acronymic or abbreviated reference to the impact section (e.g., TRA for Transportation). The following symbols are used for individual topics:

- AIR Air Quality
- BIO Biological Resources
- CUL Cultural Resources
- EN Energy
- GHG Greenhouse Gas Emissions
- HAZ Hazards and Hazardous Materials
- LU Land Use and Planning
- NOI Noise
- TRA Transportation
- TCR Tribal Cultural Resources

Impacts are also categorized by type of impact, as follows: No Impact, Less than Significant, Less Than Significant with Mitigation Incorporated, and Potentially Significant.

4.1 AIR QUALITY

This section describes the environmental setting, including regulatory framework and existing conditions at the project site, and potentially significant environmental impacts of the proposed project related to air quality. **Appendices B and C** provide air quality modeling data.

4.1.1 Environmental Setting

An overview of existing air quality conditions in the region and in Livermore is discussed below.

4.1.1.1 Air Pollutants and Health Effects

Both State and federal governments have established health-based ambient air quality standards (AAQS) for six criteria air pollutants: Carbon Monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Two criteria pollutants, O_3 and NO_2, are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as CO, SO_2, and Pb are considered local pollutants that tend to accumulate in the air locally.

The primary pollutants of concern in the project area are O_3 and suspended particulate matter. Significance thresholds established by an air district are used to manage total regional and local emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual development projects that would contribute to regional and local emissions and could adversely affect or delay the air basin's projected attainment target goals for nonattainment[1] criteria pollutants.

Because of the conservative nature of the significance thresholds, and the basin-wide context of individual development project emissions, there is no direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like nitrogen oxides (NO_X) and reactive organic gases (ROGs).

Further, by its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to individually result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, the air districts have considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be

[1] Nonattainment is when one or more pollutants in an area exceed the limits set by the national ambient air quality standards (NAAQS) and would therefore be considered unhealthy due to excessive levels of pollutants like ozone, particulate matter, or other regulated substances. These areas are then designated as nonattainment by the United States Environmental Protection Agency.

cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

Occupants of facilities such as schools, daycare centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. These populations are referred to as sensitive receptors.

Air pollutants and their health effects, and other air pollution-related considerations are summarized in **Table 4.1.A** and are described in more detail below.

Ozone. Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving ROGs and NO_X. The main sources of ROGs and NO_X, often referred to as ozone precursors, are combustion processes (including combustion in motor vehicle engines) and the evaporation of solvents, paints, and fuels. In the San Francisco Bay Area (Bay Area), automobiles are the single largest source of ozone precursors. Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Carbon Monoxide.CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles. CO transport is limited; it disperses with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations near congested roadways or intersections may reach unhealthful levels that adversely affect local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impair central nervous system function, and induce angina (chest pain) in persons with serious heart disease. Extremely high levels of CO, such as those generated when a vehicle is running in an unventilated garage, can be fatal.

Table 4.1.A: Sources and Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Ozone (O_3)	• Precursor sources[1]: motor vehicles, industrial emissions, and consumer products.	• Respiratory symptoms. • Worsening of lung disease leading to premature death. • Damage to lung tissue. • Crop, forest, and ecosystem damage. • Damage to a variety of materials, including rubber, plastics, fabrics, paints, and metals.
Particulate Matter Less than 2.5 Microns in Aerodynamic Diameter ($PM_{2.5}$)	• Cars and trucks (especially diesels). • Fireplaces, woodstoves. • Windblown dust from roadways, agriculture, and construction.	• Premature death. • Hospitalization for worsening of cardiovascular disease. • Hospitalization for respiratory disease. • Asthma-related emergency room visits. • Increased symptoms, increased inhaler usage.
Particulate Matter Less than 10 Microns in Aerodynamic Diameter (PM_{10})	• Cars and trucks (especially diesels). • Fireplaces, woodstoves. • Windblown dust from roadways, agriculture, and construction.	• Premature death and hospitalization, primarily for worsening of respiratory disease. • Reduced visibility and material soiling.
Nitrogen Oxides (NO_x)	• Any source that burns fuels such as cars, trucks, construction and farming equipment, and residential heaters and stoves.	• Lung irritation. • Enhanced allergic responses.
Carbon Monoxide (CO)	• Any source that burns fuels such as cars, trucks, construction and farming equipment, and residential heaters and stoves.	• Chest pain in patients with heart disease. • Headache. • Light-headedness. • Reduced mental alertness.
Sulfur Oxides (SO_X)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Worsening of asthma: increased symptoms, increased medication usage, and emergency room visits.
Lead (Pb)	• Contaminated soil.	• Impaired mental functioning in children. • Learning disabilities in children. • Brain and kidney damage.
Toxic Air Contaminants (TACs)	• Cars and trucks (especially diesels). • Industrial sources, such as chrome platers. • Neighborhood businesses, such as dry cleaners and service stations. • Building materials and products.	• Cancer. • Reproductive and developmental effects. • Neurological effects.

Source: Common Air Pollutants (California Air Resources Board 2025).

[1] Ozone is not generated directly by these sources. Rather, chemicals emitted by these precursor sources react with sunlight to form ozone in the atmosphere.

Particulate Matter. Particulate matter is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from manmade and natural sources. Particulate matter is categorized in two size ranges: PM_{10} for particles less than 10 microns in size and $PM_{2.5}$ for particles less than 2.5 microns in diameter. In the Bay Area, motor vehicles generate about half of the air basin's particulates through tailpipe emissions as well as brake pad, tire wear, and entrained road dust. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of such fine particulates. These fine particulates are small enough to

be inhaled into the deepest parts of the human lung and can cause adverse health effects. According to the California Air Resources Board (CARB), studies in the United States and elsewhere have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks, and studies of children's health in California have demonstrated that particle pollution may significantly reduce lung function growth in children.[2] Statewide attainment of particulate matter standards could reduce premature deaths, hospital admissions for cardiovascular and respiratory disease and asthma-related emergency room visits, and episodes of respiratory illness in California.

Nitrogen Dioxide. NO_2 is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 may be visible as a coloring component on high-pollution days, especially in conjunction with high ozone levels. NO_2 decreases lung function and may reduce resistance to infection.

Sulfur Dioxide. SO_2 is a colorless, acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. SO_2 has the potential to damage materials and can cause health effects at high concentrations. It can irritate lung tissue and increase the risk of acute and chronic respiratory disease. SO_2 also reduces visibility and the level of sunlight at the ground surface.

Lead. Lead is a metal found naturally in the environment and in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery factories.

Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the United States Environmental Protection Agency (EPA) established national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The EPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of EPA regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.

Toxic Air Contaminants. In addition to the criteria pollutants discussed above, TACs are another group of pollutants of concern. Some examples of TACs include benzene, butadiene, formaldehyde, and hydrogen sulfide. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

[2] California Air Resources Board (CARB). 2020. *Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10})*. Website: ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health (accessed April 2025).

TACs do not have ambient air quality standards but are regulated by the EPA and the CARB. In 1998, the CARB identified particulate matter from diesel-fueled engines as a TAC. The CARB has completed a risk management process that identified potential cancer risks for a range of activities and land uses that are characterized by use of diesel fueled- engines.[3] High volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (e.g., distribution centers and truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

The Bay Area Air District (Air District) regulates TACs using a risk-based approach. This approach uses a health risk assessment to determine what sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis in which human health exposure to toxic substances is estimated and considered together with information regarding the toxic potency of the substances to provide a quantitative estimate of health risks.[4] As part of ongoing efforts to identify and assess potential health risks to the public, the Air District has collected and compiled air toxic emission data from industrial and commercial sources of air pollution throughout the Bay Area. Monitoring data and emission inventories of TACs help the Air District determine health risk to Bay Area residents.

Ambient monitoring concentrations of TACs indicate that pollutants emitted primarily from motor vehicles (1,3-butadiene and benzene) account for a substantial portion of the ambient background risk in the Bay Area.[5] According to the Air District, ambient benzene levels declined dramatically in 1996 with the advent of Phase 2 reformulated gasoline. Due to this reduction, the calculated average cancer risk based on monitoring results has also been reduced.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate material (DPM) is emitted from mobile sources—primarily off-road sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units as well as trucks and buses traveling on freeways and local roadways. Agricultural and mining equipment is not commonly used in urban parts of the Bay Area, while construction equipment typically operates for a limited time at various locations. As a result, the readily identifiable locations where DPM is emitted in the Bay Area include high-traffic roadways and other areas with substantial truck traffic.

Although not specifically monitored, recent studies indicate that exposure to DPM may contribute significantly to a cancer risk (a risk of approximately 500 to 700 in 1,000,000) that is greater than all

3 CARB. 2000a. *Fact Sheet – California's Plan to Reduce Diesel Particulate Matter Emissions*. October.

4 In general, a health risk assessment is required if the Air District concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggests a potential public health risk. Such an assessment generally evaluates chronic, long-term effects, including the increased risk of cancer as a result of exposure to one or more TACs.

5 Bay Area Air Quality Management District. 2015. *Toxic Air Contaminant Control Program Annual Report, Volume 1.* May.

other measured TACs combined.[6] The CARB Diesel Risk Reduction Plan is intended to substantially reduce DPM emissions and associated health risks through introduction of ultra-low-sulfur diesel fuel—a step already implemented—and cleaner-burning diesel engines.[7] The technology for reducing DPM emissions from heavy-duty trucks is well established, and both State and federal agencies are moving aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions. The CARB anticipated that by 2020, average statewide DPM concentrations would decrease by 85 percent from levels in 2000 with full implementation of the Diesel Risk Reduction Plan, meaning that the statewide health risk from DPM was expected to decrease from 540 cancer cases in 1,000,000 to 21.5 cancer cases in 1,000,000. It is likely that the Bay Area cancer risk from DPM decreased by a similar factor.

High-Volume Roadways. Air pollutant exposures and their associated health burdens vary considerably within places in relation to sources of air pollution. Motor vehicle traffic is perhaps the most important source of intra-urban spatial variation in air pollution concentrations. Air quality research consistently demonstrates that pollutant levels are substantially higher near freeways and busy roadways, and human health studies have consistently demonstrated that children living within 100 to 200 meters (328 to 656 feet) of freeways or busy roadways have reduced lung function and higher rates of respiratory disease. At present, it is not possible to attribute the effects of roadway proximity on non-cancer health effects to one or more specific vehicle types or vehicle pollutants. Engine exhaust, from diesel, gasoline, and other combustion engines, is a complex mixture of particles and gases, with collective and individual toxicological characteristics.

4.1.1.2 National and State Ambient Air Quality Standards

Both the EPA and the CARB have established ambient air quality standards for the common pollutants CO, O_3, NO_2, SO_2, Pb, and suspended particulate matter. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. These ambient air quality standards are levels of contaminants that avoid specific adverse health effects associated with each pollutant.

Federal standards include both primary and secondary standards. Primary standards establish limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, and damage to animals, crops, vegetation, and buildings.[8] State and federal standards for the criteria air pollutants are listed in **Table 4.1.B**.

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6 *Ibid.*

7 CARB. 2000b. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October. Prepared by the Stationary Source Division and Mobile Source Control Division. Website: https://ww2.arb.ca.gov/sites/default/files/classic/diesel/documents/rrpfinal.pdf (accessed April 2025).

8 United States Environmental Protection Agency (EPA). 2023. Criteria Air Pollutants. October. Website: www.epa.gov/criteria-air-pollutants (accessed April 2025).

Table 4.1.B: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		Federal Standards [2]		
		Concentration [3]	Method [4]	Primary [3,4]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1-Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.07 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM_{10})[9]	24-Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		–		
Fine Particulate Matter ($PM_{2.5}$)[9]	24-Hour	–		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	9.0 µg/m³ [o]	12.0 µg/m³ [o]	
Carbon Monoxide (CO)	1-Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	–	Non-Dispersive Infrared Photometry (NDIR)
	8-Hour	9 ppm (10 mg/m³)		9 ppm (10 mg/m³)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m³)		–	–	
Nitrogen Dioxide (NO_2)[10]	1-Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemi-luminescence	100 ppb (188 µg/m³)	–	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.03 ppm (57 µg/m³)		53 ppb (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1-Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)[k]	–	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)
	3-Hour	–		–	0.5 ppm (1300 µg/m³)	
	24-Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[k]	–	
Lead (Pb)[12,13]	30-Day Average	1.5 µg/m³	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m³ (for certain areas)[l]	Same as Primary Standard	
	Rolling 3-Month Average	–		0.15 µg/m³		
Visibility-Reducing Particles [14]	8-Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24-Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride [12]	24-Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Source: Ambient Air Quality Standards (California Air Resources Board 2024).

Table notes continued on the following page.

[1] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact USEPA for further clarification and current national policies.

[3] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4] Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

[5] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[6] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[7] Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.

[8] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[9] On February 7, 2024, the national annual $PM_{2.5}$ standard was lowered from 12.0 µg/m^3 to 9.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[10] To attain the 1-hour national standard, the three-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[11] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the three-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[12] The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[13] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[14] In 1989, the CARB converted both the general Statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the Statewide and Lake Tahoe Air Basin standards, respectively.

°C = degrees Celsius
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
mg/m^3 = milligrams per cubic meter
ppb = parts per billion
ppm = parts per million
EPA = United States Environmental Protection Agency

4.1.1.3 Existing Climate and Air Quality

The following provides a discussion of the local and regional air quality and climate in the Livermore area.

Regional and Local Air Quality. Livermore is in the eastern region of the San Francisco Bay Area Air Basin (Air Basin), which is a large shallow air basin ringed by hills that taper into a number of sheltered valleys around the perimeter. Two primary atmospheric outlets exist. One is through the strait known as the Golden Gate, which is a direct outlet to the Pacific Ocean. The second extends to the northeast, along the west delta region of the Sacramento and San Joaquin rivers.

Livermore is within the jurisdiction of the Air District, which regulates air quality in the Bay Area. Air quality conditions in the Bay Area have improved significantly since the Air District's creation in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen dramatically. Neither State nor national AAQS of the following chemicals have been violated in recent decades: NO_2, SO_2, sulfates, Pb, hydrogen sulfide, and vinyl chloride. Those exceedances of air quality standards that do occur primarily happen during meteorological conditions conducive to high pollution levels, such as cold, windless nights or hot, sunny summer afternoons.

O_3 levels, measured by peak concentrations and the number of days over the State 1-hour standard, have declined substantially as a result of aggressive programs by the Air District and other regional, State, and federal agencies. The reduction of peak concentrations represents progress in improving public health; however, the Bay Area still exceeds the State standard for 1-hour O_3 as well as the State and federal 8-hour standards. Levels of PM_{10} have exceeded State standards two of the last 3 years, and the area is considered a nonattainment area for this pollutant relative to the State standards. The Bay Area is an unclassified area for the federal PM_{10} standard. On February 7, 2024, the EPA strengthened the NAAQS for $PM_{2.5}$ by revising the primary (health-based) annual standard from 12 micrograms per cubic meter ($\mu g/m^3$) to 9 $\mu g/m^3$; however, a new attainment designation has not been issued.

No exceedances of the State or federal CO standards have been recorded at any of the region's monitoring stations since 1991. The Bay Area is currently considered a maintenance area for State and federal CO standards.

Local Climate and Air Quality. Air quality is a function of both local climate and local sources of air pollution. Air quality is the balance of the natural dispersal capacity of the atmosphere and the emissions of air pollutants from human uses of the environment. Two meteorological factors affect air quality in Livermore: wind and temperature. Winds affect the direction of transport of any air pollution emissions and wind also controls the volume of air into which pollution is mixed in a given period of time. While winds govern horizontal mixing processes, temperature inversions determine the vertical mixing depth of air pollutants.

Livermore is in Alameda County, which lies east of the San Francisco Bay, bounded by Contra Costa County to the north, San Joaquin County to the east, and Santa Clara County to the south. Along the county's western coast, temperatures are moderated by the Bay, which can act as a heat source

during cold weather, or cool the air by evaporation during warm weather. It is generally sunnier farther from the coast, although partly cloudy skies are common throughout the summer. Average summer temperatures are mild overnight and moderate during the day. Winter temperatures are cool overnight and mild during the day. Highest temperatures are more common inland. Wind speeds vary throughout the county, with the strongest gusts along the western coast, often aided by dominant westerly winds and a bay-breeze effect. Rainfall totals average 14 to 23 inches per year, with the highest totals in the northern end of the county and atop the Oakland-Berkeley hills.[9]

O_3 and fine particle pollution, or $PM_{2.5}$, are the major regional air pollutants of concern in the San Francisco Bay Area. O_3 is primarily a problem in the summer, and fine particle pollution a problem in the winter.[10]

In Alameda County west of the East Bay hills, O_3 rarely exceeds health standards because the area is adjacent to San Francisco Bay, which tends to keep temperatures well below prime levels for ozone formation. $PM_{2.5}$ is a more significant issue in this region due to cool winter nights with light winds, wood smoke, and occasional pollution transport from the Livermore Valley to the east.

Eastern Alameda County has the highest O_3 levels in the Bay Area, with summer afternoon temperatures frequently approaching triple digits, spurring O_3 levels to exceed health standards. In winter, $PM_{2.5}$ can be transported westward through the Altamont Pass from the Central Valley where it adds to wood smoke levels, causing health standards to be exceeded.

Air Quality Monitoring Results. Air quality monitoring stations are located throughout the nation and are maintained by the local air pollution control district and state air quality regulating agencies. Ambient air data collected at permanent monitoring stations are used by the EPA to identify regions as attainment or nonattainment depending on whether the regions met the requirements stated in the primary National Ambient Air Quality Standards (NAAQS). Attainment areas are required to maintain their status through moderate, yet effective, air quality maintenance plans. Nonattainment areas are imposed with additional restrictions as required by the EPA. In addition, different classifications of attainment (e.g., marginal, moderate, serious, severe, and extreme) are used to classify each air basin in the state on a pollutant-by-pollutant basis. Different classifications have different mandated attainment dates and are used as guidelines to create air quality management strategies to improve air quality and comply with the NAAQS by the attainment date. A region is determined to be unclassified when the data collected from the air quality monitoring stations do not support a designation of attainment or nonattainment, due to lack of information, or a conclusion cannot be made with the available data. The San Francisco Bay Area Air Basin's attainment status for each criteria pollutant is listed in **Table 4.1.C**.

9 Bay Area Air Quality Management District. 2017a. *Climate and Air Quality in Alameda County.* April 21. Website: https://www.baaqmd.gov/en/about-the-air-district/in-your-community/alameda-county (accessed April 2025).

10 *Ibid*.

Table 4.1.C: San Francisco Bay Area Basin Attainment Status

Pollutant	Averaging Time	California Standards	Attainment Status	National Standards	Attainment Status
Ozone (O_3)	8-Hour	0.070 ppm	Nonattainment	0.070 ppm	Nonattainment
	1-Hour	0.09 ppm	Nonattainment	Not Applicable	Not Applicable
Carbon Monoxide (CO)	8-Hour	9.0 ppm	Attainment	9 ppm	Attainment
	1-Hour	20 ppm	Attainment	35 ppm	Unclassified/ Attainment
Nitrogen Dioxide (NO_2)	1-Hour	0.18 ppm	Attainment	100 ppb	Unclassified/ Attainment
	Annual	0.030 ppm	Attainment	0.053 ppm	Unclassified
Sulfur Dioxide (SO_2)	24-Hour	0.04 ppm	Attainment	Not Applicable	Not Applicable
	1-Hour	0.25 ppm	Attainment	75 ppb	Unclassified/ Attainment
Particulate Matter (PM_{10})	Annual	20 µg/m^3	Nonattainment	Not Applicable	Not Applicable
	24-Hour	50 µg/m^3	Nonattainment	150 µg/m^3	Unclassified
Fine Particulate Matter ($PM_{2.5}$)	Annual	12 µg/m^3	Nonattainment	9 µg/m^3	Unclassified/ Attainment
	24-Hour	Not Applicable	Not Applicable	35 µg/m^3 [j]	Nonattainment
Lead (Pb)	30-Day Average	1.5 µg/m^3	Not Applicable	Not Applicable	Attainment
	Rolling 3-Month Average [n]	Not Applicable	Not Applicable	0.15 µg/m^3	Unclassified/ Attainment

Source: Bay Area Attainment Status (Bay Area Air Quality Management District 2023).
µg/m^3 = micrograms per cubic meter
ppb = parts per billion
ppm = parts per million

The CARB and the EPA maintain ambient air quality monitoring stations within California. The air quality monitoring station closest to the project site is the 793 Rincon Avenue monitoring station in Livermore, which monitors criteria air pollutant data. The Livermore air quality monitoring station does not monitor CO, PM_{10}, or SO_2; therefore, the Owen's Court monitoring station in Pleasanton was used for CO data, the 2975 Treat Boulevard monitoring station in Concord was used for PM_{10} data, and the 1100 21st Street monitoring station in Oakland was used for SO_2 data. The air quality trends from these stations are used to represent the ambient air quality in the project area. Ambient air quality in the project area from 2021 to 2023 (the most recent available period) is shown in **Table 4.1.D**.

Table 4.1.D: Ambient Air Quality at the Nearest Air Quality Monitoring Station (793 Rincon Avenue, Livermore)

Pollutant	Standard	2021	2022	2023
Carbon Monoxide (CO)[1]				
Maximum 1-hour concentration (ppm)		1.3	1.2	16.5
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		1.0	0.8	3.7
Number of days exceeded:	State: > 9 ppm	0	0	0
	Federal: > 9 ppm	0	0	0
Ozone (O_3)				
Maximum 1-hour concentration (ppm)		0.113	0.101	0.088
Number of days exceeded:	State: > 0.09 ppm	3	2	0
Maximum 8-hour concentration (ppm)		0.086	0.078	0.076
Number of days exceeded:	State: > 0.07 ppm	9	2	2
	Federal: > 0.07 ppm	9	2	1
Coarse Particulates (PM_{10})[2]				
Maximum 24-hour concentration (µg/m^3)		26.0	35.0	39.7
Number of days exceeded:	State: > 50 µg/m^3	0	0	0
	Federal: > 150 µg/m^3	0	0	0
Annual arithmetic average concentration (µg/m^3)		12.1	12.1	ND
Exceeded for the year:	State: > 20 µg/m^3	No	No	No
	Federal: > 50 µg/m^3	No	No	No
Fine Particulates ($PM_{2.5}$)				
Maximum 24-hour concentration (µg/m^3)		43.5	25.9	43.2
Number of days exceeded:	Federal: > 35 µg/m^3	2	0	1
Annual arithmetic average concentration (µg/m^3)		8.0	9.7	7.3
Exceeded for the year:	State: > 12 µg/m^3	No	No	No
	Federal: > 15 µg/m^3	No	No	No
Nitrogen Dioxide (NO_2)				
Maximum 1-hour concentration (ppm)		0.037	0.042	0.036
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.006	0.008	0.006
Exceeded for the year:	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO_2)[3]				
Maximum 1-hour concentration (ppm)		0.011	0.008	0.002
Number of days exceeded:	State: > 0.25 ppm	0	0	0
Maximum 24-hour concentration (ppm)		0.001	0.001	0.001
Number of days exceeded:	State: > 0.04 ppm	0	0	0
	Federal: > 0.14 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.0003	0.0001	0.0004
Exceeded for the year:	Federal: > 0.030 ppm	No	No	No

Sources: California Air Resources Board and United States Environmental Protection Agency (2024).

[1] Data is from the Owens Court air quality monitoring station in Pleasanton.

[2] Data is from the 2975 Treat Boulevard air quality monitoring station in Concord.

[3] Data is from the 1100 21st Street air quality monitoring station in Oakland.

µg/m^3 = micrograms per cubic meter

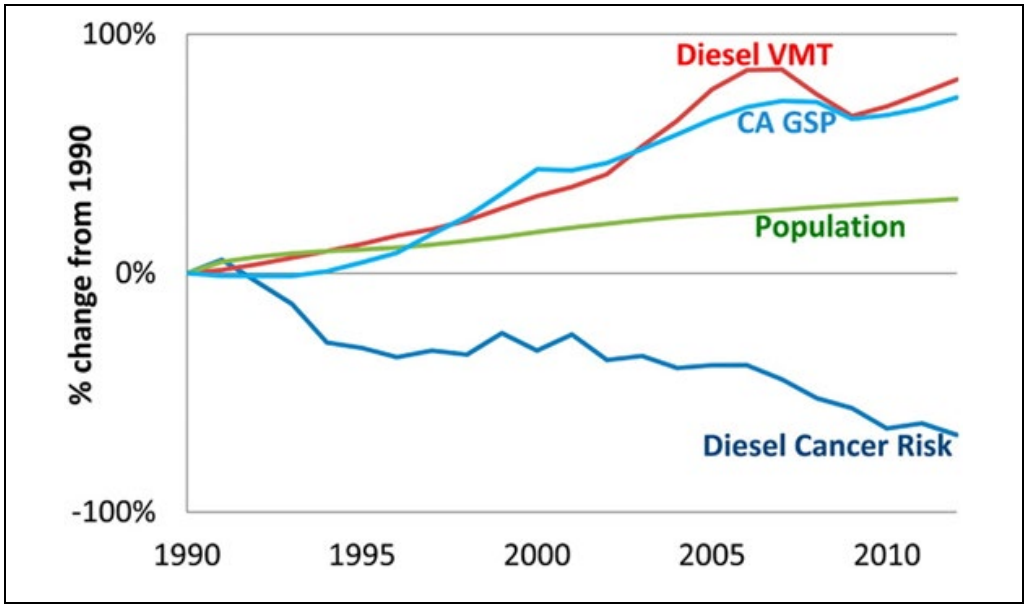
ND = No data. There were insufficient (or no) data results to determine the value.

ppm = parts per million

Pollutant monitoring results indicate that air quality in the Alameda County area has generally been good. As indicated in the monitoring results, 1-hour O_3 concentrations exceeded the State standard three times in 2021 and twice in 2022 and the 8-hour O_3 concentrations exceeded the State standards nine times in 2021, twice in 2022, and twice in 2023 and exceeded the federal standards nine times in 2021, twice in 2022, and once in 2023. In addition, the federal $PM_{2.5}$ standard was exceeded twice in 2021 and once in 2023. The CO, PM_{10}, NO_2, and SO_2 standards were not exceeded in this area during the 3-year period.

Toxic Air Contaminant Trends. In 1984, the CARB adopted regulations to reduce TAC emissions from mobile and stationary sources, as well as consumer products. A CARB study showed that ambient concentrations and emissions of the seven TACs responsible for the most cancer risk from airborne exposure declined by 76 percent between 1990 and 2012.[11] Concentrations of DPM, a key TAC, declined by 68 percent between 1990 and 2012, despite a 31 percent increase in State population and an 81 percent increase in diesel vehicle miles traveled, as shown on **Figure 4.1-1**. The study also found that the significant reductions in cancer risk to California residents from the implementation of air toxic controls are likely to continue.

Figure 4.1-1: California Population, Gross State Product, Diesel Cancer Risk, and Diesel Vehicle Miles Traveled Regulatory Context



Source: Ambient and Emission Trends of Toxic Air Contaminants in California (Propper, Ralph, et al. 2015).
GSP = gross state product
VMT = vehicle miles traveled

[11] Propper, Ralph, Patrick Wong, Son Bui, Jeff Austin, William Vance, Alvaro Alvarado, Bart Croes, and Dongmin Luo. 2015. Ambient and Emission Trends of Toxic Air Contaminants in California. *American Chemical Society: Environmental Science & Technology*. Website: pubs.acs.org/doi/full/10.1021/acs.est.5b02766 (accessed April 2025).

The EPA and the CARB regulate direct emissions from motor vehicles. The Air District is the regional agency primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as monitoring ambient pollutant concentrations.

4.1.2 Regulatory Setting

The Air District is primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development) as well as for monitoring ambient pollutant concentrations. The Air District's jurisdiction encompasses seven counties (Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara) and portions of Solano and Sonoma counties. The EPA and the CARB regulate direct emissions from motor vehicles.

Federal, State, and local laws, regulations, plans, or guidelines that are designed to reduce air quality impacts and are potentially applicable to the proposed project are summarized below.

4.1.2.1 Federal Regulations

At the federal level, the EPA has been charged with implementing national air quality programs. The EPA's air quality mandates are drawn primarily from the federal Clean Air Act (FCAA), discussed below.

Federal Clean Air Act. The FCAA was enacted in 1963 and was amended in 1970, 1977, and 1990. The FCAA required the EPA to establish primary and secondary NAAQS and required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The FCAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emission inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The EPA has responsibility to review all state SIPs to determine conformity with the mandates of the FCAA and determine if implementation will achieve air quality goals. If the EPA determines a SIP to be inadequate, a Federal Implementation Plan may be prepared for the nonattainment area, which imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated timeframe may result in sanctions on transportation funding and stationary air pollution sources in the air basin.

The EPA is also required to develop National Emission Standards for Hazardous Air Pollutants, which are defined as those that may reasonably be anticipated to result in increased deaths or serious illness, and that are not already regulated.

4.1.2.2 State Regulations

The CARB is the agency responsible for the coordination and oversight of State and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA), as discussed below.

California Clean Air Act. In 1988, the CCAA required that all air quality districts in the State endeavor to achieve and maintain California Ambient Air Quality Standards (CAAQS) for CO, O_3, SO_2, and NO_2 by the earliest practical date. The CCAA provides districts with authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. A Clean Air Plan shows how a district would reduce emissions to achieve air quality standards. Generally, the State standards for these pollutants are more stringent than the national standards.

California Air Resources Board. The CARB is the State's clean air agency. The CARB's goals are to attain and maintain healthy air quality, protect the public from exposure to TACs, and oversee compliance with air pollution rules and regulations.

Assembly Bill 2588 Air Toxics "Hot Spots" Information and Assessment Act. Under Assembly Bill (AB) 2588, stationary sources of air pollutants are required to report the types and quantities of certain substances that their facilities routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, identify facilities having localized impacts, determine health risks, and notify nearby residents of significant risks.

The California Air Resources Board Handbook. The CARB has developed an Air Quality and Land Use Handbook[12] (CARB Handbook), which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. According to the CARB Handbook, air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to -high traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California. The CARB Handbook recommends that county and city planning agencies strongly consider proximity to these sources when finding new locations for sensitive land uses such as homes, medical facilities, daycare centers, schools, and playgrounds.

Land use designations with air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the CARB Handbook include taking steps to avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day;
- Within 1,000 feet of a major service and maintenance rail yard;
- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries;

12 CARB. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB Handbook). April.

- Within 300 feet of any dry cleaning operation (for operations with two or more machines, provide 500 feet); and

- Within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

The CARB Handbook specifically states that its recommendations are advisory and acknowledges land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

The recommendations are generalized and do not consider site-specific meteorology, freeway truck percentages, or other factors that influence risk for a particular project site. The purpose of this guidance is to further examine project sites for actual health risk associated with the location of new sensitive land uses.

4.1.2.3 Regional Regulations

Bay Area Air District. The Bay Area Air District, formally the Bay Area Air Quality Management District, seeks to attain and maintain air quality conditions in the Air Basin through a comprehensive program of planning, regulation, enforcement, technical innovation, and education. The clean air strategy includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. The Air District also inspects stationary sources and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by law.

Clean Air Plan. The Clean Air Plan guides the region's air quality planning efforts to attain the CAAQS.[13] The Air District's 2017 Clean Air Plan, which was adopted on April 19, 2017 by the Air District's Board of Directors, is the current Clean Air Plan that contains district-wide control measures to reduce O_3 precursor emissions (e.g., ROGs and NO_x), particulate matter, and greenhouse gas (GHG) emissions.

The Bay Area 2017 Clean Air Plan:

- Describes the Air District's plan towards attaining all State and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities.

- Defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050.

[13] Bay Area Air Quality Management District. 2017b. *Final 2017 Clean Air Plan*. April 19, 2017. Website: www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en (accessed April 2025).

- Provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve GHG reduction targets.

- Includes a wide range of control measures designed to decrease emissions of air pollutants that are most harmful to Bay Area residents (e.g., particulate matter, O_3, and TACs); to reduce emissions of methane (CH_4) and other "Super-GHGs" that are potent climate pollutants in the near term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

CARE Program. The Community Air Risk Evaluation (CARE) program began in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area. The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages community involvement and input. The technical analysis portion of the CARE program is being implemented in three phases that include an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TACs, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and a high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area.

For commercial and industrial sources, the Air District regulates TACs using a risk-based approach. This approach uses a Health Risk Assessment (HRA) to determine what sources and pollutants to control as well as the degree of control. An HRA is an analysis in which human health exposure to toxic substances is estimated and considered together with information regarding the toxic potency of the substances, in order to provide a quantitative estimate of health risks.[14] As part of ongoing efforts to identify and assess potential health risks to the public, the Air District has collected and compiled air toxic emission data from industrial and commercial sources of air pollution throughout the Bay Area. The Air District has identified seven impacted communities,[15] with Livermore identified as an affected community.[16]

CEQA Air Quality Guidelines. The Air District's CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended

14 In general, a health risk assessment is required if the Bay Area Air District concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggests a potential public health risk. Such an assessment generally evaluates chronic, long-term effects, including the increased risk of cancer as a result of exposure to one or more toxic air contaminants.

15 The seven impacted communities include Richmond/San Pablo; eastern San Francisco, including Treasure Island; San Jose; western Alameda County; Concord; Vallejo; and Pittsburg/Antioch.

16 Bay Area Air Quality Management District. 2014. *Identifying Areas with Cumulative Impacts from Air Pollution in the San Francisco Bay Area Version 2*. March.

thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and GHG emissions.

In 2023, the Air District published an updated version of the CEQA Guidelines.[17] The Air District's CEQA Guidelines include thresholds to evaluate project impacts to protectively evaluate the potential effects of the project on air quality. These protective thresholds are appropriate in the context of the size, scale, and location of the proposed project.

4.1.2.4 Local Regulations

City of Livermore General Plan. The Open Space and Conservation chapter of the City's General Plan includes various goals, objectives, and policies related to air quality. Objectives and policies applicable to the proposed project include:

Objective OSC-6.1 Minimize air pollution emissions.

Policy P1 The City shall require project developers to develop and implement a construction-period air pollution control plan, consistent with dust and emission-abatement actions outlined in the CEQA handbook of the Bay Area Air Quality Management District.

Policy P2 The City shall prohibit the location of sensitive receptors (e.g., residential uses, schools, hospitals) in the vicinity of industries that generate toxic emissions; conversely, prohibit the location of industries that generate toxic emissions in the vicinity of sensitive receptors.

Policy P4 All industrial uses within Livermore shall meet regional, State and federal air pollution standards.

Policy P5 The City shall attempt to increase the employment to population ratio to reduce commuting rates and associated vehicle related pollution emissions. The City shall approve only those development proposals, which are designed and located to minimize energy consumption and adverse impacts on air, land and water resources. High-density, transit oriented developments shall be strongly encouraged and promoted through the use of specific planning, density transfer, the planned development concept, and zoning designations.

City of Livermore 2022 Climate Action Plan (CAP). The City of Livermore adopted the 2022 CAP on November 28, 2022, which provided a comprehensive update to the City's original 2012 CAP. The Purpose of the CAP is to protect public health and the environment, foster a green economy, and improve quality of life for Livermore residents, providing strategies to reduce GHG emissions, adapt

[17] Bay Area Air Quality Management District. 2023. *California Environmental Quality Act, Air Quality Guidelines*. April 20.

to extreme weather, deploy reliable and renewable energy, conserve habitat and biodiversity, and ensure equity and sustainability.[18]

4.1.3 Impacts and Mitigation Measures

The following describes the potential impacts of the proposed project related to air quality. This section begins with the criteria of significance that establish the thresholds for determining whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as necessary.

4.1.3.1 Significance Criteria

Implementation of the proposed project would have a significant impact related to air quality under the following conditions:

AIR-1 Conflict with or obstruct implementation of the applicable air quality plan;

AIR-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;

AIR-3 Expose sensitive receptors to substantial pollutant concentrations;

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

4.1.3.2 Project Impacts

The following section provides an evaluation and analysis of the potential impacts of the proposed project for each of the criteria of significance listed above and potential cumulative impacts.

AIR-1 The project would not conflict with or obstruct implementation of the applicable air quality plan.

Less Than Significant Impact with Mitigation Incorporated. The applicable air quality plan is the Air District's 2017 Clean Air Plan (Clean Air Plan),[19] which was adopted on April 19, 2017. The Clean Air Plan is a comprehensive plan to improve Bay Area air quality and protect public health. The Clean Air Plan defines control strategies to reduce emissions and ambient concentrations of air pollutants; safeguard public health by reducing exposure to air pollutants that pose the greatest heath risk, with an emphasis on protecting the communities most heavily affected by air pollution; and reduce GHG emissions to protect the climate. Consistency with the Clean Air Plan can be determined if the project: (1) supports the goals of the Clean Air Plan, (2) includes applicable control measures from

[18] City of Livermore. Climate Action Plan. Website: https://www.livermoreca.gov/departments/community-development/climate-action-plan-draft (accessed August 11, 2025).

[19] Bay Area Air Quality Management District. 2017b. *Clean Air Plan*. April 19.

the Clean Air Plan, and (3) would not disrupt or hinder implementation of any control measures from the Clean Air Plan.

Clean Air Plan Goals. The primary goals of the Clean Air Plan are to attain air quality standards, reduce population exposure, and protect public health in the Bay Area, and reduce GHG emissions and protect climate.

The Air District has established significance thresholds for project construction and operational impacts at a level at which the cumulative impact of exceeding these thresholds would have an adverse impact on the region's attainment of air quality standards. The health and hazards thresholds were established to help protect public health. As discussed in Section AIR-2 below, the proposed project includes both construction and operation activities that would potentially result in fugitive dust that could lead to potentially significant impacts.

Impact AIR-1: The proposed project would result in a potentially significant impact related to fugitive dust in excess of applicable air quality thresholds.

As such, **Mitigation Measure AIR-1**, shall be required to reduce potential impacts related to fugitive dust.

Mitigation Measure AIR-1

Basic Best Management Practices. In order to meet the Bay Area Air District (Air District) fugitive dust threshold, the following Basic Best Management Practices shall be implemented by the project applicant during all phases of the project construction period, including site preparation, demolition, grading, and vertical construction of residences:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used

- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Unpaved roads providing access to sites located 100 feet or farther from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.
- Publicly visible signs shall be posted with the telephone number and name of the person to contact at the City of Livermore regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.

With implementation of **Mitigation Measure AIR-1**, the proposed project would be required to implement basic best management practices, such as watering exposed surfaces and reducing vehicle speeds, to reduce fugitive dust during construction. As such, impacts related to fugitive dust would be **less than significant with mitigation incorporated**.

Clean Air Plan Control Measures.The control strategies of the Clean Air Plan include measures in the following categories: Stationary Source Measures, Transportation Measures, Energy Measures, Building Measures, Agriculture Measures, Natural and Working Lands Measures, Waste Management Measures, Water Measures, and Super-GHG Pollutants Measures, which are discussed in more detail below.

- **Stationary Source Control Measures:**The Stationary Source Control Measures, which are designed to reduce emissions from stationary sources such as metal melting facilities, cement kilns, refineries, and glass furnaces, are incorporated into rules adopted by the Air District and then enforced by the Air District's Permit and Inspection programs. Since the proposed project would not include any stationary sources, the Stationary Source Control Measures of the Clean Air Plan are not applicable to the project.

- **Transportation Control Measures:**The Air District identifies Transportation Control Measures as part of the Clean Air Plan to decrease emissions of criteria pollutants, TACs, and GHGs by reducing demand for motor vehicle travel, promoting efficient vehicles and transit service, decarbonizing transportation fuels, and electrifying motor vehicles and equipment. The project site is currently developed with two commercial buildings and the proposed project would redevelop the site with 15 residential buildings. The project site is within walking or bicycling distance from surrounding residential, commercial, and institutional uses. The proposed project would also provide pedestrian access through existing sidewalks, perimeter walkways, pedestrian paseos, and pedestrian paths and sidewalks along the internal roadways. In addition, bus stops along Pacific Avenue provide transit access to the

project site. In addition, the proposed project would provide 27 electric vehicle charging spaces. Therefore, the proposed project would support the ability of residents and visitors to use alternative modes of transportation. As such, the proposed project would not conflict with the Air District's initiatives to increase the use of alternative means of transportation.

- **Energy Control Measures:**The Clean Air Plan also includes Energy Control Measures that are designed to reduce emissions of criteria air pollutants, TACs, and GHGs by decreasing the amount of electricity consumed in the Bay Area, as well as by decreasing the carbon intensity of the electricity used by switching to less GHG intensive fuel sources for electricity generation. The proposed project would comply with current California Energy Code and California Green Building Standards Code (CALGreen Code) standards regarding energy conservation and green building standards. As such, the proposed project would not conflict with the Energy Control Measures of the Clean Air Plan.

- **Building Control Measures:**The Air District has authority to regulate emissions from certain sources in buildings such as boilers and water heaters but has limited authority to regulate the buildings themselves. Therefore, the strategies in the control measures for this sector focus on working with local governments that do have authority over local building codes to facilitate the adoption of best GHG control practices and policies. As identified above, the proposed project would be required to comply with current Energy Code and CALGreen Code standards. Therefore, the proposed project would not conflict with the Building Control Measures of the Clean Air Plan.

- **Agriculture Control Measures:**The Agriculture Control Measures are designed to primarily reduce emissions of CH_4. Because the proposed project does not include any agricultural activities, the Agriculture Control Measures of the Clean Air Plan are not applicable to the proposed project.

- **Natural and Working Lands Control Measures:**The Natural and Working Lands Control Measures focus on increasing carbon sequestration on rangelands and wetlands, as well as encouraging local governments to enact ordinances that promote urban-tree plantings. Because the proposed project does not include the disturbance of any rangelands or wetlands, the Natural and Working Lands Control Measures of the Clean Air Plan are not applicable to the proposed project.

- **Waste Management Control Measures:**The Waste Management Control Measures focus on reducing or capturing CH_4 emissions from landfills and composting facilities, diverting organic materials away from landfills, and increasing waste diversion rates through efforts to reduce, reuse, and recycle. Future occupants of the proposed project would be subject to compliance with local requirements for waste management (e.g., recycling and composting services). Therefore, the project would be consistent with the Waste Management Control Measures of the Clean Air Plan.

- **Water Control Measures:**The Water Control Measures focus on reducing emissions of criteria pollutants, TACs, and GHGs by encouraging water conservation, limiting GHG emissions from publicly owned treatment works, and promoting the use of biogas recovery systems. Because the proposed project would be required to comply with the latest CALGreen Code standards, which includes a variety of different measures, including reduction of wastewater and water use, the proposed project would not conflict with the Water Control Measures.

- **Super-GHG Control Measures:**The Super-GHG Control Measures are designed to facilitate the adoption of best GHG control practices and policies through the Air District and local government agencies. Because these measures do not apply to individual projects, the Super-GHG Control Measures are not applicable to the proposed project.

Clean Air Plan Implementation.As discussed above, the proposed project would generally implement the applicable measures outlined in the Clean Air Plan, including Transportation Control Measures. In addition, as demonstrated below under AIR-2, with implementation of **Mitigation Measure AIR-1**, construction and operation of the proposed project would not result in the generation of criteria air pollutants that would exceed the Air District's thresholds of significance. As required by **Mitigation Measure AIR-1**, the project would be required to implement the Air District's Basic Best Management Practices for Construction-Related Fugitive Dust Emissions (Basic BMPs) throughout construction of the proposed project including but not limited to watering exposed surfaces, limiting vehicle speed on unpaved roads, securing loads, and suspending work during high winds, which would reduce the potential for fugitive dust and potential conflict with the Clean Air Plan to a less than significant level. Therefore, the project would not disrupt or hinder implementation of a control measure from the Clean Air Plan, and this impact would be **less than significant with mitigation incorporated**.

AIR-2 The project would 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.

Less Than Significant Impact with Mitigation Incorporated. The Air District is currently designated as a nonattainment area for State and federal O_3 standards and federal particulate matter ambient air quality standards. The Air District's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the Air District considered the emissions levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. The

following analysis assesses the potential construction- and operation-related air quality impacts and CO impacts of the proposed project.

Construction Emissions. During construction, short-term degradation of air quality may occur due to the release of particulate matter emissions (i.e., fugitive dust) generated by demolition, grading, hauling, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_X, ROG, directly emitted particulate matter ($PM_{2.5}$ and PM_{10}), and TACs.

Site preparation and project construction would involve demolition, grading, paving, and other activities. Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The Air District requires the implementation of the Basic BMPs. With the implementation of these Basic BMPs, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_X, ROGs, and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the proposed project using the California Emissions Estimator Model version 2022.1 (CalEEMod), consistent with the Air District's recommendations. As included in the CalEEMod modeling, construction of the proposed project is anticipated to begin in summer 2026 and would take place over an approximately 20-month period. Approximately 1,400 tons of construction and demolition waste, 600 tons of trash, 100 tons of metal, 3,000 tons of asphalt, and 2,500 tons of concrete would be generated during construction of the proposed project, which was included in CalEEMod. The proposed project would require approximately 5,624 cubic yards of fill and approximately 3,957 cubic yards of cut, for a net import of 1,667 cubic yards of soil, which was also included in CalEEMod. This analysis uses model default construction equipment and assumes use of Tier 2 construction equipment. Tier 2 refers to CARB's tier level of emission standards for off-road diesel engines. These tiers (with the higher tier indicating cleaner engines) dictate the maximum allowable emissions of pollutants like particulate matter (PM) and nitrogen oxides (NO_x). The tier system is used to phase out

older, more polluting engines and promote the use of cleaner technologies. Tier 2 is the lowest tier level allowed by CARB.[20] All other construction details are not yet known; therefore, default assumptions (e.g., construction worker and truck trips and fleet activities) from CalEEMod were used. Construction-related emissions are presented in **Table 4.1.E**. CalEEMod output sheets are included in **Appendix B**.

Table 4.1.E: Project Construction Emissions

Project Construction	Average Daily Pollutant Emissions (pounds per day)					
	ROG	NO_X	Exhaust PM_{10}	Fugitive Dust PM_{10}	Exhaust $PM_{2.5}$	Fugitive Dust $PM_{2.5}$
2026	0.6	15.9	0.5	1.3	0.5	0.4
2027	5.0	6.3	0.2	0.2	0.2	0.1
Maximum Average Daily Emissions	**5.0**	**15.9**	**0.5**	**1.3**	**0.5**	**0.4**
Air District Thresholds	54.0	54.0	82.0	BMPs	54.0	BMPs
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (September 2025)
Air District = Bay Area Air District
BMPs = best management practices
NO_X = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in diameter
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter
ROGs = reactive organic gases

As shown in **Table 4.1.E**, construction emissions associated with the proposed project would be less than significant for ROG, NO_X, $PM_{2.5}$, and PM_{10} exhaust emissions. There are no established thresholds for fugitive dust ($PM_{2.5}$ and PM_{10}) emissions; however, as shown in **Table 4.1.E**, the Air District requires the implementation of Basic BMPs to ensure that impacts are reduced to a less than significant level. With the implementation of these Basic BMPs as outlined in **Mitigation Measure AIR-1** in Section 4.1.3.2, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

The measures described under **Mitigation Measure AIR-1** would implement the Air District's BMPs for construction-related fugitive dust emissions that are applicable to all construction projects throughout the Air Basin. These measures would ensure that short-term impacts associated with the generation of particulate matter and fugitive dust would be reduced to the extent feasible and would ensure that this impact would be less than significant. With implementation of **Mitigation Measure AIR-1**, construction of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State ambient air quality standard.

Operational Emissions. Long-term air pollutant emission impacts are those associated with mobile sources (e.g., vehicle trips), energy sources (e.g., natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment) related to the proposed project.

[20] California Air Resources Board. Fact Sheet: Added Vehicle Restrictions and Tier Phase-Out Requirements. August 29, 2023. Website: https://ww2.arb.ca.gov/resources/fact-sheets/fact-sheet-added-vehicle-restrictions-and-tier-phase-out-requirements (accessed August 11,2025).

Mobile source emissions include ROGs and NO_X emissions that contribute to the formation of O_3. Additionally, PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways.

Energy source emissions result from activities in buildings for which natural gas is used. The quantity of emissions is the product of usage intensity (i.e., the amount of natural gas) and the emission factor of the fuel source. The proposed project would be all-electric and would not require the use of natural gas; therefore, the proposed project would not generate energy source emissions.

Typically, area source emissions consist of direct sources of air emissions at the project site, including architectural coatings, consumer products, and the use of landscape maintenance equipment.

Emission estimates for operation of the proposed project were calculated using CalEEMod. Model results are shown in **Table 4.1.F**. Trip generation rates for the project were based on the project's trip generation estimates as identified in Section 4.9, Transportation. Based on the trip generation estimates, the proposed project would generate approximately 122 net new average daily trips. Where project-specific data were not available, default assumptions (e.g., electricity usage, water usage, and solid waste generation) from CalEEMod were used to estimate project emissions. CalEEMod output sheets are included in **Appendix B**.

The primary emissions associated with the proposed project are regional in nature, meaning that air pollutants are rapidly dispersed on release or, in the case of vehicle emissions associated with the project, emissions are released in other areas of the Air Basin. The daily and annual emissions associated with project operational trip generation, energy, and area sources are identified in **Table 4.1.F** for ROGs, NO_X, PM_{10}, and $PM_{2.5}$.

The results shown in **Table 4.1.F** indicate the proposed project would not exceed the significance criteria for daily or annual ROG, NO_X, PM_{10}, or $PM_{2.5}$ emissions. Therefore, operation of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under applicable federal or State ambient air quality standards. Impacts would be **less than significant**.

Table 4.1.F: Project Operation Emissions

	ROGs	NO_X	PM_{10}	$PM_{2.5}$
Pounds Per Day				
Mobile Source Emissions	0.4	0.3	0.7	0.2
Area Source Emissions	3.4	0.1	<0.1	<0.1
Energy Source Emissions	0.0	0.0	0.0	0.0
Total Emissions	**3.8**	**0.4**	**0.7**	**0.2**
Air District Thresholds	54.0	54.0	82.0	54.0
Exceeds Threshold?	**No**	**No**	**No**	**No**
Tons Per Year				
Mobile Source Emissions	0.1	0.1	0.1	<0.1
Area Source Emissions	0.6	<0.1	<0.1	<0.1
Energy Source Emissions	0.0	0.0	0.0	0.0
Total Emissions	**0.7**	**0.1**	**0.1**	**<0.1**
Air District Thresholds	10.0	10.0	15.0	10.0
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (September 2025).
Note: Some values may not add up due to rounding.
Air District = Bay Area Air District
NO_X = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ROGs = reactive organic gases

Localized CO Impacts. Emissions and ambient concentrations of CO have decreased dramatically in the Bay Area with the introduction of the catalytic converter in 1975. No exceedances of the State or federal CO standards have been recorded at Bay Area monitoring stations since 1991. The Air District's 2022 CEQA Guidelines include recommended methodologies for quantifying concentrations of localized CO levels for projects. A screening level analysis using guidance from the Air District's 2022 CEQA Guidelines was performed to determine the impacts of the proposed project. The screening methodology provides a conservative indication of whether the implementation of a project would result in significant CO emissions. According to the Air District's 2022 CEQA Guidelines, a project would result in a less than significant impact to localized CO concentrations if the following screening criteria are met:

- The project is consistent with an applicable Congestion Management Program established by the county congestion management agency for designated roads or highways and the regional transportation plan and local congestion management agency plans.

- Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour (vph).

- The project would not increase traffic volumes at affected intersections to more than 24,000 vph where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, or below-grade roadway).

Implementation of the proposed project would not conflict with the policies or programs of the Alameda County Transportation Commission. As identified in Section 4.9, Transportation, the proposed project would generate approximately 15 net new AM peak hour trips and a net

decrease in 24 p.m. peak-hour trips. As the project's contribution to peak-hour traffic volumes at intersections in the vicinity of the project site would be well below 44,000 vph, the proposed project would not result in localized CO concentrations that exceed State or federal standards, and project impacts would be **less than significant**.

AIR-3 The project would expose sensitive receptors to substantial pollutant concentrations.

Less Than Significant Impact with Mitigation Incorporated. Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to DPM are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to DPM. Exposure from diesel exhaust associated with construction activity contributes to both cancer and chronic non-cancer health risks. The proposed project could expose sensitive receptors to substantial pollutant concentrations; this is a potentially significant impact.

According to the Air District, a project would result in a significant impact if it would individually expose sensitive receptors to TACs, resulting in an increased cancer risk greater than 10.0 in 1 million, increased non-cancer risk of greater than 1.0 on the Hazard Index (chronic or acute), or an annual average ambient $PM_{2.5}$ increase greater than 0.3 $\mu g/m^3$.

The project site is in an urban area near existing residential uses that could be exposed to diesel emissions exhaust during the construction period. Therefore, a construction HRA, which evaluates construction-period health risk to off-site receptors, was performed for construction of the proposed project. To estimate the potential cancer risk associated with construction activities from equipment exhaust (including DPM), a dispersion model was used to translate an emissions rate from the source location to a concentration at the receptor location of interest (i.e., a nearby residence and worksites). Dispersion modeling varies from a simpler, more conservative screening-level analysis to a more complex and refined detailed analysis.

For the purposes of an HRA, emissions are analyzed for acute health impacts, chronic, and carcinogenic health impacts. A multi-pathway assessment was conducted to evaluate the project's emissions during construction following the modeling techniques recommended in the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA) *Air Toxic Hot Spots Program Risk Assessment Guidelines*.[21] The analysis herein has been conducted in accordance with the Air District's requirements for HRAs.

The HRA analysis was conducted using three models: (1) CalEEMod to determine DPM emissions during project construction, (2) the EPA AERMOD air dispersion model to determine how the TACs would move through the atmosphere, and (3) CARB's Hotspots Analysis and Reporting Program (HARP2) model to translate the pollutant concentrations from AERMOD into individual health risks at any sensitive receptor locations surrounding the project site.

[21] California Environmental Protection Agency Office of Environmental Health Hazard Assessment (OEHHA). 2015. *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. March. Website: https://oehha.ca.gov/air/air-toxics-hot-spots (accessed April 2025).

The OEHHA has determined that long-term exposure to diesel exhaust particulates poses the highest cancer risk of any TAC it has evaluated. Exposure to diesel exhaust can also have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, DPM made people with allergies more susceptible to the materials to which they were allergic, such as dust and pollen. Exposure to DPM also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks. For risk assessment procedures, the OEHHA specifies that the surrogate for whole diesel exhaust is DPM. The HRA analyses used PM_{10} emissions to represent DPM emissions, consistent with OEHHA guidance.

The conservative nature of this analysis is due primarily to the following factors:

- The CARB-adopted diesel exhaust unit risk factor (URF) of 300 in 1 million per µg/m^3 is based on the upper 95th percentile of estimated risk for each of the epidemiological studies used to develop the URF. Therefore, the risk factor is representative of DPM.

- The exposure to DPM is assumed to be constant for the given period analyzed (i.e., 70 years). However, emissions from DPM are expected to substantially decrease in the future with the implementation of standard regulatory requirements and technological advancement to reduce DPM.

Table 4.1.G, below, identifies the results of the analysis. Model outputs and snapshots of the sources are provided in **Appendix C**.

Table 4.1.G: Unmitigated Inhalation Health Risks from Project Construction to Off-Site Receptors

	Carcinogenic Inhalation Health Risk in 1 Million	Chronic Inhalation Hazard Index	Acute Inhalation Hazard Index	Annual $PM_{2.5}$ Concentration (µg/m^3)
Residential Receptor MEI	42.61	0.040	<0.001	0.20
Worker Receptor MEI	0.48	0.026	<0.001	0.13
Threshold	**10.0**	**1.0**	**1.0**	**0.30**
Exceeds Threshold?	**Yes**	**No**	**No**	**No**

Source: Compiled by LSA (September 2025).
µg/m^3 = micrograms per cubic meter
MEI = maximally exposed individual
$PM_{2.5}$ = particulate matter less than 2.5 microns in size

As shown in **Table 4.1.G**, the maximum cancer risk for the residential receptor maximally exposed individual (MEI) associated with project construction would be 42.61 in 1 million, which would exceed the Air District's cancer risk of 10 in 1 million and would result in a potentially significant impact without mitigation. The worker receptor MEI risk would be lower at 0.48 in 1 million, which would not exceed the Air District's cancer risk threshold. The chronic hazard index would be 0.040 for the residential receptor MEI and 0.026 for the worker receptor MEI, which are below the threshold of 1. In addition, the acute hazard index would be nominal (0), which would also not

exceed the threshold of 1. The results of the analysis indicate that the $PM_{2.5}$ concentration would be 0.30 µg/m^3 for the residential receptor MEI and 0.13 µg/m^3 for the worker receptor MEI, which also would not exceed the Air District's significance threshold of 0.3 µg/m^3.

Impact AIR-3: **The proposed project would result in a potentially significant impact related to the exposure of sensitive receptors to substantial pollutant concentrations.**

Therefore, implementation of **Mitigation Measure AIR-2**, as outlined below, which would require the use of diesel particulate filters, would be necessary to reduce substantial pollutant concentrations during project construction.

Mitigation Measure AIR-2 **Level 3 Diesel Particulate Filters.** During construction of the proposed project, the project contractor shall ensure all off-road, diesel-powered construction equipment of 50 horsepower or more used for the project construction meets, at a minimum, the California Air Resources Board Tier 2 emissions standards equipped with Level 3 diesel particulate filters or the equivalent.

Table 4.1.H identifies the results of the analysis with implementation of **Mitigation Measure AIR-2**.

Table 4.1H: Mitigated Inhalation Health Risks from Project Construction to Off-Site Receptors

	Carcinogenic Inhalation Health Risk in 1 Million	Chronic Inhalation Hazard Index	Acute Inhalation Hazard Index	Annual $PM_{2.5}$ Concentration (µg/m^3)
Residential Receptor MEI	7.18	0.007	<0.001	0.03
Worker Receptor MEI	0.08	0.001	<0.001	0.02
Threshold	**10.0**	**1.0**	**1.0**	**0.30**
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (September 2025).
µg/m^3 = micrograms per cubic meter
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
MEI = maximally exposed individual

As shown in **Table 4.1.H**, the mitigated cancer risk at the residential receptor MEI would be 7.18 in 1 million, which would not exceed the Air District's cancer risk of 10 in 1 million. Therefore, implementation of **Mitigation Measure AIR-2**, which would require the use of Level 3 diesel particulate filters or the equivalent during construction of the proposed project and reduce the potential for exposure of sensitive receptors to substantial pollutant concentrations, the proposed project would not exceed Air District thresholds and would not expose nearby sensitive receptors to substantial pollutant concentrations.

As discussed above, the Air District initiated the CARE program to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area. The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The Air District has

identified seven impacted communities, with Livermore identified as an affected community. The CARE program is an ongoing program that encourages community involvement and input. The technical analysis portion of the CARE program is being implemented in three phases that include an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TACs, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and a high density of sensitive populations.

As demonstrated in this analysis, with implementation of **Mitigation Measure AIR-2**, the health risk levels to nearby residents from project construction-related emissions of TACs would be below the Air District's HRA thresholds and therefore would not hinder implementation of the CARE program. In addition, once the proposed project is constructed, it would not be a source of substantial emissions, and consequently, implementation of the proposed project would not result in new sources of TACs. Therefore, the project would not expose sensitive receptors to substantial levels of TACs, and this impact would be **less than significant with mitigation incorporated**.

AIR-4 The project would not result in other emissions (such as those leading to odors) that would adversely affect a substantial number of people.

Less Than Significant. During project construction, some odors may be present due to diesel exhaust. However, these odors would be temporary and limited to the construction period. Once operational, the proposed project would not include any activities or operations that would generate objectionable odors and, once operational, the project would not be a source of odors. Therefore, the proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. This impact would be **less than significant**.

4.1.3.3 Cumulative Impacts

According to the Air District, regional air pollution is largely a cumulative impact. No single project is sufficient in size to independently create regional nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts.

The Air District is currently designated as a nonattainment area for State and national O_3 standards and national particulate matter ambient air quality standards. The Air District's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the Air District considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project

exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

Therefore, if the proposed project's daily average or annual emissions of construction- or operational-related criteria air pollutants exceed any applicable threshold established by the Air District, the proposed project would result in a considerable contribution to a cumulatively significant impact. As shown in **Table 4.1.E** and **Table 4.1.F**, with compliance with **Mitigation Measure AIR-1**, the proposed project would not generate significant construction or operational emissions. As shown in the project-specific air quality impacts discussion above, with implementation of **Mitigation Measure AIR-1**, the proposed project would not result in individually significant impacts, and, therefore, the proposed project would not result in a cumulatively considerable contribution to regional air quality impacts.

In addition, as discussed above, the Air District initiated the CARE program to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area. The Air District has identified seven impacted communities, with Livermore identified as an affected community. Throughout the program, the Air District will focus emission reduction measures in areas with high TAC exposures and a high density of sensitive populations. As demonstrated in the analysis, with implementation of **Mitigation Measure AIR-2**, the health risk levels to nearby residents from project construction-related emissions of TACs would be below the Air District's thresholds and therefore would not hinder implementation of the CARE program. Therefore, the proposed project would not cumulatively expose sensitive receptors to substantial pollutant concentrations.

Given the above, cumulative air quality impacts would be **less than significant with mitigation incorporated**.

4.2 BIOLOGICAL RESOURCES

This section describes the environmental setting, including regulatory framework and existing conditions in the project site, and potentially significant environmental impacts of the proposed project related to biological resources.

4.2.1 Environmental Setting

This section describes the existing conditions related to biological resources within and in the vicinity of the project site.

4.2.1.1 Regional Setting

The project site is within Alameda County, California, in the city of Livermore, in the eastern portion of the San Francisco Bay Area. The project region is characterized by both urban developed and agricultural areas, as well as undeveloped grasslands, and other native habitats. The average annual precipitation for the region is 13.71 inches, with the wettest period spanning November through March; average daily temperatures range from highs in the summer above 100 degrees Fahrenheit (°F) to 68°F in the winter, while lows range from above 70°F in the summer months to below 50°F in the winter.[1]

4.2.1.2 Project Setting

The topography in the project area is generally flat and urbanized. The project site is paved except for a small vacant lot in the northwest corner where a gas station once stood. The site contains approximately 71 mature trees planted throughout the project site, including in planters within the surface parking lot and along the western, southern, and eastern boundaries of the project site.

A qualified LSA biologist conducted a field survey of the project site and accessible surrounding areas on April 17, 2025. The area was surveyed for plant and wildlife species as well as inspected for wetlands or water features. The project site has no native vegetation communities. Vegetation on the project site is limited to planted landscaping trees and shrubs, with a few ruderal species on the northwest periphery of the project site at the former location of the gas station. The field survey did not detect any active bird nests, however, bird nests not actively in use were observed on the existing retail building. Birds likely nest each year on and adjacent to the project site, both in trees and on buildings. There are no wetlands or other potentially jurisdictional waters on the project site.

Special Status Species. Special-status species are species that have been listed as “threatened” or “endangered” under the federal Endangered Species Act (FESA), California Endangered Species Act (CESA), or are of special concern to federal resource agencies, the State, or private conservation organizations. For the purposes of the California Environmental Quality Act (CEQA), Special-status plant and wildlife species may meet one or more of the following criteria:

[1] National Weather Service. 2025. *NOWData.* Website: https://www.weather.gov/wrh/Climate?wfo=mtr (accessed May 13, 2025.)

- Species that are listed, formally proposed, or designated as candidates for listing as threatened or endangered under FESA
- Species that are listed, or designated as candidates for listing, as rare, threatened, or endangered under CESA
- Wildlife species designated as Species of Special Concern or Fully Protected by the California Department of Fish and Wildlife (CDFW)
- Species that meet the definition of rare, threatened, or endangered under Section 15380 of the *State CEQA Guidelines*
- Species that are considered a taxa of special concern by local agencies.

The following set of criteria was used to determine the potential for special-status plant and wildlife species to occur within the project area:

- **Present:** Species occurs within the project area based on California Natural Diversity Database (CNDDB) records and/or was observed within the project area during the field surveys.
- **High:** The project area is within the known range of the species and suitable habitat exists within the project area.
- **Moderate:** The project area is within the known range of the species and very limited suitable habitat is within the project area.
- **Low:** The project area is within the known range of the species and marginally suitable habitat exists within the project area.
- **None:** The project area does not contain suitable habitat for the species, the species was not observed during field surveys conducted within the project area, or the project area is outside the known range of the species.

Special-Status Plant Species. A total of 15 special-status plant species have CNDDB occurrences within 2 miles of the project site. The United States Fish and Wildlife (USFWS) Information for Planning and Consultation (IPaC) database list contained one federally protected plant species, palmate-bracted bird's-beak (*Cordylanthus palmatus*), which was also included in the CNDDB results. The California Native Plant Society (CNPS), list, further described below in Section 4.2.2.2, contained 18 rare plant species, including 3 species that were not in the CNDDB results. **Table 4.2.A** summarizes the potential for each of these plants to occur.

Special-Status Wildlife Species. A total of 17 special-status wildlife species have CNDDB occurrences within 2 miles of the project site. The IPaC list contained 12 federally protected animal species. **Table 4.2.B**. summarizes the potential for each of these wildlife species to occur.

Table 4.2.A: Special-Status Plant Species Evaluated

Species	Status (Federal/State/ RPR)	Habitat/Blooming Period	Potential to Occur
Astragalus tener var. tener Alkali milk-vetch	--/--/1B.2	● Alkali flats ● Vernal swales and vernal pool edges Elevation: 1–60 meters (3.3–197 feet) Blooms: April–October	**None.** No suitable alkaline/vernal pool habitat occurs on the site. There is one "possibly extirpated" CNDDB occurrence within 5 miles of the site.
Atriplex cordulata var. cordulata Heartscale	--/--/1B.2	● Alkali or saline flats ● Shadscale scrub ● Valley grassland ● Wetland-riparian Elevation: 1-70 meters (3.3-230 feet) Blooms: June–July	**None.** No suitable pool habitat is present on the site. There are two CNDDB occurrences within 5 miles of the site.
Atriplex depressa Brittlescale	--/--/1B.2	● Chenopod scrub ● Meadows and seeps ● Playas ● Valley and foothill grassland ● Vernal pools Elevation: 1–320 meters (3.3–1,050 feet) Blooms: March–June	**None.** There is no potentially suitable habitat on the site. There are six CNDDB occurrences within 5 miles of the site.
Atriplex minuscula Lesser saltscale	--/--/1B.1	● Chenopod scrub ● Playas ● Valley and foothill grassland Elevation: 15–200 meters (50–656 feet) Blooms: May–October	**None.** There is no potentially suitable habitat on the site. There are four CNDDB occurrences within 5 miles of the site.
Balsamorhiza macrolepis Big scale balsam root	--/--/1B.2	● Open grassy or rocky slopes ● Foothill woodland ● Valley grassland Elevation: 1–1,400 meters (3.3–4,600 feet) Blooms: March–July	**None.** There is no suitable habitat on the site. There is one extirpated CNDDB occurrence within 5 miles of the site.
Blepharizonia plumosa Big tarweed	--/--/1B.1	● Dry slopes in grassland ● Foothill woodland ● Chaparral ● Valley grassland Elevation: 1–500 meters (3.3–1,640 feet) Blooms: July–October	**None.** No potentially suitable habitat occurs on the site. There are no CNDDB occurrences within 5 miles of the site.
Centromadia parryi ssp. *congdonii* Congdon's tarplant	--/--/1B.1	● Grazed and ungrazed annual grassland ● Alkaline or saline soils sometimes described as saline clay soil Elevation: 1–230 meters (3.3–755 feet) Blooms: May–October	**None.** There are two CNDDB occurrences within 5 miles of the site. There is no suitable habitat with saline or highly alkaline soils on the site.

Table 4.2.A: Special-Status Plant Species Evaluated

Species	Status (Federal/State/ RPR)	Habitat/Blooming Period	Potential to Occur
Chloropyron molle ssp. *hispidum* Hispid bird's-beak	--/--/1B.1	● Meadows and seeps ● Playas ● Valley and foothill grassland ● Alkaline Elevation: 1–130 meters (3.3–430 feet) Blooms: June–September.	**None.** No suitable alkaline habitat occurs on the site. There is one CNDDB occurrence within 5 miles of the site.
Chloropyron palmatum Palmate-bracted bird's-beak	FE/CE/1B.1	● Chenopod scrub ● Valley and foothill grassland Elevation: 5–155 meters (15–105 feet) Blooms: May–October	**None.** No potentially suitable habitat occurs on the site. There is one CNDDB occurrence within 5 miles of the site.
Deinandra bacigalupii Livermore tarplant	--/CE/1B.1	● Alkaline meadows ● Edge of alkali barrens and sinks Elevation: 100–200 meters (330–660 feet) Blooms: June–October	**None.** No potentially suitable habitat occurs on the site. There are four CNDDB occurrences within 5 miles of the site.
Delphinium californicum ssp. *interius* Hospital canyon larkspur	--/--/1B.2	● Slopes in open woodland ● Eastern side of coast ranges ● Foothill woodland Elevation: 300–1,000 meters (990–3,280 feet) Blooms: April–June	**None.** There is no suitable habitat on the site. There are no CNDDB occurrences within 5 miles of the site.
Extriplex joaquinana San Joaquin spearscale	--/--/1B.2	● Chenopod scrub ● Meadows and seeps ● Playas ● Valley and foothill grassland ● Alkaline microhabitats Elevation: 1–835 meters (3.3–2,740 feet) Blooms: April–October	**None.** No suitable wet alkaline habitat occurs on the site. There are four CNDDB occurrences within 5 miles of the site.
Navarretia prostrata Prostrate vernal pool navarettia	--/--/1B.2	● Coastal scrub ● Meadows and seeps ● Valley and foothill grassland (alkaline) ● Vernal pools Elevation: 3–1,210 meters (10–689 feet) Blooms: April–July	**None.** There are no vernal pools or other suitable habitat on the project site.
Plagiobothrys glaber Hairless popcornflower	--/--/1A	● Coastal salt marsh ● Meadows and seeps (alkaline) Elevation: 15–1,800 meters (50–5,906 feet) Blooms: March–May	**None.** This plant is presumed extinct. There is one CNDDB occurrence within 5 miles of the site, but it is based on a collection made in 1942, and the population is considered extirpated. There is no suitable habitat on the site.

Table 4.2.A: Special-Status Plant Species Evaluated

Species	Status (Federal/State/ RPR)	Habitat/Blooming Period	Potential to Occur
Puccinellia simplex California alkali grass	--/--/1B.2	● Chenopod scrub ● Meadows and seeps ● Valley and foothill grassland ● Vernal pools Elevation: 2–930 meters (7–3,051 feet) Blooms: March–May	**None.** There are no vernal pools, seeps, or other potentially suitable habitat on the site.
Spergularia macrotheca var. *longistyla* Long-styled sand-spurrey	--/--/1B.2	● Marshes and swamps ● Meadows and seeps Elevation: 0–255 meters (0–837 feet) Blooms: February–May	**None.** There are no marshes, swamps, or seeps on the site. There is one "possibly extirpated" and one "presumed extant" CNDDB occurrence within 5 miles of the site.
Trifolium hydrophilum Saline clover	--/--/1B.2	● Marshes and swamps ● Valley and foothill grassland (mesic, alkaline) ● Vernal pools Elevation: 0–255 meters (0–836 feet) Blooms: February–May	**None.** There are no vernal pools, alkaline soils, marshes, or swamps on the site. There is one CNDDB occurrence within 5 miles of the site.
Tropidocarpum capparideum Caper-fruited tropidocarpum	--/--/1B.1	● Alkaline-clay soils in valley and foothill grassland Elevation: 1–455 meters (3–1,493 feet) Blooms: March–April	**None.** No typical alkaline habitat occurs on the site. The one CNDDB occurrence within 5 miles of the site is based on a collection made in 1897.

Source: Compiled by LSA (2025).
Status:
CE: California Endangered
FE: Federally Endangered
Rare Plant Rank (RPR)

1A: California Rare Plant Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere. These plants have not been seen or collected in the wild in California for many years. A plant is extinct if it no longer occurs anywhere. A plant that is extirpated from California has been eliminated from California but may still occur elsewhere in its range.

1B.1: California Rare Plant Rank 1B, Threat Rank 0.1: Plant species rare, threatened, or endangered in California and elsewhere. Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat).

1B.2: California Rare Plant Rank 1B, Threat Rank 0.2: Plant species rare, threatened, or endangered in California and elsewhere. Moderately threatened in California (20-80 percent of occurrences threatened/moderate degree and immediacy of threat).

2B.1: California Rare Plant Rank 2B, Threat Rank 0.1: Plant species rare, threatened, or endangered in California, but more common elsewhere. Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat).

CNDDB = California Natural Diversity Database

Table 4.2.B: Special-Status Animal Species Evaluated

Species	Status (Federal/State/ CDFW)	Habitat Requirements	Potential to Occur
Amphibians			
Ambystoma californiense California tiger salamander	FT/CT/--	Spends most of its life in underground burrows. Breeds in vernal pools and ponds, including cattle stock ponds. Breeds after the first rains in late fall and early winter when the wet season allows the salamander to migrate to the nearest pond, a journey that may be more than 1 mile and take several days. Lays eggs in small clusters or singly, which hatch after 14 to 21 days. The pools must hold water for a minimum of 12 weeks for the larvae to successfully metamorphose into their terrestrial form.	**None.** There are 50 CNDDB occurrences within 2 miles of the site. There is no suitable aquatic breeding habitat or upland habitat on or adjacent to the site.
Rana boylii Foothill yellow-legged frog	--/CE/CSC	Found in streams with clear water and gravel or rocky substrates. Requires perennial or nearly perennial pools in streams or flowing water. Needs some cobble-sized rocks as a substrate for egg laying.	**None.** There is one CNDDB occurrence within 2 miles of the project site, based on observations made in Arroyo Mocho Creek at the Mines Road bridge. There are no streams on the site.
Rana draytonii California red-legged frog	FT/--/CSC	Inhabits permanent and temporary pools, streams, freshwater seeps, and marshes in lowlands and foothills. Uses adjacent upland habitat for foraging and refuge. Breeds during the wet season from December through March in slow parts of streams, lakes, reservoirs, ponds, and other waters with emergent vegetation. Lays 300 to 4,000 eggs in a large cluster, which is attached to plants near the water surface. Requires water for 4 to 7 months for tadpoles to complete metamorphosis.	**None.** There are 34 CNDDB occurrences within 2 miles of the site. The developed nature of the site makes it unsuitable upland habitat even if there were a nearby breeding area.
Spea hammondii Western spadefoot	PT/--/CSC	Mostly terrestrial, spending most of its life dormant in underground burrows. The spadefoots emerge after heavy rainfall to breed in vernal pools, other shallow temporary rain pools, and in still pools of intermittent streams, feeding on invertebrates.	**None.** There is one CNDDB occurrence within 2 miles of the site. The developed nature of the site makes it unsuitable upland habitat even if there were a nearby breeding area.
Reptiles			
Actinemys marmorata Northwestern pond turtle	Proposed FT/-- /CSC	Permanent or nearly permanent water (fresh to brackish) in a wide variety of habitat types. Requires basking sites such as steep banks, logs, or rocks. Upland areas with friable soils are required for egg laying.	**None.** There are six CNDDB occurrences within 2 miles of the site. There is no suitable aquatic or upland habitat on or adjacent to the site.
Masticophis lateralis euryxanthus Alameda whipsnake (also known as Alameda striped racer, *Coluber lateralis euryxanthus*)	FT/CT/--	Lives primarily in scrub and chaparral communities but has also been observed in nearby grasslands and woodlands. Feeds primarily on lizards. Most active in the spring and fall. Retreats from hot temperatures in the summer and cold temperatures in the winter into burrows or other underground refuges.	**None.** There are two CNDDB occurrences within 2 miles of the site. The site does not provide suitable habitat and is separated from suitable habitat by significant barriers to dispersal.

Table 4.2.B: Special-Status Animal Species Evaluated

Species	Status (Federal/State/ CDFW)	Habitat Requirements	Potential to Occur
Birds			
Athene cunicularia Burrowing owl	--/--/CSC	Nearly or quite level grassland, prairie, and desert floor with short or sparse vegetation. Subterranean nester that generally uses existing mammal burrows (especially of ground squirrels) but will also excavate its own burrows.	**None.** There are 20 CNDDB occurrences within 2 miles of the project site, including observations made in 2017 and 2018. There are no burrows on the site that could be used by burrowing owls and no prey base due to lack of vegetation.
Sterna antillarum browni California least tern	FE/CE/CFP	Nests in colonies on exposed tidal flats or beaches. In the San Francisco Bay Area, nesting typically occurs on abandoned salt flats.	**None.** There are no CNDDB records within 2 miles of the project site. There is no suitable besting habitat on the site.
Buteo swainsoni Swainson's hawk	--/CT/--	Nests primarily in dense trees in riparian areas. Forages in open areas, including agricultural fields.	**None.** There is only one CNDDB occurrence within 2 miles of the project site. There are no trees or shrubs suitable for nesting on or adjacent to the site. Due to the barren nature of the site, it is unlikely the species ever attempts to forage on the site.
Elanus leucurus White-tailed kite	--/--/CFP	Savannahs, open woodlands, marshes, desert grasslands, partially cleared lands, and cultivated fields. Nests in the upper third of trees 10–160 feet tall, usually near water.	**None.** There are trees on the site that could support a nest but they are not near water or part of a larger contiguous area of suitable habitat. There are two CNDDB occurrences of a nest within 2 miles of the site.
Gymnogyps californianus California condor	FE/--/--	Nests on cliff ledges or caves. Forages over wide areas to find carrion.	**None.** There is no suitable nesting or foraging habitat on the project site. There are no CNDDB occurrences within 2 miles of the site.
Agelaius tricolor Tricolored blackbird	--/CT/CSC	Breeds in large colonies near freshwater, preferably emergent wetland such as cattails and tules but also in thickets of willow and other shrubs. Requires nearby foraging areas with large numbers of insects.	**None.** There are seven CNDDB occurrences within 2 miles of the site. The project site does not support any marshes with emergent vegetation.
Lanius ludovicianus Loggerhead shrike	--/--/CSC	Often nests in thorny vegetation, on average about 3 feet above the ground. Found in open areas with short vegetation with some shrubs or small trees. Feeds mainly on insects in the summer and small vertebrates in the winter.	**None.** There is one CNDDB occurrence within 2 miles of the site. The project site has no suitable nesting or foraging habitat.
Mammals			
Corynorhinus townsendii Townsend's big-eared bat	--/--/CSC	Found in humid coastal regions of Northern and Central California. Roosts in caves, mines, and buildings.	**None.** There is one CNDDB occurrence within 2 miles of the site. The occurrence was a maternity roost in a constructed cave that had been used for wine storage and then abandoned. There is no potential roosting habitat on or adjacent to the site.
Taxidea taxus American badger	--/--/CSC	Usually found in grasslands or drier open areas of most shrub and forest and habitats. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents.	**None.** There are no burrows or suitable that could be used by badgers on the site. There is one CNDDB occurrence within 2 miles of the site.

Table 4.2.B: Special-Status Animal Species Evaluated

Species	Status (Federal/State/ CDFW)	Habitat Requirements	Potential to Occur
Vulpes macrotis mutica San Joaquin kit fox	FE/CT/--	Found primarily in flat areas with short, sparse vegetation in the southern San Joaquin Valley. Feeds on kangaroo rats and other small rodent species, but will also consume insects, hares, mice, and lizards. Lives in dens that it either excavates itself or moves into atypical dens, including manmade structures.	**None.** There are no CNDDB occurrences within 2 miles of the site. No nearby occurrences have been recorded within the last 20 years. No potential dens are present on the site.
Invertebrates			
Bombus occidentalis Western bumble bee		Feeds upon nectar and pollen from a variety of plant species but is most adapted to native plant species. Nests in abandoned rodent burrows and bird nests. The flight period in California is from early February to late November, peaking from June to September. Little is known about sites where queens overwinter. The species is currently restricted to high elevation sites in the Sierra Nevada and scattered coastal areas.	**None.** There are two CNDDB occurrences within 2 miles of the site, but they are based on collections made in 1957 and 1958. The species is likely extirpated from the Livermore area. Furthermore, the developed nature of the site means it provides little nectar or pollen.
Danaus plexippus Monarch butterfly	FC/--/--	Migrates through the San Joaquin Valley primarily in the spring and fall. Lays eggs on the larval host plant milkweed.	**None.** The CNDDB does not track monarch butterfly observations, except at coastal overwintering sites. No milkweed was seen on or near the site. Furthermore, the mostly barren nature of the site means it provides little nectar or pollen.
Branchinecta conservation Conservancy fairy shrimp	FE/--/--	Found only in vernal pools in California's Central Valley and one population in Ventura County.	**None.** No vernal pools are present on the project site. There are no CNDDB occurrences within 2 miles of the site.
Branchinecta lynchi Vernal pool fairy shrimp	FT/--/--	Inhabits vernal pools and swales during all stages of its life cycle.	**None.** No vernal pools are present on the site. There are three CNDDB occurrences within 2 miles of the site.

Source: Compiled by LSA (2025).
Status:
CE: California State listed as endangered
CFP: California Fully Protected
CSC: California species of special concern
CT: California State listed as threatened
FC: Federal candidate species
FE: Federally listed as endangered
FT: Federally listed as threatened
CDFW = California Department of Fish and Wildlife
CNDDB = California Natural Diversity Database

4.2.2 Regulatory Setting

Federal, State, and local laws, regulations, plans, or guidelines that are designed to reduce biological impacts and are potentially applicable to the proposed project are summarized below.

4.2.2.1 Federal Regulations

Federal Endangered Species Act. The USFWS and the National Oceanic and Atmospheric Administration, National Marine Fisheries Service are responsible for implementation of FESA (16 United States Code Section 1531 et seq.). The act protects fish and wildlife species that are listed as threatened or endangered, and their habitats. "Endangered" species, subspecies, or distinct population segments are those that are in danger of extinction through all or a significant portion of their range, and "threatened" species, subspecies, or distinct population segments are likely to become endangered in the near future.

Section 9 of FESA prohibits the "take" of any fish or wildlife species listed as endangered, including the destruction of habitat that prevents the species' recovery. "Take" is defined as an action or attempt to hunt, harm, harass, pursue, shoot, wound, capture, kill, trap, or collect a species. Section 9 prohibitions also apply to threatened species unless a special rule has been defined with regard to take at the time of listing.

Under Section 9 of the FESA, the take prohibition applies only to wildlife and fish species. However, Section 9 does prohibit the unlawful removal and reduction to possession, or malicious damage or destruction, of any endangered plant from federal land. Section 9 prohibits acts to remove, cut, dig up, damage, or destroy an endangered plant species in nonfederal areas in knowing violation of any State law or in the course of criminal trespass. Candidate species and species that are proposed or under petition for listing receive no protection under FESA Section 9.

Migratory Bird Treaty Act. The federal Migratory Bird Treaty Act (MBTA), 16 United States Code Section 703, prohibits killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. The MBTA protects whole birds, parts of birds, and bird eggs and nests; and prohibits the possession of all nests of protected bird species whether they are active or inactive. An active nest is defined as having eggs or young, as described by the Department of the Interior in its April 16, 2003 Migratory Bird Permit Memorandum. Nest starts (nests that are under construction and do not yet contain eggs) are not protected from destruction. All native bird species that occur on the subject property are protected under the MBTA.

Clean Water Act. The federal Clean Water Act (CWA) is the primary federal law regulating water quality. Implementing the CWA is the responsibility of the United States Environmental Protection Agency (EPA). The EPA depends on other agencies, such as individual state governments and the United States Army Corps of Engineers, to assist in implementing the CWA. The objective of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Sections 401 and 404 apply to activities that would impact waters of the United States (such as creeks, ponds, wetlands, etc.).

4.2.2.2 State Regulations

California Endangered Species Act. CESA (California Fish and Game Code Section 2050 et seq.) establishes State policy to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that State agencies should not approve projects that jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. For projects that would affect a species that is on the federal and State lists, compliance with FESA satisfies CESA if the CDFW determines that the federal incidental take authorization is consistent with the CESA under California Fish and Game Code Section 2080.1. For projects that would result in take of a species that is only State listed, the project proponent may apply for a take permit under Section 2081(b).

California Environmental Quality Act. CEQA applies to "projects" proposed to be undertaken or requiring approval by State and local government agencies. Projects are defined as activities having the potential to have a physical impact on the environment. Under Section 15380 of CEQA, a species not included on any formal list "shall nevertheless be considered rare or endangered if the species can be shown by a local agency to meet the criteria" for listing. With sufficient documentation, a species could be shown to meet the definition of rare or endangered under CEQA and be considered a "de facto" rare or endangered species.

The USFWS defines riparian areas as "plant communities contiguous to and affected by surface and subsurface hydrologic features of perennial or intermittent lotic and lentic water bodies (rivers, streams, lakes, or drainage ways)," and notes they are "usually transitional between wetland and upland," areas.[2] Riparian areas are typically vegetated with lush growths of grasses, forbs, shrubs, and trees that are tolerant of periodic flooding and have sediments that are rich in nutrients and organic matter."

CDFW tracks the occurrences of natural plant communities that are of limited distribution statewide or within a county or region where they are often vulnerable to the effects of development projects. In the most recent list of vegetation alliances/natural communities recognized in California, alliances with a NatureServe State ranking code of S1 through S3 are "highly imperiled" and impacts to "high-quality occurrences" of these communities may be considered significant under CEQA. Whether a natural plant community is imperiled or not can be determined by checking CDFW's List of Vegetation Alliances and Associations (2010). Some imperiled vegetation associations can be difficult to distinguish from common plant communities without a quantitative vegetation description. For example, patches of native grassland comprising at least 15 percent relative cover in a grassland area are considered a sensitive natural community by CDFW.

California Fish and Game Code. Under the California Fish and Game Code, the CDFW provides protection from "take" for a variety of species. The CDFW also protects streams, waterbodies, and riparian corridors through the Streambed Alteration Agreement process under Section 1601 to 1606 of the California Fish and Game Code. The California Fish and Game Code stipulates that it is

[2] U.S. Fish & Wildlife Service. 2025. *Glossary – Riparian.* Website: https://www.fws.gov/glossary/riparian (accessed June 27, 2025).

"unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake" without notifying the CDFW, incorporating necessary mitigation, and obtaining a Streambed Alteration Agreement. CDFW's jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation canopy cover.

California Fish and Game Code Section 3503.5 prohibits "take," possession, or destruction of any raptor (e.g., bird of prey species in the orders Falconiformes and Strigiformes), including their nests or eggs.

Violations of this law include destruction of active raptor nests as a result of tree removal and disturbance to nesting pairs by nearby human activity that causes nest abandonment and reproductive failure.

California Native Plant Protection Act. The California Native Plant Protection Act of 1977 prohibits importation of rare and endangered plants into California, "take" of rare and endangered plants, and sale of rare and endangered plants. The CESA defers to the California Native Plant Protection Act, which ensures that State-listed plant species are protected when State agencies are involved in projects subject to CEQA. In this case, plants listed as rare under the California Native Plant Protection Act are not protected under the CESA but rather under CEQA.

The CNPS is a non-governmental conservation organization that has developed a list of plants of special concern in California. The following explains the designations for each plant species[3]:

- Rank 1A – Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
- Rank 1B – Plants Rare, Threatened, or Endangered in California and Elsewhere
- Rank 2A – Plants Presumed Extirpated in California, But Common Elsewhere
- Rank 2B – Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
- Rank 3 – Plants About Which More Information is Needed- A Review List
- Rank 4 – Plants of Limited Distribution – A Watch List

Although the CNPS is not a regulatory agency and plants on these lists have no formal regulatory protection, plants with a Ranking of 1A through 2B may be considered to meet the definition of endangered, rare, or threatened species under Section 15380(d) of CEQA (see above), and impacts to these species may be considered "significant."

[3] California Native Plant Society (CNPS), Rare Plant Program. 2025. Inventory of Rare and Endangered Plants (online edition, v9.5.1). Sacramento: California Native Plant Society. Website http://www.rareplants.cnps.org (accessed April 11, 2025).

In addition, the CDFW recommends, and local governments may require, protection of species which are regionally significant, such as locally rare species, disjunct populations, essential nesting and roosting habitat for more common wildlife species, or plants with a CNPS Ranking of 3 and 4.

California Natural Communities. Sensitive natural communities are natural community types considered to be rare or of a "high inventory priority" by the CDFW. Although sensitive natural communities have no legal protective status under the FESA or CESA, they are provided some level of consideration under CEQA. Appendix G of the *State CEQA Guidelines* identifies potential impacts on a sensitive natural community as one of six criteria to consider in determining the significance of a proposed project. While no thresholds are established as part of this criterion, it serves as an acknowledgement that sensitive natural communities are an important resource and, depending on their rarity, should be recognized as part of the environmental review process. The level of significance of a project's impact on any particular sensitive natural community will depend on that natural community's relative abundance and rarity.

As an example, a discretionary project that has a substantial adverse effect on any riparian habitat, native grassland, valley oak woodland, and/or other sensitive natural community would normally be considered to have a significant effect on the environment. Further loss of a sensitive natural community could be interpreted as substantially diminishing habitat, depending on its relative abundance, quality, and degree of past disturbance, and the anticipated impacts to the specific community type.

Porter Cologne Water Quality Control Act. This act authorizes the Regional Water Quality Control Board (RWQCB) to regulate the discharge of waste that could affect the quality of the State's waters. Projects that do not require a federal permit may still require review and approval by the RWQCB. The RWQCB focuses on ensuring that projects do not adversely affect the "beneficial uses" associated with waters of the State. In most cases, the RWQCB requires the integration of water quality control measures into projects that will require discharge into waters of the State. For most construction projects, the RWQCB requires the use of construction and post-construction best management practices.

4.2.2.3 Local Regulations

City of Livermore General Plan. Applicable goals, objectives, and policies from the adopted City of Livermore General Plan related to biological resources are presented below:

> **Goal OSC-1** Conserve the value and function of Livermore's open space as a biological resource.
>
> > **Objective OSC-1.1** Maintain biodiversity within the Planning Area with special emphasis on species that are sensitive, rare, declining, unique or represent valuable biological resources.
> >
> > > **Policy P4** The City shall require all projects that impact a federal or State listed threatened or endangered species, federal or State listed candidate species, State

species of special concern, or State designated sensitive habitats, to mitigate for identified impacts in a way consistent with mitigation and avoidance measures published and distributed by the federal and/or State resource agencies at the time of the specific plan or project-level review. Monitoring requirements also shall be consistent with published requirements for each species or habitat. For listed or candidate species, species of special concern, or sensitive habitats for which no mitigation or avoidance measures have been published, the City shall require evidence of coordination with the responsible agencies prior to acceptance of mitigation or avoidance measures or monitoring requirements.

Objective OSC-1.2 Minimize impacts to sensitive natural habitats including alkali sinks, riparian vegetation, wetlands and woodland forest.

Policy P1 Habitats of rare or endangered species shall be preserved.

Policy P2 Use and development of riparian areas should enhance the appearance of the creekside environment and protect and enhance native vegetation.

Policy P3 Require appropriate setbacks, to be determined in coordination with resource agencies, LARPD, EBRPD, and other responsible agencies, adjacent to natural streams to provide adequate buffer areas that ensure the protection of plant and animal communities.

Policy P4 Riparian woodlands and freshwater marshes shall be preserved. Developers shall be required to mitigate possible adverse impacts upon these resource areas. Consistent with the North Livermore Urban Growth Boundary Initiative, no development shall be allowed that would have a substantial adverse impact or significant effect on such areas.

Policy P6 The City shall require all development to comply with State and federal regulations to preserve and protect the habitats of rare and endangered species.

Policy P7 The City shall require project proponents to identify and map sensitive biological and wetland resources on each development parcel and identify the measures necessary to avoid and/or minimize impacts on sensitive biological and wetland resources prior to approving the development. Mitigation for impacts to sensitive biological and wetland resources shall replace the functions and values of the resources as well as gross acreage.

Policy P8 The City shall require development to avoid take of species listed as threatened, endangered, or candidate under federal and state endangered species acts by implementing measures determined in consultation with the U.S. Fish and Wildlife Service and the California Department of Fish and Game.

Policy P12 The City shall require the maintenance of adequately sized terrestrial and aquatic movement corridors that connect natural open space areas.

Objective OSC-1.3 Conserve Livermore's native trees and vegetation, which are important biological resources within the Planning Area

Policy P1 Require new developments to incorporate native vegetation into their landscape plans, and prohibit the use of invasive non-native plant species. Propagules (seeds or plants) of native plants shall be from native sources.

City of Livermore Tree Protection Ordinance. Chapter 12.20 of the City's Municipal Code comprises the City's Tree Preservation Ordinance. Pursuant to Section 12.20.190, removal or encroachment into the protected zone of any "protected trees" on public or private property within the City requires issuance of a tree permit from the City pursuant to the provisions of the Ordinance. Protected trees are defined in Section 12.20.160(M) of the Municipal Code as a single-trunked tree, a multi-trunked tree, or a stand of trees dependent upon each other for survival that meets any one or more of the following criteria:

1. Any tree located on private property occupied by single-family residential development that meets the following criteria:
    a. Any tree with a circumference at breast height (CBH) of 60 inches or more; or
    b. Any California native tree having a circumference (CBH) of 24 inches or more;
2. Any tree located on private property occupied by commercial, industrial, institutional (i.e., religious, public agency, hospital, care facilities, etc.), mixed-use or multifamily residential (two or more units) development with a circumference (CBH) of 24 inches or more;
3. Any tree located on an undeveloped or underdeveloped property, regardless of zoning district, use, or development status, for which new development is proposed, with a circumference (CBH) of 18 inches or more;
4. Any tree located in an open space, riparian, or habitat area with a circumference (CBH) of 18 inches or more;
5. Any tree approved as part of a site plan approval, or required as a condition of approval for a development project, zoning use permit, use permit or other site development review;
6. Any tree designated by the City Council as determined to be an ancestral tree
7. Any tree listed on the City's ancestral tree inventory; and/or
8. Any tree required to be planted as mitigation for unlawfully removed trees.

In addition, Section 12.20 contains further regulations related to the definition, planting, protection, removal, and pruning of street trees within the City. As noted in Section 12.20.020 of the City's Municipal Code, all street trees within Livermore are considered property of the City, and the Director of Public Works or designee thereof retains exclusive authority and responsibility to plant, remove, prune, inspect, maintain, root-prune, or otherwise alter street trees.

East Alameda County Conservation Strategy. The East Alameda County Conservation Strategy (EACCS) is a collaborative document developed by multiple federal, State, and local entities, including Alameda County, to provide an effective framework to protect, enhance, and restore natural resources in eastern Alameda County, while improving and streamlining the environmental permitting process for impacts resulting from infrastructure and development projects. The EACCS study area encompasses 271,485 acres within Alameda County and includes the cities of Dublin, Livermore, and Pleasanton. The EACCS enables project proponents to comply with federal and State regulatory requirements within a framework of comprehensive conservation goals and objectives by implementing standardized mitigation requirements. Although the EACCS does not directly result in permits from any regulatory agencies, the standardized avoidance, minimization, and mitigation measures for species and natural communities provide more certainty for project proponents and local agencies of regulatory expectations and costs. This approach is expected to streamline the environmental permitting process, reducing the overall cost of environmental permitting and consolidating mitigation.

The EACCS addresses 19 "focal species" comprised of 13 wildlife and 6 plant species that meet one of the following criteria: (1) listed under the federal ESA as threatened or endangered, or proposed for listing; (2) listed under the California ESA as threatened or endangered, or proposed for listing; (3) listed under the Native Plant Protection Act as rare; or (4) expected to be listed under the federal or State ESA in the foreseeable future.[4]

4.2.3 Impacts and Mitigation Measures

The following describes the potential impacts of the proposed project related to biological resources. This section begins with the criteria of significance that establish the thresholds for determining whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as necessary.

4.2.3.1 Significance Criteria

Implementation of the proposed project would have a significant impact related to biological resources under the following conditions:

BIO-1 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

[4] Arbor Resources. 2023. Arborist Report, Pacific & Livermore Center. (Accessed June 7)

regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

BIO-2 Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

BIO-3 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;

BIO-4 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;

BIO-5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

BIO-6 Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4.2.3.2 Project Impacts

The following section provides an evaluation and analysis of the potential impacts of the proposed project for each of the criteria of significance listed above and potential cumulative impacts.

BIO-1 **The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.**

Less Than Significant Impact with Mitigation Incorporated. The project site is entirely developed with two commercial buildings consisting of a strip mall with a variety of tenants and several vacant units. At the northwestern end of the site is a vacant lot where a gas station used to be. The rest of the site is covered in parking lots, with landscaping in medians. The strip mall building is in poor condition and several structural issues were noted. The site is surrounded by residential and commercial development.

A search of the CNDDB for records of special-status plant and wildlife species and sensitive habitat occurrences within 2 miles of the project site was conducted in March of 2025. Additionally, the CNPS Electronic Inventory of Rare and Endangered Vascular Plants of California was also queried for all records of special-status species on the *Livermore* and *Altamont, California* United States Geological Survey quadrangle. An additional unofficial species list of federally protected species was obtained from the USFWS' IPaC database that identifies threatened, endangered, proposed, and candidate plant and wildlife species, as well as proposed and final designated critical habitat that may occur within the boundary of the project site and/or may be affected by the project.

A qualified biologist conducted a field survey of the project site and accessible surrounding areas on April 17, 2025. The area was surveyed for plant and wildlife species as well as inspected for wetlands or water features. The site has no native vegetation communities. Vegetation on the site is limited to planted landscaping trees and shrubs, with a few ruderal species on the northwest periphery of the site and where the gas station used to be. The field survey did not detect any active bird nests though a few old bird nests were seen on the strip mall. Birds likely nest each year on and adjacent to the site, both in trees and on buildings. There are no wetlands or other potentially jurisdictional waters on the site.

According to the *Biological Resources Technical Memorandum* **(Appendix D)** prepared for the proposed project, the CNDDB search identified that a total of 15 special-status plant species have occurrences within 2 miles of the project site (Table 4.2.A). Of the 15 special-status plant species identified by CNDDB, one federally protected plant species, palmate-bracted bird's-beak was identified by the IPaC database search as a federally protected plant species with the potential to occur within the boundary of the project site or to be potentially affected by the project. Additionally, the CNPS search revealed potential occurrence for 18 rare plant species, including 3 species that were not in the CNDDB results (Table D.1 in **Appendix D**). In total, 20 wildlife species were identified with the potential to occur within the vicinity of the project site, as summarized in Table 4.2.B.

However, each of these species have been determined to be absent from the project site because it lacks suitable habitat, is outside the known range of the species, and/or is isolated from the nearest known extant populations by development or otherwise unsuitable habitat. Therefore, no special-status plant or animal species are known or expected to occur on or in the vicinity of the project site due to its completely urbanized condition and lack of suitable habitats. As such, implementation of the proposed project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species.

As previously mentioned, the field survey did not identify any active bird nests. However, a few old bird nests were seen on the strip mall. Birds likely nest each year on and adjacent to the site, in trees and on buildings. Although no active bird nests were identified, common native bird species are protected by California Fish and Game Code, and it is likely that birds nest on and adjacent to the site each year. Therefore, tree removal, building demolition, and construction of the proposed project could result in potentially significant impacts to nesting birds protected by the MBTA and the California Fish and Game Code. Construction of the proposed project may take place during the bird breeding season (typically February 1 through September 15), which could result in ground-disturbing construction activities directly affecting birds protected by the MBTA and their nests through the removal of habitat on the project site and indirectly through increased noise, vibration, and increased human activity. To avoid or minimize impacts to birds in compliance with the MBTA and California Fish and Game Code, **Mitigation Measure BIO-1** shall be required, which would limit construction activities and require pre-construction surveys by a qualified biologist to identify any active nests at the project site.

Impact BIO-1: The proposed project could potentially have a significant adverse impact on nesting birds.

Mitigation Measure BIO-1

If project activities including tree removal, demolition, or construction take place during nesting bird season (February 1 to September 15), a qualified biologist shall conduct focused surveys for active nests within 5 days prior to the initiation of project-related activities. Surveys shall be conducted in all potential habitat on and adjacent to the project site. If a lapse in project-related activities of 7 days or longer occurs, another focused survey will be required before project activities can resume. If an active nest is found, the biologist shall consult with CDFW regarding appropriate action to comply with the Fish and Game Code of California.

The qualified biologist shall observe any identified active nests prior to the start of any construction-related activities to establish a behavioral baseline of adults and any nestlings. Once work commences, all active nests should be continuously monitored for a minimum of three consecutive workdays by the biologist to detect any signs of disturbance and behavioral changes as a result of project activities. In addition to direct impacts, such as nest destruction, nesting birds might be affected by noise, vibration, odors and movement of workers or equipment. If signs of disturbance and behavioral changes are observed at any time, the biologist shall cease work causing that behavioral change and shall contact the CDFW for guidance.

Active nest sites and protective buffer zones shall be designated as "Environmentally Sensitive Areas" where no project-related activities or personnel may enter until the biologist determines that the young have fully fledged and will no longer be adversely affected by the project. These designated areas shall be protected during project activities by surrounding the nest site with a wildlife- safe fence or flagging barrier. The Qualified Biologist and/or Biological Monitor shall determine the necessary buffer distance to protect nesting birds based on existing site conditions (such as construction activity and line of sight). Buffer distance shall be increased to provide sufficient protection of nesting birds and their natural behaviors, as needed.

Implementation of **Mitigation Measure BIO-1** would require a qualified biologist to survey for nesting birds prior to the commencement of construction activities and require a buffer zone around any active nest which would reduce potential impacts to nesting birds to a level that is **less than significant with mitigation**.

BIO-2 The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

No Impact. As previously mentioned, the U.S Fish and Wildlife Service defines riparian areas as "plant communities contiguous to and affected by surface and subsurface hydrologic features of perennial or intermittent lotic and lentic water bodies (rivers, streams, lakes, or drainage ways)," and notes they are "usually transitional between wetland and upland," areas.

The field survey conducted for the proposed project identified no riparian habitat present on the site. Additionally, the project site has no native vegetation communities. Vegetation on the project site is limited to planted landscaping trees and shrubs, with a few ruderal species on the periphery of the site and where the gas station used to be. Therefore, the proposed project would have **no impact** on any riparian habitat or other sensitive natural communities.

BIO-3 The project would not 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;

No Impact. According to the USFWS National Wetland Inventory, the project site does not contain any federally protected wetlands as defined by Section 404 of the CWA. Therefore, implementation of the proposed project, including the conceptual development project, would have **no impact** on any federally protected wetland.

BIO-4 The project would not 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;

No Impact. The project site is in an urban area of Livermore and is almost entirely developed with commercial buildings and a surface parking lot. In addition, the project site is not considered an established native resident or migratory wildlife corridor. Construction of the proposed project would redevelop the project site with residential uses and would not interfere with local wildlife movement or corridors beyond existing conditions. Common wildlife species that have adapted to urban environments would continue to use the project site after redevelopment. In addition, the project site does not contain any native wildlife nursery sites. Therefore, construction of the proposed project would not create substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or native wildlife nursery sites. **No impact** would occur.

BIO-5 The project would conflict with a local policy or ordinances protecting biological resources, such as a tree preservation policy or ordinance;

Less Than Significant Impact with Mitigation Incorporated. The goals, objectives, and policies from the adopted City of Livermore General Plan relate to undeveloped open space and sensitive, rare, declining, unique or represent valuable biological resources. The project site is developed and

contains no protected biological resources. Therefore, construction of the proposed project would not conflict with local policies or ordinances protecting biological resources.

Based on the Arborist Report included as (**Appendix E**), Deodar cedars and Crape myrtles are the most frequently encountered trees on the project site, comprising at total of 82 percent of the 71 inventoried trees. All inventoried species are regarded as ornamental and are not native to the local geographical region or defined as California natives pursuant to Section 12.20.160(B) of the Livermore Municipal Code. Of the 71 inventoried trees, 22 are situated within the public right-of-way and defined as street trees pursuant to Section 12.20.010(G) of the Livermore Municipal Code; 39 are defined as protected trees pursuant to Code Section 12.20.160(M)(2) due to having a trunk circumference greater than 24 inches. Of the existing 71 trees on and around the perimeter of the project site, 70 would be removed. Approximately 405 new trees would be planted throughout the project site. Landscaping and other plantings would be provided throughout the project site as well.

The City of Livermore Tree Protection Ordinance states that removal or encroachment into the protected zone of any "protected trees" on public or private property within Livermore requires issuance of a tree permit from the City pursuant to the provisions of the ordinance. However, without implementation of additional protection measures, potential impacts to trees that would be retained during construction would be potentially significant. As such, **Mitigation Measure BIO-2** and **Mitigation Measure BIO-3** shall be required.

Impact BIO-5: The proposed project would have a potential conflict with a local policy or ordinance protecting a biological resource.

Mitigation Measure BIO-2 Final landscape plans shall be submitted for approval and review by the City of Livermore Planning Division prior to issuance of any grading, trenching, encroachment, demolition, or building permit for development. Final landscape plans shall clearly identify all "protected trees," as defined in the Tree Protection Ordinance, and all trees to be removed from the project site and the size, location, type, value of trees and specify the species of all replacement trees.

Mitigation Measure BIO-3 The project applicant shall implement all tree protection measures recommended in the Arborist Report (**Appendix E**) prepared for the project which are designed to help mitigate or avoid impacts to trees being retained. A qualified arborist shall be consulted in the event that any recommendations cannot be feasibly implemented.

With implementation of **Mitigation Measures BIO-2** and **Mitigation Measure BIO-3**, which would require final landscape plans to be reviewed by the city to ensure compliance with all applicable local policies or ordinances protecting biological resources including the City's Tree Protection Ordinance, and requires the implementation of all protection measures recommended in the Arborist Report prepared for the proposed projects, impacts related to a conflict with local policies or ordinances protecting biological resources would be **less than significant with mitigation**.

BIO-6 Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

No Impact. As previously noted and discussed in the *Biological Resources Technical Memorandum* (**Appendix D**, **Table 4.2.C**), the project site is located within the EACCS. While the EACCS addresses 19 "focal species" including 13 wildlife and 6 plant species, none of the focal species have any potential to occur on the site. Therefore, there would be no conflict.

4.2.3.3 Cumulative Impacts

According to Section 15130 of the *State CEQA Guidelines*, cumulative impacts refer to incremental effects of an individual project when viewed in connection with the effects of past projects, current projects, and probable future projects. This cumulative analysis examines the effects of the project in the relevant geographic area in combination with buildout of the General Plan. Cumulative impacts are addressed only for those thresholds that would result in a project-related impact, whether it be less than significant or less than significant with mitigation. If the project would result in no impact with respect to a particular threshold, it would not contribute to a cumulative impact; therefore, no further discussion of cumulative effects related to these topics is required.

Based on the list of cumulative projects in Section 4.0, three projects were recently approved in vicinity of the project site. However, based on the project approvals, none would result in impacts related to biological resources. Due to the project site's historic and ongoing disturbance, proximity to development, lack of sensitive biological resources, and through compliance with applicable City requirements and implementation of **Mitigation Measures BIO-1**, **BIO-2**, and **BIO-3**, which would reduce potential project-related impacts to less-than-significant levels, the proposed project would not result in a significant effect on biological resources.

When the City considers future development proposals, these proposals would undergo environmental review pursuant to CEQA and, when necessary, mitigation measures would be adopted as appropriate. In most cases, this environmental review and compliance with project mitigation measures, conditions of approval, and relevant policies of the General Plan would ensure that significant impacts on biological resources would be avoided or otherwise mitigated to less-than-significant levels. Based on the information in this Biological Resources section, and for the reasons summarized above, implementation of the proposed project would not make a cumulatively considerable contribution to significant adverse cumulative impact related to biological resources. This impact would be **less than significant with mitigation incorporated**.

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4.3 CULTURAL RESOURCES

This section describes the environmental setting, including regulatory framework and existing conditions at the project site, and potentially significant environmental impacts of the proposed project related to cultural resources.

4.3.1 Environmental Setting

The prehistoric and historical context of the project area is discussed below.

4.3.1.1 Prehistoric and Historical Background

Cultural resources in the City of Livermore's General Plan planning area are associated with the Livermore-Amador Valley's prehistoric past, the Spanish and Mexican periods, and Livermore's civic and agricultural development. The City of Livermore (City) prepared a Historic Resources Survey Update in March 2021 to determine if any potential historic resources that were not listed are present within Livermore.[1]

As part of the Historic Resources Survey Update, a total of 2,103 properties within Livermore were considered during a reconnaissance-level survey. Following the reconnaissance-level survey, a list of 82 properties, consisting of 67 individual properties and a historic district with 15 properties that warranted further evaluation as potential historic resources, was compiled. Overall, a total of 30 properties were identified to be eligible for individual listing in the National Register of Historic Places (NRHP) and California Register of Historic Resources (CRHR) and met the definition of a City of Livermore historic resource, and 22 properties met the definition of a City of Livermore historic resource. In addition, 14 properties were identified as contributors to the Trevarno Road historic district. Overall, nearly 100 properties were newly identified within the Historic Resources Survey Update. Livermore also includes five properties that are currently listed as historic resources.

The concept of prehistory refers to the period of time before events were recorded in writing and varies worldwide. Due to the absence of a written record, the understanding of California prehistory relies on archaeological materials and oral histories passed down through generations. The Livermore-Amador Valley was initially occupied by native Californians known as the Ohlone for thousands of years before the arrival of Europeans.[2] The area's earliest inhabitants are referred to by archaeologists as "Paleoindians." Paleoindian groups were the first humans to enter California and subsisted primarily on big game and, to a minimal extent, processed plant foods. The Paleo-Archaic-Emergent cultural sequence developed by David Fredrickson at the University of California, Davis, Department of Anthropology, is commonly used to interpret the prehistoric occupation of Central California. The sequence is broken into the following three broad periods:

1 City of Livermore. 2021. Historic Resources Survey Update.

2 Museum on Main. n.d. *The Ohlone World.* Website: https://www.museumonmain.org/native-ohlone.html (accessed May 22, 2025)

- The Paleoindian period (8000 to 6000 B.C.) began with the first entry of people into California. Such people probably subsisted mainly on big game, and to a lesser extent, on plant foods, with few or no trade networks. Current research, however, indicates more plant processing, trading, and sedentism occurred in the period than previously thought;

- The Archaic period (Lower Archaic, 6000 to 3000 B.C.; Middle Archaic, 3000 to 500 B.C.; and Upper Archaic, 500 B.C. to 1000 A.D.) is characterized by increased use of plant foods, elaboration of burial and grave goods, and increasingly complex trade networks; and

- The Emergent period (1000 to 1800 A.D.) is marked by the introduction of the bow and arrow, the ascendance of wealth-linked social status, and the elaboration and expansion of trade networks, signified in part by the appearance of clam disk bead money.

4.3.1.2 Project Site History and Current Uses

According to the *Historical Resource Evaluation Memorandum* **(Appendix F)** prepared for the project, the project site consists of a parking lot and two single-story, multi-unit commercial buildings constructed in 1960 and remodeled in 1975–1977 on four assessor's parcels comprising a total of 6.54 acres. The western portion of the project site is an undeveloped triangular area that, until circa 1993, contained a gasoline filling station that fronted South Livermore Avenue. The project site is generally flat and is surrounded by single and multi-family residential neighborhoods constructed in phases from the 1920s to the 1980s to the east, north, west, and, to an extent, to the south with the exception of a collection of municipal buildings constructed circa 2000–2020 on an approximately 9-acre site.

On April 9, 2025, a record search was conducted at the Northwest Information Center (NWIC) for the project site and a 0.25-mile radius. In addition, local and State inventories for built environment cultural resources in and adjacent to the project site including the *California Inventory of Historic Resources*, *Five Views: An Ethnic Historic Site Survey for California*, *California Points of Historical Interest*, *California Historical Landmarks*, *Pacific Coast Architecture Database*, *An Architectural Guidebook to San Francisco and the Bay Area*, *A Living Legacy: Historic Architecture of the East Bay*, and *Built Environment Resource Directory: Alameda County*. The results of the NWIC search and local inventory reviews did not identify any previously identified cultural resources within the vicinity of the project site.

According to the map review conducted for the project site and its vicinity, the project site was undeveloped from 1906 to 1941, with no buildings, structures, or objects. By 1953, the project site was set within an orchard or vineyard, but no buildings, structures, or objects were present. In 1961, one building appeared on the project site, the footprint of which corresponds to the existing larger building that is parallel to Pacific Avenue. In addition, the 1961 map depicts the modern residential tract development north of and adjacent to the project site as well as modern Dolores Street at the project site's eastern boundary. By 1968, the project site appeared to have the existing second single-story building near the southeast corner of the project site, the apartment buildings to the south of the project site, and Civic Center Park across Pacific Street. Both the maps reviewed from 1973 and 1980 depict the same general built environment as 1968 but show Livermore extending farther to the south and west.

A review of online sources of newspaper articles on the project site revealed mentions of individual business within the existing shopping center. On March 18, 2025, the project site, building exteriors, and portions of publicly available interior spaces were reviewed by an LSA architectural historian. The buildings are considered Ranch-style or influenced commercial style architecture and are similar in visual appearance to contemporary multi-unit commercial retail buildings in Livermore and statewide.

The background research identified two built environment cultural resources more than 50 years old on the project site that together constitute the existing Vineyard Shopping Center. Research indicates that the Vineyard Shopping Center is associated with the commercial development and growth of Livermore in the mid-20th century, including a pattern of development in the project vicinity and Alameda County in the years following World War II.

4.3.1.3 Known Historic and Archaeological Resources

According to the *Cultural Resources Memorandum* **(Appendix G)** LSA prepared on April 16, 2025, for the proposed project, an archaeological record search, survey, and Native American consultation were conducted for the proposed project site.

On March 27, 2025, a record search request was submitted to the NWIC for the project area and a 0.25-mile area around the project. According to this record search, no previous studies or resources had been recorded from the project area or its vicinity, but three previous surveys were conducted outside of the 0.25-mile radius area.

Based on the pedestrian field survey conducted on March 18, 2025, the undeveloped triangular parcel on the project site exhibited a low growth of weeds with 80–95 percent ground visibility, with no visible resources. Sediment was observed to be mainly gravel, concrete pieces, small rocks, and recent trash, including small pieces of glass, metal, plastic, and paper.

4.3.2 Regulatory Setting

Federal, State, and local laws, regulations, plans, or guidelines that are designed to protect significant cultural resources and are potentially applicable to the proposed project are summarized below.

4.3.2.1 Federal Regulations

The following describes the State and local regulatory and policy requirements for cultural resources that are relevant to the proposed project.

National Register of Historic Places. The NRHP was first established in 1966, with major revisions in 1976. Federal regulations for the NRHP are set forth in Code 36 of Federal Regulations (CFR) 60, which establishes the responsibilities of the State Historic Preservation Officers (SHPOs), standards for their staffs and review boards, and describes the statewide survey and planning process for historic preservation. Within these regulations, guidelines for nominations by the SHPO are set forth in 36 CFR 60.6. In addition, further regulations are found in 36 CFR 63 and 800 and *Bulletin 15: How*

to Apply the National Register Criteria for Evaluation (Bulletin 15)[3], which define procedures for determination of eligibility, identification of historic properties, recovery, reporting, and protection procedures. The NRHP was established to recognize resources associated with the accomplishments of all peoples who have contributed to the country's history and heritage. Guidelines were designed for federal and state agencies in nominating cultural resources to the NRHP. These guidelines are based upon integrity and significance of the resource. Integrity applies to specific items such as location, design, setting, materials, workmanship, feeling, and association. Quality of significance in American history, architecture, archaeology, engineering, and culture is present in resources that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and meet at least one of the following criteria:

- **Criterion A:** Associated with events that have made a significant contribution to broad patterns of our history.
- **Criterion B:** Associated with the lives of persons significant in our past.
- **Criterion C:** Embodies distinctive characteristics of 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.
- **Criterion D:** Have yielded, or are likely to yield, information important in prehistory or history.

Integrity is defined in Bulletin 15 as "…the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic or prehistoric period. If a property retains the physical characteristics it possessed in the past then it has the capacity to convey association with historical patterns or persons, architectural or engineering design and technology, or information about a culture or peoples." There are also seven aspects of integrity that are used: (1) location, (2) design, (3) setting, (4) materials, (5) workmanship, (6) feeling, and (7) association.

Section 106 for the National Historic Preservation Act of 1966. Federal regulations for cultural resources are governed primarily by Section 106 of the National Historical Preservation Act (NHPA) of 1966. Section 106 of NHPA requires Federal agencies to take into account the effects of their undertakings on historic properties and affords the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The Council's implementing regulations, "Protection of Historic Properties," are found in Title 36 CFR Part 800. The goal of the Section 106 review process is to offer a measure of protection to sites, that are determined eligible for listing on the NRHP. The criteria for determining NRHP eligibility are found in 36 CFR Part 60. Amendments to the Act (1986 and 1992) and subsequent revisions to the implementing regulations have, among other things, strengthened the provisions for Native American consultation and participation in the Section 106 review process. Although federal agencies must follow federal regulations, most projects by private developers and landowners do not require this level of compliance. Federal regulations

[3] United States Department of the Interior National Park Service. 1990. *Bulletin 15: How to Apply the National Register Criteria for Evaluation*.

only come into play in the private sector if a project requires a federal permit or uses federal funding.

4.3.2.2 State Regulations

State regulations relating to preserving historic and archaeological properties are Public Resources Code Section 5020 et seq., CEQA Sections 21083.2 and 21084.1, and *State CEQA Guidelines* Section 15064.5.

For purposes of CEQA, "historical resources" include:

- A resource listed in, or determined eligible for listing in, the California Register of Historical Resources;
- A resource included in a local register of historical resources adopted pursuant to a local ordinance or resolution, or included in a historical resource survey, meeting the requirements of California Public Resource Code Section 5024.l(g); or
- Any resource that the lead agency deems to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.

Sites are evaluated in accordance with Section 15064.5(a)(2)-(3) of the *State CEQA Guidelines*, using the criteria outlined in Section 5024.1 of the California Public Resources Code. Under this section, an important historical resource is one that includes the following:

- Criterion 1: is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Criterion 2: is associated with the lives of persons important in our past; or
- Criterion 3: embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value; or
- Criterion 4: has yielded, or may be likely to yield, information important in prehistory or history. Such resources are considered eligible for the California Register of Historical Resources.

Typically, historic-era properties are evaluated under each of these criteria, while prehistoric properties are evaluated under Impact Discussion CULT-4 only. In practice, unevaluated resources usually are treated as potentially important.

Under Section 21083.2, a "unique" archaeological resource is an object, artifact, or site that can be clearly shown to (1) contain information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; or (2) have a special and particular quality such as being the oldest of its type or the best available example of its type; or (3)

is directly associated with a scientifically recognized important prehistoric or historic event or person.

Guidelines for CEQA require identification of project effects on cultural resources (historic-era and pre- historic archaeological sites, buildings, and traditional cultural properties) that are determined to be legally important. CEQA defines such resources as those eligible for listing in the CRHR using Criteria for Evaluating the Significance of Historical Resources (Assembly Bill 2881, signed into law on September 27, 1992). The first step is to avoid impacts to cultural resources whenever possible. Where avoidance is not feasible, further investigations may be needed. If buried cultural materials are encountered during construction, work would be required to stop in that area until a qualified archaeologist can evaluate the nature and significance of the find.

Protection of historic and pre-historic human remains is addressed under CEQA. These remains may consist of historic-period burials or cemeteries, and Native American remains that occur as isolated features or in archaeological site contexts. Native American-sanctified cemeteries, places of worship, ceremonial and religious sites, or sacred shrines situated on public property must be protected from vandalism and damage under Public Resources Code 5097.9.

California Health and Safety Code Section 7050.5. California Health and Safety Code Section 7050.5 states that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the Coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the Coroner's authority. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission (NAHC) within 24 hours of this identification. The NAHC will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

4.3.2.3 Local Regulations

City of Livermore General Plan. The relevant goals, policies, and actions from the adopted City of Livermore General Plan related to cultural and tribal cultural resources are presented below.

> **Goal CC-3:** Preserve and enhance the City's cultural and historic resources not merely as positive reminders of the past, but also as relevant and unique alternatives for the present and the future – a source of community identity, architecture, and social, ecological and economic vitality.
>
> > **Objective CC-3.1:** Establish and maintain a comprehensive, Citywide preservation program.
> >
> > > **Policy P2:** The City shall encourage, and when possible require, the preservation of places, sites, areas, buildings, structures, and works of humans which have cultural, archaeological, or historical significance or other special distinction to the community.

Policy P3: Whenever a historical resource is known to exist in or near a proposed project area, the City shall require an evaluation by qualified professionals as a part of the environmental assessment process.

Policy P4: The City shall encourage the preservation of historic resources to promote the sustainability, stabilization, and revitalization of its neighborhoods

Objective CC-3.4: Identify and protect archaeological and paleontological resources that enrich our understanding of early Livermore and the surrounding region.

Policy P1: The City shall require proper archaeological or paleontological testing, research, documentation, monitoring, and safe retrieval of archaeological and cultural resources as part of a City established archaeological monitoring and mitigation program.

Policy P2: Whenever there is evidence of an archaeological or paleontological site within a proposed project area, an archaeological survey by qualified professionals shall be required as a part of the environmental assessment process.

Policy P3: If an archaeological site is discovered during construction, all work in the immediate vicinity shall be suspended pending site investigation by qualified professionals. If, in the opinion of a qualified professional, the site will yield new information or important verification of previous findings, the site shall not be destroyed.

Policy P4: Archaeological sites should be preserved for research and educational programs. Where possible, such sites shall be made accessible to the public as part of the open space/recreation/educational system.

4.3.3 Impacts and Mitigation Measures

The following describes the potential impacts of the proposed project related to cultural resources. This section begins with the criteria of significance that establish the thresholds for determining whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as necessary.

4.3.3.1 Significance Criteria

Implementation of the proposed project would have a significant impact related to cultural resources under the following conditions:

CUL-1 Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5;

CUL-2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;

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

4.3.3.2 Project Impacts

The following section provides an evaluation and analysis of the potential impacts of the proposed project for each of the criteria of significance listed above and potential cumulative impacts.

CUL-1 The project would cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

Less Than Significant Impact. As previously stated, the project involves the demolition of the existing commercial buildings on the project site (Livermore Town Center), the construction of 15 residential buildings totaling 115 units, pool area, and associated pool equipment and clubhouse buildings totaling approximately 1,577 square feet, landscaping, paseos, guest parking, and an interior park. The proposed project would also include new frontage improvements such as curb, sidewalk, gutter, and streetlights.

In compliance with Policy P3 of the City's General Plan Community Character Element Objective CC-3.1, a *Historical Resource Evaluation of the Vineyard Shopping Center* **(Appendix F)** was prepared for the proposed project on April 25, 2025. As identified in the *Historical Resource Evaluation,* the commercial buildings on-site were constructed in 1960 and remodeled in 1975–1977. Therefore, these buildings are more than 50 years old, constituting potential historical resources. According to the NRHR and CRHP significance criteria for historical resources, a resource would be considered historical if it was associated with events that have made a significant contribution to the broad patterns of national history or California's history and cultural heritage, was associated with the lives of significant persons or persons important to national or Californian past, embodies the distinctive characteristics of a type, period, or method of construction, represented the work of a master or important creative individual, possessed high artistic values, or if it has yielded or would be likely to yield information important in national or State history or prehistory.

The *Historical Resource Evaluation* determined that, although the existing commercial buildings are associated with the commercial development and growth of Livermore in the mid-20th century, including the expansion of Livermore after World War II, background information indicated that this example does not have a higher associative stature when compared to the other similar developments associated with this important land use pattern. Therefore, demolition of the existing commercial buildings associated with the proposed project would have a less than significant impact on a resource associated with events that have made a significant contribution to the broad patterns of national history or California history and cultural heritage.

Additionally, the *Historical Resource Evaluation* did not identify a builder or person responsible for designing or constructing the existing commercial buildings, and did not identify the existing buildings as representative examples of an architectural style, specimens of a noted architect, architectural firm, or other notable design professional, or as an object that possesses innovative qualities or modifies an existing style or method of construction. Therefore, demolition of the existing commercial buildings associated with the proposed project would result in a less than significant impact on a resource associated with the lives of significant persons in national or

Californian past and would not embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master or important creative individual, or possess high artistic values.

Finally, the *Historical Resource Evaluation* determined that information about the growth of commercial strip developments in the post-World War II era, the adaptation of Ranch style to their design, and the pertinent construction techniques, as represented by the Vineyard Shopping Center historic period built environment, can be obtained from other widely available sources on this familiar architectural style and is not likely to result in new information about their construction techniques or architectural style and design. Therefore, demolition of the existing commercial buildings associated with the proposed project would result in a less than significant impact on any information important in national or Californian prehistory or history.

In addition to the analysis above, a record search of the project site and a 0.25-mile radius did not identify any previously identified cultural resources within the 6.54-acre project site or a 0.25-mile radius. Similarly, a review of online newspapers, public comment letters, and a field review performed by an architectural historian did not identify any cultural resources within the project site or its vicinity. Therefore, the existing commercial buildings to be demolished by the proposed project do not appear eligible for inclusion in the NRHP, or the CRHR under any significance criteria, either individually or as contributing element of a potential historic district, and therefore does not appear to qualify as a "historical resource" for the purposes of CEQA (Public Resources Code Section 21084.1)

Therefore, the proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5, a **less than significant impact** would occur, and no mitigation is required.

CUL-2 The project could result in a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

Less Than Significant Impact with Mitigation Incorporated. The proposed project is located on a 6.5-acre area currently developed with commercial buildings and a paved asphalt parking lot. There is a small undeveloped triangular area at the western end of the project area, which was previously developed as a gas station.

According to the *Cultural Resources Memorandum* **(Appendix G)** prepared for the proposed project, an archaeological record search and pedestrian survey were conducted for the project site. The record search was submitted to the NWIC for the project area and a 0.25-mile area around the project site on March 27, 2025, and a pedestrian field survey of the project site was conducted on March 18, 2025.

The results of the record search found that no previous studies or resources had been recorded from the project area. In addition, no resources had been recorded within 0.25 mile of the project area. The record search did identify three previously conducted cultural field studies that were conducted outside of the project site, but within 0.25 mile of the project area. These studies indicated that little development has taken place in the area since 1970. Modern maps show that Livermore Avenue

runs along a portion of the east boundary of *Rancho las Positas* and to the west of *Rancho Valle de San Jose*, indicating that the area was valued for grazing cattle, which was a primary economic use of the land during the Mexican Rancho Period.

The pedestrian field survey conducted for the project site showed that the western side of the project, composing approximately 85 percent of the total project area, consisted of a paved asphalt parking lot and commercial buildings, while the western portion of the project area is, as previously mentioned, an undeveloped triangular area once used as a gasoline station. The survey showed that the undeveloped parcel exhibited a high degree of prior surface disturbance, including a low growth of weeds with 80–95 percent ground visibility. The sediment observed was mainly gravel, concrete pieces, small rocks, and recent trash, including small pieces of glass, metal, plastic, and paper. No cultural material other than relatively recent trash was observed.

As previously mentioned, the project site has been previously disturbed by the construction of a commercial center and parking lot, and the undeveloped parcel was previously disturbed by a gas station. Although the site has been developed and there is no evidence of archaeological resources, during site preparation/grading activities, there is the potential for inadvertent discovery of unknown archaeological resources. Pursuant to Policies P1, P2, and P3 of the City's General Plan Community Character Element Objective 3.4, proper archaeological or paleontological testing, research, documentation, monitoring, and safe retrieval of archaeological and cultural resources would be required as part of the City established archaeological Monitoring and Mitigation program. In addition, an archaeological survey would be required if there was evidence of an archaeological or paleontological site, and if an archaeological site is discovered during ground-disturbing activities, all work in the immediate vicinity of the site shall be suspended pending site investigation by qualified professionals.

Implementation of **Mitigation Measure CUL-1** would require that a qualified professional archaeologist provide cultural resources awareness training prior to the commencement of ground-disturbing activities, and that a qualified professional archaeologist be retained on-call in the event that construction personnel encounter any archaeological deposits and/or human remains during construction activities. If construction personnel encounter any archaeological deposits during construction activities, the on-call qualified professional archaeologist will be contacted to assess the nature of the find. When archaeological resources are assessed and/or protected as they are discovered, impacts on these resources are less than significant. As such, with implementation of **Mitigation Measure CUL-1** this impact would be considered **less than significant with mitigation incorporated**.

Impact CUL-2: The project could result in a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

Mitigation Measure CUL-1 Unknown Archaeological Resources. In the event that archaeological resources are discovered during excavation, grading, or construction activities, work shall cease within 50 feet of the find until a qualified archaeologist has evaluated the find in accordance with federal, State, and local guidelines to determine whether the find constitutes a "unique archaeological resource," as defined in Section

21083.2(g) of the California Public Resources Code (PRC). The Applicant and its construction contractor shall not collect or move any archaeological materials and associated materials. Construction activity may continue unimpeded on other portions of the project site. Any found deposits shall be treated in accordance with federal, State and local guidelines, including those set forth in PRC Section 21083.2, and shall be assessed, handled, and treated consistent with accepted standards, such as the Secretary of the Interior's standards and guidelines for archaeology and historic preservation. Prior to commencement of grading activities, the Director of the City of Livermore (City) Community Development Department, or designee, shall verify that all project grading and construction plans include specific requirements regarding California PRC (Section 21083.2[g]) and the treatment of archaeological resources as specified above.

CUL-3 The project could disturb human remains, including those interred outside of formal cemeteries.

Less Than Significant Impact with Mitigation Incorporated. Although no human remains are known to be on the project site or are anticipated to be discovered during project construction, due to ground disturbance, there is a possibility of inadvertent discovery of human remains. Disturbing human remains could violate the State's Health and Safety Code as well as destroy the resource. **Mitigation Measure CUL-2** requires compliance with the State's Health and Safety Code for the treatment of human remains. With adherence to regulatory standards included in the following mitigation measure, a less-than-significant impact related to the discovery of human remains would occur.

Impact CUL-3: The project could disturb human remains, including those interred outside of formal cemeteries.

Mitigation Measure CUL-2 Cultural Resources Monitoring and Accidental Discovery, Human Remains. In the event that human remains are encountered on the project site, work within 50 feet of the discovery shall be redirected and the County Coroner notified immediately consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e). State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which shall determine and notify a Most Likely Descendant (MLD). With the permission of the property owner, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains

and items associated with Native American burials. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the City of Livermore shall consult with the MLD as identified by the NAHC to develop an agreement for treatment and disposition of the remains. Prior to the issuance of grading permits, the Director of the City of Livermore Community Development Department, or designee, shall verify that all grading plans specify the requirements of CCR Section 15064.5(e), State Health and Safety Code Section 7050.5, and PRC Section 5097.98, as stated above.

Implementation of **Mitigation Measure CUL-2** would ensure that archaeological deposits and human remains would be treated in a culturally appropriate manner and in accordance with appropriate State codes and regulations. Implementation of **Mitigation Measure CUL-2** would ensure that impacts to unknown archaeological resources, including human remains, that could be discovered during construction of the proposed project would be **less than significant with mitigation.**

4.3.3.3 Cumulative Impacts

For cultural resources, the scope for assessing cumulative impacts encompasses other past, current, or probable future projects under review by the City. The proposed project would have a significant effect on the environment if it would contribute to a significant cumulative impact on cultural resources. Based on the list of cumulative projects in Section 4.0, three projects were recently approved in vicinity of the project site. However, it was determined that none would result in impacts related to cultural resources.

As discussed above, the proposed project would include the demolition of the existing commercial buildings, which are not considered historical resources under CEQA. Other development in the project vicinity may impact, but any development impacting historical resources would be required to undergo project-specific environmental review and implement project-specific mitigation as applicable. As previously mentioned, the proposed project would demolish two buildings that are not part of a historical district and that do not share a historic context or use with other historic built resources in the cumulative projects within 0.25 mile of the project site. Therefore, the proposed project would not result in a cumulatively considerable contribution to a significant and unavoidable impact.

Similar to the proposed project, ground disturbance associated with cumulative projects could result in potentially significant impacts on previously unidentified archaeological sites and associated human remains that may be unearthed. However, impacts on resources accidentally discovered during implementation of these projects would be **less than significant** with compliance with appropriate regulations and conditions of approval. Proposed projects in the area would also be required to comply with **Mitigation Measure CUL-1** and **Mitigation Measure CUL-2** as described above. Collectively, recent past, approved, and probable future projects that may occur in the vicinity—including the proposed project—would not result in a cumulative increase in impacts on archaeological historical resources, archaeological resources, or human remains because these

resources would be avoided or otherwise removed, analyzed, and documented (i.e., by a qualified archaeologist).

When the City considers future development proposals, these proposals would undergo environmental review pursuant to CEQA and, when necessary, mitigation measures would be adopted as appropriate. In most cases, this environmental review and compliance with existing regulations, conditions of approval, and relevant policies of the General Plan would ensure that significant impacts on cultural resources would be avoided or **less than significant**. Based on the information in this Cultural Resources section, and for the reasons summarized above, implementation of the proposed project would not make a cumulatively considerable contribution to significant adverse cumulative impacts related to cultural resources when considered together with other cumulative development. Therefore, the cumulative impact on cultural resources would be **less than significant**.

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4.4 ENERGY

This section describes the environmental setting, including regulatory framework and existing conditions at the project site, and potentially significant environmental impacts of the proposed project related to energy. The energy use analysis in this section is based on information from the California Emissions Estimator Model (CalEEMod) version 2022.1 modeling results contained in **Appendix B**. The energy estimates are included in **Appendix H**.

4.4.1 Environmental Setting

The following discussion provides an overview of existing energy usage on the project site.

4.4.1.1 Electricity

Electricity is a manmade 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. Electricity is used for a variety of purposes (e.g., lighting, heating, cooling, and refrigeration, and for operating appliances, computers, electronics, machinery, and public transportation systems).

According to the most recent data available, in 2023, California's electricity was generated primarily by natural gas (43.68 percent), renewable sources (56.09 percent), large hydroelectric (12.55 percent), nuclear (8.22 percent), coal (0.12 percent), and other unspecified sources. Total electric generation in California in 2023 was 281,140 gigawatt-hours (GWh), down 2.1 percent from the 2022 total generation of 287,220 GWh.[1]

The project site is within the service territory of Pacific Gas & Electric Company (PG&E). According to the California Energy Commission (CEC), total electricity consumption in the PG&E service area in 2022 was 77,887 GWh or 77,886,999,998 kilowatt-hours (kWh).[2] Of this total, Alameda County consumed 10,395 GWh or 10,395,384,395 kWh.[3]

4.4.1.2 Natural Gas

Natural gas is a non-renewable fossil fuel. Fossil fuels form when layers of decomposing plant and animal matter are exposed to intense heat and pressure under the surface of the Earth over millions of years. Natural gas is a combustible mixture of hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas is found in naturally occurring reservoirs in deep underground rock formations. Natural gas is used for a variety of uses (e.g., heating buildings, generating electricity, and powering appliances such as stoves, washing machines and dryers, gas fireplaces, and gas grills).

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1 California Energy Commission (CEC). 2024a. 2023 Total System Electric Generation. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2023-total-system-electric-generation (accessed April 2025).

2 CEC. 2024b. Electricity Consumption by County and Entity. Website: http://www.ecdms.energy.ca.gov/elecbycounty.aspx and http://www.ecdms.energy.ca.gov/elecbyutil.aspx (accessed April 2025).

3 *Ibid*.

Natural gas consumed in California is used for electricity generation (45 percent), residential uses (21 percent), industrial uses (25 percent), and commercial uses (9 percent). California continues to depend on out-of-state imports for nearly 90 percent of its natural gas supply.[4]

PG&E is the natural gas service provider for the proposed project site. According to the CEC, total natural gas consumption in the PG&E service area in 2022 was 4.422 billion therms[5] (4,422,630,060 therms).[6] Of this total, Alameda County consumed 377 million therms, or 377,309,788 therms.[7]

4.4.1.3 Petroleum/Transportation Energy

Petroleum is also a non-renewable fossil fuel. Petroleum is a thick, flammable, yellow-to-black mixture of gaseous, liquid, and solid hydrocarbons that occurs naturally beneath the earth's surface. Petroleum is primarily recovered by oil drilling. It is refined into a large number of consumer products, primarily fuel oil, gasoline, and diesel.

The average fuel economy for light-duty vehicles (automobiles, pickups, vans, and sport utility vehicles [SUVs]) in the United States has steadily increased from about 14.9 miles per gallon (mpg) in 1980 to 22.8 mpg in 2022.[8] The average fuel economy for heavy-duty trucks in the United States has also steadily increased, from 5.7 mpg in 2013 to a projected 8.0 mpg in 2021.[9] Federal and State fuel economy standards require the continued increase of fuel efficiency in passenger and commercial fleets. Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline consumed by light-duty cars, pickup trucks, and SUVs. In 2022, the most recent year available, total gasoline consumption in California was 316.425 million barrels (13.3 billion gallons), or 1,597.6 trillion British thermal units (BTU). Of the total gasoline consumption, 296.948 million barrels or 1499.3 trillion BTU were consumed for transportation.[10] Based on fuel consumption obtained from the CARB's California Emissions Factor Model (EMFAC2021), 536.1 million gallons of gasoline and 155.7 million gallons of diesel were consumed from vehicle trips in Alameda County in 2024.

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4 CEC. n.d. Supply and Demand of Natural Gas in California. Website: https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california (accessed April 2025).

5 A therm is a non-SI unit of heat energy equal to 100,000 British thermal units (BTU).

6 CEC. 2024c. Gas Consumption by County and Entity. Website: http://www.ecdms.energy.ca.gov/gasbycounty.aspx and http://www.ecdms.energy.ca.gov/gasbyutil.aspx (accessed April 2025).

7 Ibid.

8 United States Department of Transportation (USDOT). 2023. Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles. Website: https://www.bts.gov/content/average-fuel-efficiency-us-light-duty-vehicles (accessed April 2025).

9 CEC. 2015. Medium and Heavy-Duty Truck Prices and Fuel Economy 2013–2026. Website: efiling.energy.ca.gov/getdocument.aspx?tn=206180 (accessed April 2025).

10 United States Energy Information Administration (EIA). 2022. California State Profile and Energy Estimates, Data. Website: www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=CA (accessed April 2025).

4.4.2 Regulatory Setting

Federal and State agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure improvements. On the State level, the California Public Utilities Commission (CPUC) and the CEC are two agencies with authority over different aspects of energy.

The CPUC regulates privately owned electric, natural gas, telecommunication, water, railroad, rail transit, and passenger transportation companies and serves the public interest by protecting consumers and ensuring the provision of safe, reliable utility service and infrastructure at reasonable rates, with a commitment to environmental enhancement and a healthy California economy.

The CEC is the State's primary energy policy and planning agency. The CEC forecasts future energy needs, promotes energy efficiency, supports energy research, develops renewable energy resources, and plans for/directs State response to energy emergencies.

Federal, State, and local laws, regulations, plans, or guidelines that are designed to reduce energy impacts and are potentially applicable to the proposed project are summarized below.

4.4.2.1 Federal Regulations

Energy Policy Act of 2005. The Energy Policy Act of 2005 seeks to reduce reliance on nonrenewable energy resources and provide incentives to reduce current demand on these resources. For example, under this Act, consumers and businesses can obtain federal tax credits for purchasing fuel-efficient appliances and products (including hybrid vehicles), building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

Corporate Average Fuel Economy Standards. On March 31, 2022, the National Highway Traffic Safety Administration finalized the Corporate Average Fuel Economy (CAFE) standards for Model Years 2024–2026 Passenger Cars and Light Trucks. The amended CAFE standards would require an industry-wide fleet average of approximately 49 mpg for passenger cars and light trucks in model year 2026 by increasing fuel efficiency by 8 percent annually for model years 2024–2025, and 10 percent annually for model year 2026. The final standards are estimated to save about 234 billion gallons of gasoline between model years 2030 to 2050.

4.4.2.2 State Regulations

Assembly Bill 1575, Warren-Alquist Act. In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted Assembly Bill (AB) 1575 (also known as the Warren-Alquist Act), which

created the CEC. The statutory mission of the CEC is to forecast future energy needs, license power plants of 50 megawatts (MW) or larger, develop energy technologies and renewable energy resources, plan for and direct State responses to energy emergencies, and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) and *State CEQA Guidelines* Section 15126.4 to require Environmental Impact Reports (EIRs) to include, where relevant, mitigation measures proposed to minimize the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F to the *State CEQA Guidelines*. Appendix F assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the *State CEQA Guidelines* also states that the goal of conserving energy implies the wise and efficient use of energy and the means of achieving this goal, including (1) decreasing overall per capita energy consumption; (2) decreasing reliance on fossil fuels such as coal, natural gas, and oil; and (3) increasing reliance on renewable energy sources.

Senate Bill 1389, Energy: Planning and Forecasting. In 2002, the State Legislature passed Senate Bill (SB) 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission vehicles and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

In compliance with the requirements of SB 1389, the CEC adopts an Integrated Energy Policy Report every 2 years and an update every other year. The most recently adopted report includes the *2024 Integrated Energy Policy Report Update*.[11] The *2024 Integrated Energy Policy Report Update* covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast. The *2024 Integrated Energy Policy Report Update* provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs.

Renewables Portfolio Standard. The California Renewables Portfolio Standard (RPS) program was established in 2002 by SB 1078. SB 1078 initially required that 20 percent of electricity retail sales be served by renewable resources by 2017; however, this standard has become more stringent over time. In 2006, SB 107 accelerated the standard by requiring that the 20 percent mandate be met by 2010. In April 2011, SB 2 required that 33 percent of electricity retail sales be served by renewable resources by 2020. In 2015, SB 350 established tiered increases to the RPS of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. In 2018, SB 100 increased the requirement to 60 percent

[11] California Energy Commission. 2024. *2024 Integrated Energy Policy Report Update.* Docket Number 24-IEPR-01.

by 2030 and required all the State's electricity to come from carbon-free resources by 2045. SB 100 took effect on January 1, 2019.[12]

California Code. Energy consumption by new buildings in California is regulated by the Building Energy Efficiency Standards, in Part 6 of Title 24 of the California Code of Regulations, known as the Energy Code. The CEC first adopted the Building Energy Efficiency Standards for Residential and Non-residential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the State. The Energy Code is updated every 3 years, with the most recent update consisting of the 2022 Energy Code that became effective January 1, 2023. Mid-cycle supplements to the 2022 Code will become effective on July 1, 2024. The efficiency standards apply to both new construction and rehabilitation of both residential and nonresidential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency 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 the Energy Code.

California Green Building Standards Code. In 2010, the California Building Standards Commission (CBSC) adopted Part 11 of the Title 24 Building Energy Efficiency Standards, referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code took effect on January 1, 2011. The CALGreen Code is updated on a regular basis, with the most recent update consisting of the 2022 CALGreen Code standards that became effective January 1, 2023. The CALGreen Code established mandatory measures for residential and nonresidential building construction and encouraged sustainable construction practices in the following five categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) indoor environmental quality. Although the CALGreen Code was adopted as part of the State's efforts to reduce greenhouse gas emissions, the CALGreen Code standards have co-benefits of reducing energy consumption from residential and nonresidential buildings subject to the standard.

California Energy Efficiency Strategic Plan. On September 18, 2008, the CPUC adopted California's first Long-Term Energy Efficiency Strategic Plan, presenting a roadmap for energy efficiency in California. The Plan articulates a long-term vision and goals for each economic sector and identifies specific near-term, mid-term, and long-term strategies to assist in achieving those goals. The plan also reiterates the following four specific programmatic goals known as the "Big Bold Energy Efficiency Strategies" that the CPUC established in Decisions D.07-10-032 and D.07-12-051:

- All new residential construction will be zero net energy (ZNE) by 2020.[13]
- All new commercial construction will be ZNE by 2030.
- 50 percent of commercial buildings will be retrofitted to ZNE by 2030.
- 50 percent of new major renovations of State buildings will be ZNE by 2025.

[12] California Public Utilities Commission (CPUC). 2019. Renewables Portfolio Standard Program. Website: cpuc.ca.gov/rps (accessed April 2025).

[13] Achievement of this goal was determined not yet to be feasible in time for the 2019 Building Energy Efficiency Standards (effective 2020), but State regulators continue to take steps toward this goal.

4.4.2.3 Regional Regulations

There are no regional energy regulations that apply to the proposed project.

4.4.2.4 Local Regulations

City of Livermore General Plan. The Open Space and Conservation of the City of Livermore's (City) General Plan includes various goals, objectives, and policies related to energy. Objectives and policies applicable to the proposed project include:

> **Objective OSC-7.1** Promote a variety of approaches to energy conservation in the public and private realms.
>
> > **Policy P2** The City shall approve only those development proposals which are designed and located to minimize energy consumption and adverse impacts on air, land, and water resources.

4.4.3 Impacts and Mitigation Measures

The following describes the potential impacts of the proposed project related to energy. This section begins with the criteria of significance that establish the thresholds for determining whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as necessary.

4.4.3.1 Significance Criteria

Implementation of the proposed project would have a significant impact related to energy under the following conditions:

EN-1 Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

EN-2 Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.4.3.2 Project Impacts

The following section provides an evaluation and analysis of the potential impacts of the proposed project for each of the criteria of significance listed above and potential cumulative impacts.

EN-1 The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

Less Than Significant Impact. The proposed project would increase the demand for energy through day-to-day operations and fuel consumption associated with project construction and operation. The discussion and analysis provided below is based on data included in the CalEEMod output, which are included in **Appendix B**.

Construction-Period Energy Use.Construction of the proposed project would include demolition, grading, site preparation, building construction, architectural coating, and paving activities. Construction activities require energy associated with the manufacture and transportation of building materials, grading activities, and building construction. Construction activities also typically require electricity to power construction-related equipment and do not involve the consumption of natural gas.

Transportation energy represents the largest energy use during construction and would be from the transport and use of construction equipment, delivery vehicles, haul trucks, and construction worker vehicles that would use petroleum fuels (e.g., diesel fuel and/or gasoline). Therefore, the analysis of energy use during construction focuses on fuel consumption. Construction trucks and vendor trucks hauling materials to and from a site would be anticipated to use diesel fuel, whereas construction workers traveling to and from a site would be anticipated to use gasoline-powered vehicles. Fuel consumption from transportation uses depends on the type and number of trips, VMT, the fuel efficiency of the vehicles, and the travel mode.

Estimates of fuel consumption (diesel fuel and gasoline) from construction equipment, construction trucks, and construction worker vehicles, are based on default construction equipment assumptions and trip estimates from CalEEMod and fuel efficiencies from EMFAC2021.

As previously discussed in Section 4.1, Air Quality, of this EIR, construction emissions were estimated for the project using CalEEMod version 2022.1, consistent with the Bay Area Air District's recommendations. As included in the CalEEMod modeling, construction of the proposed project is anticipated to begin in January 2026 and would continue over an approximately 20-month period. Approximately 1,400 tons of construction and demolition waste, 600 tons of trash, 100 tons of metal, 3,000 tons of asphalt, and 2,500 tons of concrete would be generated by the proposed project, which was included in CalEEMod. The proposed project would require approximately 5,624 cubic yards of fill and approximately 3,957 cubic yards of cut, for a net import of 1,667 cubic yards of soil, which was also included in CalEEMod. This analysis uses the default construction equipment list. All other construction details are not yet known; therefore, default assumptions (e.g., construction worker and truck trips and fleet activities) from CalEEMod were used.

Table 4.4.A presents fuel consumption estimates associated with construction of the proposed project. CalEEMod output sheets are included in **Appendix B**, and detailed energy calculations are included in **Appendix H**.

Table 4.4.A: Energy Consumption Estimates During Project Construction

Energy Type	Total Energy Consumption	Annual Energy Consumption	Percentage of Increase Countywide
Diesel Fuel (total gallons)	65,041.2	32,520.6	<0.1
Gasoline (total gallons)	20,737.9	10,369.0	<0.1

Source: Compiled by LSA (September 2025).

As shown in Table 4.4.A, construction of the proposed project would consume approximately 65,041.2 gallons of diesel fuel and 20,737.9 gallons of gasoline during construction. As discussed above, construction associated with the proposed project is expected to continue over approximately 20 months; therefore, when averaged over approximately 2 years, construction of the proposed project would consume 32,520.6 gallons of diesel fuel per year and 10,369.0 gallons of gasoline per year during construction. Based on fuel consumption obtained from EMFAC2021, trips in Alameda County will consume approximately 536.1 million gallons of gasoline and approximately 155.7 million gallons of diesel in 2026. Therefore, construction of the proposed project would increase the annual construction generated fuel use in Alameda County by less than 0.1 percent for diesel and gasoline usage, and impacts related to construction-period energy use would be less than significant.

Operational Energy Use. Operational energy use is typically associated with natural gas use, electricity consumption, and fuel used for vehicle trips. Electricity consumption was estimated for the project using default energy intensities by land use type in CalEEMod. The proposed project would be all-electric and would not require the use of natural gas, which was assumed in CalEEMod.

As discussed above, the Title 24 Standards contain energy efficiency requirements for newly constructed buildings, additions to existing buildings, and alterations to existing buildings. The Title 24 Standards establish performance metrics in the form of an "energy budget" based on energy consumption per square foot of floor space. For this reason, the Title 24 Standards include both a prescriptive option, allowing builders to comply by using methods known to be efficient, and a performance option, allowing builders complete freedom in their designs provided the building achieves the same overall efficiency as an equivalent building using the prescriptive option. Reference appendices are adopted along with the Title 24 Standards containing data and various compliance tools to help builders achieve compliance.

In addition, the proposed project would result in energy usage associated with gasoline and diesel fuel consumed by project-related vehicle trips. Trip generation rates for the proposed project were based on the project's trip generation estimates as identified in Section 4.9, Transportation, of this EIR. Based on the trip generation estimates, the proposed project would generate approximately 122 net new average daily trips. The amount of operational fuel use was estimated using CARB's EMFAC2021 model, which provided projections for typical daily fuel usage in Alameda County.

Table 4.4.B shows electricity and fuel usage estimates associated with the proposed project.

Table 4.4.B: Energy Consumption Estimates During Project Operation

Energy Type	Annual Energy Consumption	Percentage of Increase Countywide
Electricity Consumption (kWh/year)	520,219.0	<0.1
Natural Gas Consumption (therms/year)	0.0	0.0
Gasoline (gallons/year)	12,224.8	<0.1
Diesel Fuel (gallons/year)	1,664.7	<0.1

Source: Compiled by LSA (April 2025).
kWh = kilowatt-hours

As shown in Table 4.4.B, the estimated potential increase in electricity demand associated with the proposed project is 520,219 kWh per year. Total electricity consumption in Alameda County in 2022 was 10,395 GWh (10,395,384,395 kWh). Therefore, operation of the proposed project would increase the annual electricity consumption in Alameda County by less than 0.1 percent.

The proposed project would also result in energy usage associated with gasoline and diesel fuel consumed by project-related vehicle trips. As shown in Table 4.4.B, the increase in fuel use associated with the vehicle trips generated by the proposed project is estimated at 12,224.8 gallons of gasoline and 1,664.7 gallons of diesel fuel per year. Based on fuel consumption obtained from EMFAC2021, 536.1 million gallons of gasoline and 155.7 million gallons of diesel were consumed from vehicle trips in Alameda County in 2024. Therefore, vehicle trips associated with the proposed project would increase the annual fuel use in Alameda County by less than 0.1 percent for gasoline and diesel fuel usage.

As shown in Table 4.4.B above, electricity demand associated with the proposed project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Furthermore, the proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. The proposed project would be required to adhere to all federal, State, and local requirements for energy efficiency, including the latest Energy Code. The Energy Code establishes minimum energy and water efficiency requirements for new buildings and additions or alterations to existing buildings.

Additionally, as shown in Table 4.4.B above, the proposed project would result in a minimal increase in annual fuel use in Alameda County. The project site is currently developed with two commercial buildings, and the proposed project would redevelop the site with 15 residential buildings. The project site is within walking or bicycling distance from surrounding residential, commercial, and institutional uses. The proposed project would also provide pedestrian access through existing sidewalks, perimeter walkways, pedestrian paseos, and pedestrian paths and sidewalks along the internal roadways. In addition, bus stops along Pacific Avenue provide transit access to the project site. In addition, the proposed project would provide 27 electric vehicle charging spaces. Therefore, the project would support the ability of residents and visitors to use alternative modes of transportation. As such, fuel consumption associated with project vehicle trips would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region and this impact would be **less than significant**.

EN-2 The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Less Than Significant Impact. As discussed above, the most recently adopted CEC energy report is the *2024 Integrated Energy Policy Report Update*.[14] The *2024 Integrated Energy Policy Report Update* provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs. The *2024 Integrated Energy Policy Report Update* covers a broad range of topics, including implementation of SB 350 (Clean Energy and Pollution Reduction Act of 2015), integrated resource planning, distributed energy resources, transportation electrification, solutions to increase resiliency in the electricity sector, energy efficiency barriers faced by disadvantaged communities, demand response, transmission and landscape-scale planning, the California Energy Demand Preliminary Forecast, the preliminary transportation energy demand forecast, renewable gas (in response to SB 1383), updates on electricity reliability, the natural gas outlook, and climate adaptation and resiliency.

As indicated above, energy usage on the project site during construction would be temporary in nature. In addition, energy usage associated with operation of the proposed project would be relatively small in comparison to the State's available energy sources, and energy impacts would be negligible at the regional level. Because California's energy conservation planning actions are conducted at a regional level, and because the project's total impact to regional energy supplies would be minor, the proposed project would not conflict with California's energy conservation plans as described in the CEC *2024 Integrated Energy Policy Report Update*. Therefore, the proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency, and this impact would be **less than significant.**

4.4.3.3 Cumulative Impacts

The proposed project would have a significant effect on the environment if it, in combination with other projects, would contribute to a significant cumulative impact related to energy.

Development of cumulative projects within the PG&E service area that encompasses 70,000 square miles would result in a substantial increase in electricity and natural gas demand as well as an increase in the consumption of fuel for vehicles. Although the proposed project would result in a net increase in demand for electricity, implementation of the proposed project would not result in the construction of new electric infrastructure beyond what has already been assumed and will be included in PG&E's regional forecasts. The proposed project would be all-electric and would not result in an increase in natural gas demand.

As discussed previously, the total annual electricity consumption in the PG&E service area in 2022 was 77,887 GWh (77,886,999,998 kWh). As shown in Table 4.4.B, the estimated potential increase in electricity demand associated with the proposed project is 520,219 kWh per year. Therefore, operation of the proposed project would increase the annual electricity consumption in the PG&E

[14] California Energy Commission. 2024. 2024 Integrated Energy Policy Report Update. Docket Number 24-IEPR-01.

service area by less than 0.1 percent. As such, the proposed project's share of cumulative electricity consumption would negligible.

In addition, in 2022, approximately 40 percent of PG&E's delivered electricity came from renewable sources, including solar, wind, geothermal, small hydroelectric, and various forms of bioenergy.[15] PG&E reached California's 2020 renewable energy goal in 2017 and is positioned to meet the State's 60 percent by 2030 renewable energy mandate set forth in SB 100. In addition, PG&E plans to continue to provide reliable service to its customers and upgrade its distribution systems as necessary to meet future demand.

Transportation energy use would also increase; however, as described above, fuel use associated with the vehicle trips generated by the proposed project is estimated at 12,224.8 gallons of gasoline and 1,664.7 gallons of diesel fuel per year. Based on fuel consumption obtained EMFAC2021, 536.1 million gallons of gasoline and 155.7 million gallons of diesel were consumed from vehicle trips in Alameda County in 2024. Therefore, vehicle trips associated with the proposed project would increase the annual fuel use in Alameda County by less than 0.1 percent for gasoline and diesel fuel usage. Therefore, gasoline and diesel fuel demand generated by vehicle trips associated with the proposed project would be a minimal fraction of gasoline and diesel fuel consumption in Alameda County.

As demonstrated above, the proposed project's contribution to impacts related to the inefficient, wasteful, and unnecessary consumption of energy would not be cumulatively considerable. Impacts would be **less than significant**.

[15] Pacific Gas & Electric. 2023. *Exploring Clean Energy Solutions*. Website: https://www.pge.com/en/about/corporate-responsibility-and-sustainability/taking-responsibility/clean-energy-solutions.html (accessed April 2025).

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4.5 GREENHOUSE GAS EMISSIONS

This section describes the environmental setting, including regulatory framework and existing conditions at the project site, and potentially significant environmental impacts of the proposed project related to greenhouse gas emissions. The analysis performed for this section is based on guidance provided in the Bay Area Air District (Air District) *California Environmental Quality Act (CEQA) Air Quality Guidelines*[1] and the City of Livermore *2022 Climate Action Plan*.[2]

4.5.1 Environmental Setting

The following section provides background information on greenhouse gas (GHG) emissions and global climate change.

4.5.1.1 Greenhouse Gases

Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. The Earth's average near-surface atmospheric temperature rose 0.6 ± 0.2 degree Celsius (°C) or 1.1 ± 0.4 degrees Fahrenheit (°F) in the 20th century. The prevailing scientific opinion on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide (CO_2) and other greenhouse gases (GHGs) are the primary causes of the human-induced component of warming. GHGs are released by the burning of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect.[3]

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are the following:

- Carbon Dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF_6)

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which is believed to be causing global warming. Although

1 Bay Area Air Quality Management District. 2023. *California Environmental Quality Act, Air Quality Guidelines*. April 20.

2 City of Livermore. 2022. City of Livermore Climate Action Plan. November 28.

3 The temperature on Earth is regulated by a system commonly known as the "greenhouse effect". Just as the glass in a greenhouse allows heat from sunlight in and reduces the heat escaping, GHGs such as carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of GHGs results in global warming, the *naturally occurring* greenhouse effect is necessary to keep the planet at a comfortable temperature.

man-made GHGs include naturally occurring GHGs such as CO_2, CH_4, and N_2O, some gases, such as HFCs, PFCs, and SF_6, are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. For the purposes of this analysis, the term "GHGs" will refer collectively only to the six gases listed above.

These gases vary considerably in terms of global warming potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The global warming potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG; the definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e). **Table 4.5.A** shows the GWP for each type of GHG. For example, the same amount of sulfur hexafluoride would contribute 23,900 times more to global warming than CO_2.

Table 4.5.A: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-year Time Horizon)
Carbon Dioxide (CO_2)	50–200	1
Methane (CH_4)	12	21
Nitrous Oxide (N_2O)	114	310
HFC-32	270	11,700
HFC-134a	14	140
HFC-152a	1.4	140
PFC: Tetrafluoromethane (CF_4)	50,000	6,500
PFC: Hexafluoromethane (C_2F_6)	10,000	9,200
Sulfur Hexafluoride (SF_6)	3,200	23,900

Source: *Second Update to the Climate Change Scoping Plan: Building on the Framework* (CARB 2017a).
CARB = California Air Resources Board
HFC = hydrofluorocarbon

The following summarizes the characteristics of the six GHGs and black carbon. Black carbon also contributes to climate change and is therefore discussed below.

Carbon Dioxide. In the atmosphere, carbon generally exists in its oxidized form, as CO_2. Natural sources of CO_2 include the respiration (breathing) of humans, animals, and plants, volcanic outgassing, decomposition of organic matter, and evaporation from the oceans. Human -caused sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. Natural sources release approximately 150 billion tons of CO_2 each year, far outweighing the 7 billion tons of manmade emissions of CO_2 each year. Nevertheless,

natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of manmade CO_2, and consequently, the gas is building up in the atmosphere.

In 2022, total annual CO_2 accounted for approximately 81 percent of California's overall GHG emissions.[4] Transportation is the single largest source of CO_2 in California, which is primarily composed of on-road travel. Electricity production, industrial and residential sources also make important contributions to CO_2 emissions in California.

Methane. CH_4 is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Decomposition occurring in landfills accounts for the majority of human-generated CH_4 emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation, manure management, and rice cultivation are also significant sources of CH_4 in California. Total annual emissions of CH_4 accounted for approximately 9.8 percent of GHG emissions in California in 2022.[5]

Nitrous Oxide. N_2O is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. Nitrous oxide is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N_2O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California. N_2O emissions accounted for approximately 3.4 percent of GHG emissions in California in 2022.[6]

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride. HFCs are primarily used as substitutes for ozone-depleting substances regulated under the Montréal Protocol.[7] PFCs and SF_6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry leads to greater use of PFCs. HFCs, PFCs, and SF_6 accounted for about 5.7 percent of GHG emissions in California in 2022.[8]

Black Carbon. Black carbon is the most strongly light-absorbing component of particulate matter (PM) formed by burning fossil fuels such as coal, diesel, and biomass. Black carbon is emitted directly into the atmosphere in the form of $PM_{2.5}$ (particulate matter 2.5 microns or less in diameter) and is the most effective form of PM, by mass, at absorbing solar energy. Per unit of mass in the

4 CARB. 2024a. Assembly Bill 32 Greenhouse Gas Emissions Inventory for 2000-2022 – by Gas.

5 *Ibid*.

6 *Ibid*.

7 The Montréal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion.

8 CARB. 2024a. Op. cit.

atmosphere, black carbon can absorb 1 million times more energy than CO_2.[9] Black carbon contributes to climate change both directly, such as absorbing sunlight, and indirectly, such as affecting cloud formation. However, because black carbon is short-lived in the atmosphere, it can be difficult to quantify its effect on global warming.

Most U.S. emissions of black carbon come from mobile sources (52 percent), particularly from diesel-fueled vehicles. The other major source of black carbon is open biomass burning, including wildfires, although residential heating and industry also contribute. The California Air Resources Board (CARB) estimates that the annual black carbon emissions in California will be reduced approximately 50 percent below 2013 levels by 2030.[10]

4.5.1.2 Emissions Inventories

An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, United States, and California GHG emission inventories.

Global Emissions. Worldwide emissions of GHGs in 2021, the latest inventory year available, totaled 19.2 billion metric tons of CO_2e. Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change.[11]

United States Emissions. In 2022, the year for which the most recent data are available, the United States emitted about 6,343.2 million metric tons of CO_2e (MMT CO_2e). Overall, emissions in 2022 increased by 0.2 percent compared to the 2021 total GHG emissions. This increase in total GHG emissions was driven by fossil fuel combustion due primarily to economic activity rebounding after the height of the COVID-19 pandemic. However, GHG emissions in 2022 were 16.7 percent below those of 2005 levels. Of the five major sectors—residential and commercial, agricultural, industry, transportation, and electricity generation—transportation accounted for the highest amount of GHG emissions in 2022 (28 percent), with electricity generation second at 25 percent and emissions from industry third at 23 percent.[12]

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9 United States Environmental Protection Agency (USEPA). 2017. Black Carbon, Basic Information. February 14. Website: 19january2017snapshot.epa.gov/www3/airquality/blackcarbon/basic.html (accessed April 2025).

10 CARB. 2017. *Short-Lived Climate Pollutant Reduction Strategy.* March. Website: https://ww2.arb.ca.gov/sites/default/files/2020-07/final_SLCP_strategy.pdf (accessed April 2025).

11 United Nations Framework Convention on Climate Change (UNFCCC). 2023. GHG Data from UNFCCC. Website: unfccc.int/process-and-meetings/transparency-and-reporting/greenhouse-gas-data/ghg-data-unfccc/ghg-data-from-unfccc (accessed April 2025).

12 United States Environmental Protection Agency. 2024. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2022. Website: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2022 (accessed April 2025).

State of California Emissions. The State emitted approximately 371.1 MMT CO_2e emissions in 2022, 9.3 MMT CO_2e lower than 2021 levels.[13] CARB estimates that transportation was the source of approximately 39 percent of the State's GHG emissions in 2022. The next largest sources included industrial sources at approximately 23 percent and electricity generation at 16 percent. The remaining sources of GHG emissions were residential activities at 8 percent, agriculture at 8 percent, and commercial activities at 6 percent.[14]

San Francisco Bay Area Emissions. The Air District established a climate protection program in 2005 to acknowledge the link between climate change and air quality. The Air District regularly prepares inventories of criteria and toxic air pollutants to support planning, regulatory and other programs. The most recent emissions inventory estimates GHG emissions produced by the San Francisco Bay Area (Bay Area) in 2015.[15]

In 2015, 86.5 MMT CO_2e of GHGs were emitted in the Bay Area. Fossil fuel consumption in the transportation sector was the single largest source of the Bay Area's GHG emissions in 2015. The transportation sector (including passenger cars/trucks, heavy duty trucks, aviation, ships and boats, industrial equipment, buses/motorhomes, motorcycles, and locomotives) contributed approximately 41 percent of GHG emissions. The industrial sector, including stationary sources, such as oil refineries, natural gas combustion, cement plants, natural gas distribution, and fugitive and process emissions (excluding electricity and agriculture), contributed 26 percent of GHG emissions in the Bay Area. Energy production activities such as electricity generation and co-generation were the third largest contributor with approximately 14 percent of the total GHG emissions. Commercial and residential uses contributed approximately 11 percent of the total GHG emissions, and the remaining GHG emissions were contributed from high GWP cases, recycling and waste facilities, and agriculture and farming operations.[16]

City of Livermore Emissions. The most recent data available indicated that, in 2017, approximately 535,566 MT CO_2e was emitted in Livermore. [17] As shown in **Table 4.5.B**, according to the results of the 2017 GHG inventory, the largest source of GHG emissions in Livermore was from on-road passenger and commercial transportation, which accounted for 59 percent of total emissions. The second largest amount of GHG emissions was from natural gas usage in both residential and nonresidential buildings, which combined accounted for 23 percent of Livermore's total GHG

13 CARB. 2024b. *California Greenhouse Gas Emissions for 2000 to 2022, Trends of Emissions and Other Indicators Report*. Website: https://ww2.arb.ca.gov/sites/default/files/2024-09/nc-2000_2022_ghg_inventory_trends.pdf (accessed April 2025).

14 *Ibid*.

15 Bay Area Air Quality Management District. 2017. *Final 2017 Clean Air Plan*. April 19. Website: https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?rev=8c588738a4fb455b9cabb27360409529&sc_lang=en (accessed April 2025).

16 Bay Area Air District. Greenhouse Gas Emission Estimates and Draft Forecasts. March 2017. Website: Stationary sources, such as oil refineries, natural gas combustion, cement plants, natural gas distribution, and fugitive and process emissions contributed 26 percent of GHG emissions (accessed August 11, 2025).

17 City of Livermore. 2022. City of Livermore Climate Action Plan Appendix A: GHG Inventory and Forecast – Methodology and Calculations. April.

emissions. Electricity usage accounted for the third largest source of emissions, with residential and nonresidential sectors together representing 9 percent of total emissions in Livermore.

Table 4.5.B: City of Livermore Greenhouse Gas Emissions Inventory

Source Category	GHG Emissions (MT CO_2e)	Percentage of GHG Emissions
On-Road Transportation	314,154	59%
Residential Gas	65,896	12%
Nonresidential Gas	57,462	11%
Nonresidential Electricity	27,836	5%
Off-Road Transportation	18,002	4%
Waste	23,052	4%
Residential Electricity	19,775	4%
Direct Access Electricity	6,545	1%
Water	1,479	<1%
Wastewater	1,366	<1%
Total	**535,566**	**100%**

Source: *City of Livermore Climate Action Plan Appendix A: GHG Inventory and Forecast – Methodology and Calculations* (City of Livermorel 2022).
GHG = greenhouse gas
MT CO_2e = metric tons of carbon dioxide equivalent

4.5.2 Regulatory Setting

The Air District is primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development) as well as for monitoring ambient pollutant concentrations. The Air District's jurisdiction encompasses seven counties (Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara) and portions of Solano and Sonoma counties. The United States Environmental Protection Agency (EPA) and the CARB regulate direct emissions from motor vehicles.

Federal, State, and local laws, regulations, plans, or guidelines that are designed to reduce GHG impacts and are potentially applicable to the proposed project are summarized below.

4.5.2.1 Federal Regulations

Federal regulations applicable to GHG emissions are described below.

Federal Clean Air Act. The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the EPA has the authority to regulate CO_2 emissions under the federal Clean Air Act. Although there currently are no adopted federal regulations for the control or reduction of GHG emissions, the EPA commenced several actions in 2009 to implement a regulatory approach to global climate change.

This includes the 2009 EPA final rule for mandatory reporting of GHGs from large GHG emission sources in the United States. Additionally, the EPA Administrator signed an endangerment finding action in 2009 under the federal Clean Air Act, finding that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and

SF_6) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to global climate change, leading to national GHG emission standards.

In October 2012, the EPA and the National Highway Traffic Safety Administration (NHTSA), on behalf of the United States Department of Transportation, issued final rules to further reduce GHG emissions and improve Corporate Average Fuel Economy (CAFE) standards for light-duty vehicles for model years 2017 and beyond (77 *Federal Register* 62624). The NHTSA's CAFE standards have been enacted under the Energy Policy and Conservation Act since 1978. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. This program would increase fuel economy to the equivalent of 54.5 miles per gallon (mpg), limiting vehicle emissions to 163 grams of CO_2 per mile for the fleet of cars and light-duty trucks by model year 2025 (77 *Federal Register* 62630).

On March 31, 2022, the NHTSA finalized the CAFE standards for Model Years 2024–2026 Passenger Cars and Light Trucks. The amended CAFE standards would require an industry-wide fleet average of approximately 49 mpg for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024–2025, and 10 percent annually for model years 2026 and beyond. The final standards are estimated to save about 234 billion gallons of gasoline between model years 2030 to 2050.

4.5.2.2 State Regulations

The CARB is the lead agency for implementing climate change regulations in the State. Since its formation, the CARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems. Key efforts by the State are described below.

Assembly Bill 1493 (2002). In a response to the transportation sector's significant contribution to California CO_2 emissions, Assembly Bill (AB) 1493 was enacted on July 22, 2002. AB 1493 requires the CARB to set GHG emission standards for passenger vehicles and light-duty trucks (and other vehicles whose primary use is noncommercial personal transportation in the State) manufactured in 2009 and all subsequent model years. These standards (starting in model years 2009 to 2016) were approved by the CARB in 2004, but the needed waiver of Clean Air Act Preemption was not granted by the EPA until June 30, 2009. The CARB responded by amending its original regulation, now referred to as Low Emission Vehicle III, to take effect for model years starting in 2017 to 2025. The Trump administration revoked California's waiver in 2019, but the Biden administration restored California's waiver in 2021.

Executive Order S-3-05 (2005). Governor Arnold Schwarzenegger signed Executive Order (EO) S-3-05 on June 1, 2005, which proclaimed that California is vulnerable to the impacts of climate change. To combat those concerns, the executive order established California's GHG emissions reduction targets, which established the following goals:

- GHG emissions should be reduced to 2000 levels by 2010.
- GHG emissions should be reduced to 1990 levels by 2020.
- GHG emissions should be reduced to 80 percent below 1990 levels by 2050.

Assembly Bill 32 (2006), California Global Warming Solutions Act. California's major initiative for reducing GHG emissions is AB 32, passed by the State Legislature on August 31, 2006. This effort aims at reducing GHG emissions to 1990 levels by 2020. The CARB has established the level of GHG emissions in 1990 at 427 MMT of CO_2e. The emissions target of 427 MMT requires a reduction of 169 MMT from the State's projected business-as-usual 2020 emissions of 596 MMT. AB 32 requires the CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The CARB approved the Scoping Plan on December 11, 2008, which contains the main strategies California will implement to achieve the reduction goals and includes CARB recommended GHG reductions for each emission sector of the State's GHG inventory.

The CARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines CARB climate change priorities until 2020 and also sets the groundwork to reach long-term goals set forth in EOs S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals as defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. The CARB released a second update to the Scoping Plan, the 2017 Scoping Plan,[18] to reflect the 2030 target set by EO B-30-15 and codified by SB 32.

The 2022 Scoping Plan[19] was approved in December 2022 and assesses progress toward achieving the SB 32 2030 target and laying out a path to achieve carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

Executive Order B-30-15 (2015). Governor Jerry Brown signed EO B-30-15 on April 29, 2015, which added the following immediate target:

- GHG emissions should be reduced to 40 percent below 1990 levels by 2030.

All State agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. The CARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target and therefore is moving forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing emissions.

[18] CARB. 2017b. *California's 2017 Climate Change Scoping Plan*. November.
[19] CARB. 2022a. *2022 Scoping Plan*. November 16. Website: https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf (accessed March 2025).

Senate Bill 350 (2015) Clean Energy and Pollution Reduction Act. SB 350, signed by Governor Jerry Brown on October 7, 2015, updates and enhances AB 32 by introducing the following set of objectives in clean energy, clean air, and pollution reduction for 2030:

- Raise California's renewable portfolio standard from 33 percent to 50 percent.
- Increase energy efficiency in buildings by 50 percent by the year 2030.

The 50 percent renewable energy standard will be implemented by the California Public Utilities Commission for the private utilities and by the California Energy Commission for municipal utilities. Each utility must submit a procurement plan showing it will purchase clean energy to displace other non-renewable resources. The 50 percent increase in energy efficiency in buildings must be achieved through the use of existing energy efficiency retrofit funding and regulatory tools already available to State energy agencies under existing law. The addition made by this legislation requires State energy agencies to plan for and implement those programs in a manner that achieves the energy efficiency target.

Senate Bill 32, California Global Warming Solutions Act of 2016, and Assembly Bill 197. In the summer of 2016, the Legislature passed, and the Governor signed, SB 32 and AB 197. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emission reductions target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's April 2015 EO B-30-15. SB 32 builds on AB 32 and keeps California on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an Intergovernmental Panel on Climate Change analysis of the emissions trajectory that would stabilize atmospheric GHG concentrations at 450 parts per million CO_2e and reduce the likelihood of catastrophic impacts from climate change.

The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 meant to provide easier public access to air emissions data that are collected by the CARB was posted in December 2016.

Senate Bill 100. On September 10, 2018, Governor Brown signed SB 100, which raises California's Renewables Portfolio Standard requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the Western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Executive Order B-55-18. EO B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." EO B-55-18 directs the CARB to work with relevant State agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the

remaining emissions be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Assembly Bill 1279. AB 1279 was signed in September 2022 and codifies the State goals of achieving net carbon neutrality by 2045 and maintaining net negative GHG emissions thereafter. This bill also requires California to reduce statewide GHG emissions by 85 percent compared to 1990 levels by 2045 and directs CARB to work with relevant State agencies to achieve these goals.

California Building Efficiency Standards (Title 24, Part 6). The California Building Standards Code, or Title 24 of the California Code of Regulations contains the regulations that govern the construction of buildings in California. Within the Building Standards Code, two parts pertain to the incorporation of both energy efficient and green building elements into land use development. Part 6 is California's Energy Efficiency Standards for Residential and Non-Residential Buildings. These standards were first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption and are updated on an approximately 3-year cycle to allow consideration and possible incorporation of new energy efficient technologies and methods. In November 2008, the California Building Standards Commission established the California Green Building Standards Code (CALGreen Code), which sets performance standards for residential and non-residential development to reduce environmental impacts and encourage sustainable construction practices. The CALGreen Code addresses energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The current set of standards were adopted in 2022 and will apply to projects seeking building permits on or after January 1, 2023. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

Executive Order N-79-20. EO N-79-20, which Governor Gavin Newsom signed on September 23, 2020, sets the following goals for the State: 100 percent of in-State sales of new passenger cars and trucks shall be zero-emission by 2035; 100 percent of medium- and heavy-duty vehicles in the State shall be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks; and 100 percent of off-road vehicles and equipment in the State shall be zero-emission by 2035, where feasible.

Low Carbon Fuel Standard and Advanced Clean Cars. EO S-01-07 established a -low carbon fuel standard (LCFS) with a Statewide goal to be established to reduce the carbon intensity of California's transportation fuels that applies to all refiners, blenders, producers, or importers ("Providers") of transportation fuels in California, including fuels used by off-road construction equipment. CARB approved amendments in 2018 to readjust carbon intensity benchmarks to meet California's 2030 GHG reductions targets under SB 32. These amendments include opportunities to promote zero emission vehicle (ZEV) adoption, carbon capture and sequestration, and advanced technologies for decarbonization of the transportation sector.

Executive Order B-48-18. In January 2018, Governor Brown signed EO B-48-18 requiring all State entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as installing 200 hydrogen fueling stations and 250,000 electric vehicle (EV) charging stations by 2025. It specifies that 10,000 of the EV charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local and regional governments to

streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a Plug-in Charging Station Design Guidebook and update the 2015 Hydrogen Station Permitting Guidebook to aid in these efforts. All State entities are required to participate in updating the 2016 Zero-Emissions Vehicle Action Plan to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities. Additionally, all State entities are to support and recommend policies and actions to expand ZEV infrastructure at residential land uses, through the LCFS Program, and recommend how to ensure affordability and accessibility for all drivers.

4.5.2.3 Regional Regulations

Regional regulations that are applicable to GHG emissions generated by the proposed project are implemented by the Metropolitan Transportation Commission (MTC), Association of Bay Area Governments (ABAG), and the Air District, as discussed below.

Plan Bay Area 2050. Plan Bay Area 2050[20] is a State-mandated, integrated, long-range transportation and land use plan. As required by SB 375, all metropolitan regions in California must complete a Sustainable Communities Strategy (SCS) as part of a Regional Transportation Plan. In the Bay Area, MTC and ABAG are jointly responsible for developing and adopting an SCS that integrates transportation, land use, and housing to meet GHG reduction targets set by the CARB. Plan Bay Area 2050 connects the elements of housing, the economy, transportation and the environment through 35 strategies that will make the Bay Area more equitable for all residents and more resilient in the face of unexpected challenges. In the short-term, the plan's Implementation Plan identifies more than 80 specific actions for MTC, ABAG, and partner organizations to take over the next 5 years to make headway on each of the 35 strategies.

Bay Area Air District. The Air District is the regional government agency that regulates sources of air pollution and GHG emissions within the nine Bay Area counties. In April 2022, the Air District adopted the *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans* document, which incorporates updated GHG significance thresholds.[21] The Air District recommends these thresholds of significance for use in determining whether a proposed project would have a significant impact related to climate change. These thresholds evaluate a project based on its effect on California's efforts to meet the State's long-term climate goals. Applying this approach, the Air District identifies and provides supporting documentation underlying the requirements for new land use development projects necessary to achieve California's long-term climate goal of carbon neutrality by 2045. Based on the analysis, the Air District found that new land use development projects need to incorporate design elements to contribute their "fair share" to implement the goal of carbon neutrality by 2045. If a project is designed and built to incorporate the identified design elements, then it will contribute its portion of what is necessary to achieve California's long-term climate goals—its "fair share"—and an agency

[20] Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). 2021. *Plan Bay Area 2050*. October. Website: https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf (accessed March 2025).

[21] Bay Area Air Quality Management District (BAAQMD). 2022. *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans*. April.

reviewing the project under CEQA can conclude that the project will not make a cumulatively considerable contribution to global climate change. The document concludes that, if a project does not incorporate these design elements, then it should be found to make a significant climate impact because it will hinder California's efforts to address climate change.

4.5.2.4 Local Regulations

City of Livermore General Plan. The Open Space and Conservation of the City's General Plan includes various goals, objectives, and policies related to air quality that would also work to reduce GHG emissions in the City. Objectives and policies applicable to the proposed project include:

Objective OSC-6.1 Minimize air pollution emissions.

Policy P1 The City shall require project developers to develop and implement a construction-period air pollution control plan, consistent with dust and emission-abatement actions outlined in the CEQA handbook of the Bay Area Air Quality Management District.

Policy P4 All industrial uses within Livermore shall meet regional, State and federal air pollution standards.

Policy P5 The City shall attempt to increase the employment to population ratio to reduce commuting rates and associated vehicle related pollution emissions. The City shall approve only those development proposals, which are designed and located to minimize energy consumption and adverse impacts on air, land and water resources. High-density, transit-oriented developments shall be strongly encouraged and promoted through the use of specific planning, density transfer, the planned development concept, and zoning designations

City of Livermore Climate Action Plan. The City of Livermore adopted its first Climate Action Plan (CAP) in 2012, which established a GHG emissions reduction goal of reducing emissions by 15 percent by 2020. The City's updated CAP, the 2022 CAP, was adopted on November 28, 2022.[22] The 2022 CAP establishes new GHG reduction goals consistent with current State legislation and establishes a pathway to carbon neutrality by 2045. Additionally, the 2022 CAP meets the Air District's requirements for a Qualified GHG Reduction Strategy and is designed to streamline environmental review of future development projects in the City consistent with *State CEQA Guidelines* Section 15183.5(b) and the Air District's CEQA Air Quality Guidelines.

4.5.3 Impacts and Mitigation Measures

The following describes the potential impacts of the proposed project related to GHG emissions. This section begins with the criteria of significance that establish the thresholds for determining whether

[22] City of Livermore. 2022. City of Livermore Climate Action Plan. November 28.

an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as necessary.

4.5.3.1 Significance Criteria

Implementation of the proposed project would have a significant impact related to greenhouse gas emissions under the following conditions:

GHG-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

4.5.3.2 Project Impacts

The following section provides an evaluation and analysis of the potential impacts of the proposed project for each of the criteria of significance listed above and potential cumulative impacts.

GHG-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Less Than Significant Impact. The following section describes potential impacts associated with GHG emissions that could occur with construction and operation of the proposed project.

Construction GHG Emissions. The Air District has not addressed emission thresholds for construction in its CEQA Guidelines; however, the Air District encourages quantification and disclosure of construction-generated emissions.

Construction activities associated with the proposed project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change. GHG emissions generated during construction of the proposed project would be short term in nature, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions.

As discussed in Section 4.1, Air Quality, of this EIR, construction emissions were estimated for the project using CalEEMod, consistent with the Air District's recommendations. As included in the CalEEMod modeling, construction of the proposed project is anticipated to begin in summer 2026 and would continue over an approximately 20-month period. Approximately 1,400 tons of construction and demolition waste, 600 tons of trash, 100 tons of metal, 3,000 tons of asphalt, and 2,500 tons of concrete would be generated by the proposed project, which was included in CalEEMod. The proposed project would require approximately 5,624 cubic yards of fill and approximately 3,957 cubic yards of cut, for a net import of 1,667 cubic yards of soil, which was

also included in CalEEMod. This analysis uses the model default construction equipment and assumes use of Tier 2 construction equipment. All other construction details are not yet known; therefore, default assumptions (e.g., construction worker and truck trips and fleet activities) from CalEEMod were used. CalEEMod output sheets are included in **Appendix B**.

Using CalEEMod, it is estimated that the construction of the proposed project would generate approximately 654.1 metric tons of CO_2e during construction of the project. This impact would be **less than significant**.

Operational GHG Emissions. As discussed above, a project would have a less than significant impact related to GHG emissions if it would include the project design elements related to natural gas prohibition, energy, VMT, and EVs or if it would be consistent with a local GHG reduction strategy that meets the criteria under *State CEQA Guidelines* Section 15183.5(b). The City's 2022 CAP meets the Air District's requirements for a Qualified GHG Reduction Strategy and is designed to streamline environmental review of future development projects in Livermore consistent with *State CEQA Guidelines* Section 15183.5(b) and the Air District's CEQA Air Quality Guidelines. Therefore, this analysis evaluates the proposed project's consistency with the City's 2022 CAP. As discussed below, the proposed project would be consistent with the City's 2022 CAP.

Impact GHG-1: The proposed project would not generate operational GHG emissions that may have a significant impact on the environment, due to operational design elements.

The 2022 CAP is intended to create a roadmap to achieve emission reductions of 40 percent below 1990 levels by 2030, and carbon neutrality (i.e., net zero carbon emissions) by 2045. The CAP contains mitigation strategies and actions, consistent with State climate mitigation targets, which were developed to reduce the City's GHG emissions to reach its adopted reduction targets for 2030 and 2045. The project's consistency with the applicable mitigation strategies and actions is demonstrated in **Table 4.5.C**, below.

Table 4.5.C: Project Consistency with the City of Livermore CAP Mitigation Strategies

CAP Mitigation Strategies	Consistency Discussion
Buildings and Energy	
B-1: Require new buildings to be all-electric and incentivize electrification retrofits of existing buildings	***Consistent.*** The proposed project would be all-electric and would not include natural gas. Therefore, the proposed project would be consistent with this CAP mitigation strategy.
B-2: Decarbonize electricity from the grid and increase local renewable energy generation	***Not Applicable.*** This is a community policy based goal; therefore, this measure would not be applicable to the project. PG&E is the private utility that would supply the proposed project's electricity and natural gas services. In 2022, approximately 40 percent of PG&E's delivered electricity came from renewable sources, including solar, wind, geothermal, small hydroelectric, and

Table 4.5.C: Project Consistency with the City of Livermore CAP Mitigation Strategies

CAP Mitigation Strategies	Consistency Discussion
	various forms of bioenergy.[23] PG&E reached California's 2020 renewable energy goal in 2017 and is positioned to meet the State's 60 percent by 2030 renewable energy mandate set forth in Senate Bill (SB) 100. In addition, PG&E plans to continue to provide reliable service to its customers and upgrade its distribution systems as necessary to meet future demand.
Transportation and Land Use	
T-1: Facilitate a transition to electric vehicles	***Consistent.*** As discussed in the Project Description, a total of 268 vehicle parking spaces would be provided with the project; 27 of the total parking spaces available will have electric vehicle (EV) charging capabilities. As such, the proposed project would be consistent with the intent of this CAP mitigation strategy.
T-2: Facilitate a transition to transit and shared mobility services	***Not Applicable.*** This CAP mitigation strategy requires the City to work with regional stakeholders, including the Altamont Corridor Express (ACE), Bay Area Rapid Transit (BART), and the Livermore Amador Valley Transit Authority (LAVTA), to expand service lines and increase the convenience of transit by reducing the time it takes to reach a destination via transit as well as reducing wait times (headways) for transit. However, the proposed project is within walking or bicycling distance from surrounding residential, commercial, and institutional uses. The proposed project would also provide pedestrian access through existing sidewalks, perimeter walkways, pedestrian paseos, and pedestrian paths and sidewalks along the internal roadways. In addition, bus stops along Pacific Avenue provide transit access to the project site. Therefore, the project would support the ability of residents and visitors to use alternative modes of transportation, consistent with the intent of this CAP mitigation strategy.
T-3: Improve and expand active transportation infrastructure	***Consistent.*** This CAP mitigation strategy encourages prioritizing active transportation by expanding access to safe, low-stress, and convenient biking and pedestrian infrastructure. As discussed above, the proposed project is within walking or bicycling distance from surrounding residential, commercial, and institutional uses. The proposed project would also provide pedestrian access through existing sidewalks, perimeter walkways, pedestrian paseos, and pedestrian paths and sidewalks along the internal roadways. In addition, bus stops along Pacific Avenue and Dolores Street provide transit access to the project site. Therefore, the project would support the ability of residents and visitors to use alternative modes of transportation, consistent with the intent of this CAP mitigation strategy.
T-4: Support sustainable land use practices	***Consistent.*** This CAP mitigation strategy encourages promoting a jobs-housing match, maximizing infill development, and planning complete and walkable neighborhoods. The proposed project would provide housing, which would help to address the California housing shortage and would increase the number of

[23] Pacific Gas & Electric Company. 2023. *Exploring Clean Energy Solutions*. Website: https://www.pge.com/en/about/corporate-responsibility-and-sustainability/taking-responsibility/clean-energy-solutions.html (accessed April 2025).

Table 4.5.C: Project Consistency with the City of Livermore CAP Mitigation Strategies

CAP Mitigation Strategies	Consistency Discussion
	residences available to Bay Area residents. Through increasing housing opportunities, the proposed project would be consistent with State and regional goals to advance the availability of fair housing. In addition, the project site is currently developed with two underutilized commercial buildings, thereby redeveloping a an infill project site. As such, the proposed project would be consistent with this CAP mitigation strategy.
Waste and Materials	
W-1: Reduce the amount of waste that is landfilled	***Consistent.*** The proposed project would comply with the latest Title 24 standards, including measures related to waste reduction. Additionally, as discussed in the Initial Study prepared for the proposed project, the proposed project would comply with all federal, State, and local solid waste statutes and/or regulations related to solid waste. Further, as discussed in the Project Description, approximately 75-percent of the demolished materials would be recycled. As such, the proposed project would be consistent with this CAP mitigation strategy.
W-2: Expand use of low-carbon and recycled building materials	***Consistent.*** As discussed above, the proposed project would comply with the latest Title 24 standards, including measures related to waste reduction. Additionally, as discussed in the Project Description, approximately 75-percent of the demolished materials would be recycled. Therefore, the proposed project would be consistent with this CAP mitigation strategy.
Carbon Sequestration	
S-1: Maximize local carbon sequestration	***Consistent***. As discussed in the Project Description, the total landscaped area provided for the project site would be approximately 55,201 square feet. Total open space provided would be approximately 26,052 square feet and would include an approximately 8,865-square-foot community park with a tot lot and picnic area; an approximately 4,770-square-foot pedestrian paseos between Buildings 7 and 8 and between Buildings 12 and 13; and an approximately 3,200-square-foot central pool area with a pool, spa area, and lounge seating. The remaining 9,217 square feet of open space on the project site would consist of a perimeter walkway along the northern and eastern boundaries and other landscaped areas throughout the project site. Of the existing 71 trees on and around the perimeter of the project site, 70 would be removed. Approximately 405 new trees would be planted throughout the project site. Landscaping and other plantings would be provided throughout the project site as well. As such, the proposed project would be consistent with the intent of this CAP mitigation strategy.

Source: Compiled by LSA (September 2025).
CAP = Climate Action Plan
City = City of Livermore
PG&E = Pacific Gas & Electric Company

As shown in **Table 4.5.C**, above, the proposed project would be consistent with the City's 2022 CAP. As such, the impact would be **less than significant.**

GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Less Than Significant Impact. Other applicable plans adopted for the purpose of reducing GHG emissions include the 2022 Scoping Plan and Plan Bay Area. As such, the proposed project was evaluated for consistency with those plans to demonstrate whether the proposed project would conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the GHG emissions. As discussed below, this impact would be less than significant.

Impact GHG-2: The proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases.

Scoping Plan. The following discussion evaluates the proposed project according to the goals of the 2022 Scoping Plan, EO B-30-15, SB 32, and AB 197.

EO B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. The CARB released a second update to the Scoping Plan, the 2017 Scoping Plan, to reflect the 2030 target set by EO B-30-15 and codified by SB 32. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emission reductions target of at least 40 percent below 1990 levels by 2030 contained in EO B-30-15. SB 32 builds on AB 32 and keeps the State on the path toward achieving the 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air emission data that are collected by the CARB was posted in December 2016.

The 2022 Scoping Plan assesses progress toward the statutory 2030 target while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

The 2022 Scoping Plan focuses on building clean energy production and distribution infrastructure for a carbon-neutral future, including transitioning existing energy production and transmission infrastructure to produce zero-carbon electricity and hydrogen, and utilizing biogas resulting from wildfire management or landfill and dairy operations, among other substitutes. The 2022 Scoping Plan states that in almost all sectors, electrification will play an important role. The 2022 Scoping Plan evaluates clean energy and technology options and the transition away from fossil fuels, including adding four times the solar and wind capacity by 2045 and about 1,700 times the amount of current hydrogen supply. As discussed in the 2022 Scoping Plan, EO N-79-20 requires that all new passenger vehicles sold in California to be zero-emission by 2035, and all other fleets will have transitioned to zero-emission as fully possible by 2045, which will reduce the percentage of fossil fuel combustion vehicles.

As identified above, the 2022 Scoping Plan contains GHG reduction measures that work towards reducing GHG emissions, consistent with the targets set by EO B-30-15 and codified by SB 32 and AB 197. The measures applicable to the proposed project include energy efficiency measures, water conservation and efficiency measures, and transportation and motor vehicle measures, as qualitatively discussed below.

Energy Measures. Energy-efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. The proposed project would comply with current California Energy Code and CALGreen standards. In addition, as discussed above under Threshold 4.5-1, the proposed project would be all-electric and would not include natural gas. The elimination of natural gas in new development would help projects implement their "fair share" of achieving long-term 2045 carbon neutrality consistent State goals. As such, if a project does not use natural gas, a lead agency can conclude that it would be consistent with achieving the 2045 neutrality goal and will not have a cumulative considerable impact on climate change.[24] Therefore, the proposed project would be consistent with applicable energy measures.

Water Conservation and Efficiency Measures. Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As identified above, the proposed project would comply with current CALGreen Code standards, which include a variety of different measures, including reduction of wastewater and water use. In addition, the proposed project would be required to comply with the California Model Water Efficient Landscape Ordinance. Therefore, the proposed project would comply with applicable water conservation and efficiency measures.

Transportation and Motor Vehicle Measures. The goal of transportation and motor vehicle measures is to develop regional GHG emission reduction targets for passenger vehicles. Specific regional emission targets for transportation emissions would not directly apply to the proposed project. The second phase of Pavley standards would reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. The majority of vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. Therefore, the proposed project would comply with applicable transportation and motor vehicle measures.

[24] Bay Area Air Quality Management District. 2023b. *Air Quality Guidelines Appendix A: Thresholds of Significance Justification.* Website: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/appendix-a-thresholds-of-significance-justification_final-pdf (accessed March 2025).

The project site is currently developed with two commercial buildings, and the proposed project would redevelop the site with 15 residential buildings. The project site is within walking or bicycling distance from surrounding residential, commercial, and institutional uses. The proposed project would also provide pedestrian access through existing sidewalks, perimeter walkways, pedestrian paseos, and pedestrian paths and sidewalks along the internal roadways. In addition, bus stops along Pacific Avenue and Dolores Street provide transit access to the project site. In addition, the proposed project would provide 27 EV charging spaces. Therefore, the project would support the ability of residents and visitors to use alternative modes of transportation.

In addition, the 2022 Scoping Plan includes key project attributes that reduce operational GHG emissions in Appendix D, Local Actions,[25] of the 2022 Scoping Plan. A summary of the proposed project's consistency with the 2022 Scoping Plan's key project attributes identified in Appendix D of the 2022 Scoping Plan is shown in **Table 4.5.D**.

Table 4.5.D: Project Consistency with 2022 Scoping Plan Key Project Attributes

Priority Areas	Key Project Attribute	Project Consistency
Transportation Electrification	Provides EV charging infrastructure that, at minimum, meets the most ambitious voluntary standard in the California Green Building Standards Code at the time of project approval.	***Consistent.*** As discussed above, a total of 268 vehicle parking spaces would be provided with the project; 27 of the total parking spaces available will have EV charging capabilities. As such, the proposed project would be consistent with this key project attribute.
VMT Reduction	Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer).	***Consistent.*** The project site is in an urban area in Livermore and is generally surrounded by residential, commercial, and institutional uses. In addition, the project site is currently developed with two commercial buildings and is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer). The proposed project would be consistent with this key project attribute.
	Does not result in the loss or conversion of natural and working lands.	***Consistent.*** The project site is designated Neighborhood Mixed Low Density (NML) and is a Transfer Development Credits (TDC) Receiver Site (K) in the City's General Plan. In addition, the project site is currently developed with two commercial buildings. The proposed project does not consist of natural or working lands; therefore, the proposed project would be consistent with this key project attribute.
VMT Reduction (cont.)	Consists of transit-supportive densities (minimum of 20 residential dwelling units per acre) or is in proximity to existing transit stops (within 0.50 mile) or satisfies more detailed and stringent criteria specified in the region's SCS.	***Consistent.*** The project site is currently developed with two commercial buildings and the proposed project would redevelop the site with 15 residential buildings. The project site is within walking or bicycling distance from surrounding residential, commercial, and institutional uses. The proposed project would also provide pedestrian access through existing sidewalks, perimeter walkways, pedestrian paseos, and pedestrian paths and sidewalks along the internal roadways. In addition, bus stops along Pacific Avenue and Dolores Street provide transit access to the project site. In addition,

[25] California Air Resources Board (CARB). 2022a. *2022 Scoping Plan, Appendix D Local Actions.* November. Website: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf (accessed April 2024).

Table 4.5.D: Project Consistency with 2022 Scoping Plan Key Project Attributes

Priority Areas	Key Project Attribute	Project Consistency
		the proposed project would provide 27 EV charging spaces. Therefore, the project would support the ability of residents and visitors to use alternative modes of transportation, consistent with the intent of this key attribute.
	Reduces parking requirements by: eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or providing residential parking supply at a ratio of less than one parking space per dwelling unit; or for multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.	***Consistent.*** The proposed project would provide a total of 268 vehicle spaces with the project, including resident and guest spaces. However, as discussed above, the project would support the ability of residents and visitors to use alternative modes of transportation, consistent with the intent of this key attribute.
	At least 20 percent of units included are affordable to lower-income residents.	***Not Consistent.*** The proposed project would not include affordable units.
	Results in no net loss of existing affordable units.	***Consistent.*** The proposed project would not result in a net loss of existing affordable units, as there is no housing on the site. The proposed project would be consistent with this key project attribute.
Building Decarbonization	Uses all-electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking	***Consistent.*** The proposed project would be all-electric and would not include natural gas. Therefore, the proposed project would be consistent with this key project attribute.

Source: Compiled by LSA (September 2025).
EV = electric vehicle
SCS = Sustainable Communities Strategy

Plan Bay Area. As described above, Plan Bay Area 2050 is a State-mandated, integrated, long-range transportation and land use plan. Plan Bay Area 2050 includes 11 goals and 35 performance targets covering four broad areas: housing, economics, transportation, and environment. These targets enable the plan to be evaluated by its performance in areas identified as key regional concerns, including equitable access, economic vitality, and transportation system effectiveness. **Table 4.5.E** includes an evaluation of the proposed project's consistency with Plan Bay Area 2050 goals and performance targets.

Table 4.5.E: Project Consistency with Plan Bay Area 2050

Goal	Target	Project Consistency
Housing Strategies		
	H2. Preserve existing affordable housing. Acquire homes currently affordable to low and middle-income residents for preservation as permanently deed-restricted affordable housing.	***Not Applicable.*** Policy based goal.
Spur Housing Production for Residents of All Income Levels	**H3. Allow a greater mix of housing densities and types in Growth Geographies.** Allow a variety of housing types at a range of densities to be built in Priority Development Areas, select Transit-Rich Areas and select High-Resource Areas.	***Consistent.*** The project site is currently developed with two commercial buildings and the proposed project would redevelop the site with 15 residential buildings. The project site is within walking or bicycling distance from surrounding residential, commercial, and institutional uses. The proposed project would also provide pedestrian access through existing sidewalks, perimeter walkways, pedestrian paseos, and pedestrian paths and sidewalks along the internal roadways. In addition, bus stops along Pacific Avenue and Dolores Street provide transit access to the project site. In addition, the proposed project would provide 27 EV charging spaces. Therefore, the project would support the ability of residents and visitors to use alternative modes of transportation, consistent with the intent of this target.
	H4. Build adequate affordable housing to ensure homes for all. Construct enough deed-restricted affordable homes to fill the existing gap in housing for the unhoused community and to meet the needs of low-income households.	***Not Applicable.*** Policy based goal.
	H5. Integrate affordable housing into all major housing projects. Require a baseline of 10–20% of new market-rate housing developments of five units or more to be affordable to low-income households.	***Not Applicable.*** Policy based goal; however, the proposed project includes affordable units.
Spur Housing Production for Residents of All Income Levels (cont.)	**H6. Transform aging malls and office parks into neighborhoods.** Permit and promote the reuse of shopping malls and office parks with limited commercial viability as neighborhoods with housing for residents at all income levels.	***Consistent.*** The project site is currently developed with two commercial buildings associated with the former Livermore Town Center. Since construction in 1959, the existing buildings have been occupied by various commercial uses and are currently occupied by retail and restaurant uses, with a current high rate of vacancies. The proposed project would redevelop the project site with housing consistent with the intent of this target.

Table 4.5.E: Project Consistency with Plan Bay Area 2050

Goal	Target	Project Consistency
Transportation Strategies		
Create Healthy and Safe Streets	**T8. Build a Complete Streets network.** Enhance streets to promote walking, biking and other micro-mobility through sidewalk improvements, car-free slow streets, and 10,000 miles of bike lanes or multi-use paths.	***Consistent.*** The project site is currently developed with two commercial buildings and the proposed project would redevelop the site with 15 residential buildings. The project site is within walking or bicycling distance from surrounding residential, commercial, and institutional uses. The proposed project would also provide pedestrian access through existing sidewalks, perimeter walkways, pedestrian paseos, and pedestrian paths and sidewalks along the internal roadways. In addition, bus stops along Pacific Avenue and Dolores Street provide transit access to the project site. In addition, the proposed project would provide 27 EV charging spaces. Therefore, the project would support the ability of residents and visitors to use alternative modes of transportation, consistent with the intent of this target.
Environmental Strategies		
Expand Access to Parks and Open Space	**EN4. Maintain urban growth boundaries.** Using urban growth boundaries and other existing environmental protections, focus new development within the existing urban footprint or areas otherwise suitable for growth, as established by local jurisdictions.	***Consistent.*** The proposed project would develop residential development on a previously developed site generally surrounded by residential, commercial, and institutional uses.
	EN5. Protect and manage high-value conservation lands. Provide strategic matching funds to help conserve and maintain high-priority natural and agricultural lands, including but not limited to, Priority Conservation Areas and wildland-urban interface areas.	***Consistent.*** The project site is currently occupied by commercial uses and does not serve as a conservation or agricultural area.
Expand Access to Parks and Open Space (cont.)	**EN6. Modernize and expand parks, trails and recreation facilities.** Invest in quality parks, trails and open spaces that provide inclusive recreation opportunities for people of all backgrounds, abilities and ages to enjoy.	***Not Applicable.*** This strategy is not applicable, as the proposed project would consist of a residential development. However, the proposed project would provide a total of 55,201 square feet of landscaped area, including an approximately 8,865-square-foot community park with a tot lot and picnic area;
	EN8. Expand clean vehicle initiatives. Expand investments in clean vehicles, including more fuel-efficient vehicles and electric vehicle subsidies and chargers.	***Consistent.*** As discussed in the Project Description, a total of 268 vehicle parking spaces would be provided with the project; 27 of the total parking spaces available would have EV charging capabilities. As such, the proposed project would be consistent with this target.

Table 4.5.E: Project Consistency with Plan Bay Area 2050

Goal	Target	Project Consistency
Reduce Climate Emissions (cont.)	**EN9. Expand transportation demand management initiatives.** Expand investments in programs like vanpools, bikeshare, carshare and parking fees to discourage solo driving.	***Consistent.*** As discussed above, the project site is currently developed with two commercial buildings and the proposed project would redevelop the site with 15 residential buildings. The project site is located within walking or bicycling distance from surrounding residential, commercial, and institutional uses. The proposed project would also provide pedestrian access through existing sidewalks, perimeter walkways, pedestrian paseos, and pedestrian paths and sidewalks along the internal roadways. In addition, bus stops along Pacific Avenue and Dolores Street provide transit access to the project site. Therefore, the project would support the ability of residents and visitors to use alternative modes of transportation, consistent with the intent of this target.

Sources: Metropolitan Transportation Commission and Association of Bay Area Governments (2021); LSA (September 2025).
EV = electric vehicle

As described above, the proposed project would generally be consistent with the 2022 Scoping Plan, Plan Bay Area 2050, and the City's 2022 CAP. The proposed project would comply with the majority of regulations adopted for the purpose of reducing GHG emissions. Although the proposed project would not install fewer on-site parking spaces than required by code, the proposed project would support the ability of residents and visitors to use alternative modes of transportation. Further, although the proposed project would not provide affordable housing, the proposed project would help to address California's housing shortage and would increase the number of residences available to Bay Area residents. Through increasing housing opportunities, the proposed project would be consistent with State and regional goals to advance the availability of fair housing. Additionally, the proposed project would be all-electric and would not include natural gas. Therefore, per the City's 2022 CAP and the Air District's recommended thresholds of significance for GHG emission impact analysis, the proposed project would contribute to its "fair share" of emissions reductions required to support achieving long-term 2045 carbon neutrality, consistent with State goals. As such, the proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions. Therefore, this impact would be **less than significant**.

4.5.3.3 Cumulative Impacts

GHG impacts are by their nature cumulative impacts. Localized impacts of climate change are the result of the cumulative impact of global emissions. The combined benefits of reductions achieved by all levels of government help to slow or reverse the growth in GHG emissions. In the absence of comprehensive international agreements on appropriate levels of reductions achieved by each country, another measure of cumulative contribution is required. This serves to define the State's share of the reductions regardless of the activities or lack of activities of other areas of the United

States or the world. Therefore, a cumulative threshold based on consistency with State targets and actions to reduce GHGs is an appropriate standard of comparison for significance determinations.

As discussed above, a project would have a less than significant impact related to GHG emissions if it would include the project design elements related to natural gas prohibition, energy, VMT, and EVs or if it would be consistent with a local GHG reduction strategy that meets the criteria under *State CEQA Guidelines* Section 15183.5(b). The City's 2022 CAP meets the Air District's requirements for a Qualified GHG Reduction Strategy and is designed to streamline environmental review of future development projects in Livermore consistent with *State CEQA Guidelines* Section 15183.5(b) and the Air District's CEQA Air Quality Guidelines. As described above, the proposed project would be consistent with the City's 2022 CAP. Therefore, since the proposed project would incorporate the applicable CAP mitigation strategies, the proposed project would achieve its "fair share" of emission reductions and would not result in the generation of GHG emissions that would have a significant impact on the environment, and the cumulative GHG impacts would be considered **less than significant**.

4.6 HAZARDS AND HAZARDOUS MATERIALS

This section describes the environmental setting, including regulatory framework and existing conditions in the project site, and potentially significant environmental impacts of the proposed project related to hazards and hazardous materials.

4.6.1 Environmental Setting

This section describes the existing conditions related to hazards and hazardous materials within and in the vicinity of the project site.

4.6.1.1 Historical and Current Land Uses

A former gas station operated at the project site from approximately 1963 to 1988. Three underground storage tanks (USTs) (two 10,000-gallon gasoline tanks and one 500-gallon waste oil tank) were removed from the project site by the early 1990s. In addition, a previous dry cleaner operated at the project site, as described below. In its existing condition, the project site is occupied by two single-story, multi-unit commercial buildings and a paved asphalt lot. The area once developed with the gas station is now a small undeveloped triangular area at the western end of the project area. The existing commercial buildings are occupied by various commercial uses including retail and food service uses.

4.6.1.2 Hazardous Materials and Subsurface Contamination

The project site is listed on the State Water Resources Control Board's (SWRCB) GeoTracker database as a Cleanup Program Site related to a previous dry cleaner use that operated from approximately 1966 to 2010. The project site is listed as open and undergoing assessment and interim remedial action as of May 1, 2025.[1]

The project site has a history of uses that included a dry cleaner (approximately 1966–2010) and a gasoline service station (approximately 1963–1988). Dry cleaner operations resulted in the release of tetrachloroethene (PCE) into soil, soil vapor, and groundwater, with concentrations exceeding applicable Environmental Screening Levels (ESLs). The highest recorded concentrations were detected in 2018 at two monitoring locations. More recent sampling near adjacent residences indicates soil vapor concentrations are below ESLs.

A former gas station occupied the northwest corner of the project site at 900 South Livermore Avenue. The gas station was equipped with two 10,000-gallon gasoline underground storage tanks (UST) and one 550-gallon waste oil UST. The site of the former gas station was previously listed on the State Water Resources Control Board GeoTracker database due to the release of hazardous materials from the USTs. The site underwent remediation, including the removal of all USTs and their

[1] State Water Resources Control Board. 2025. State Water Resources Control Board GeoTracker. Website: https://geotracker.waterboards.ca.gov/profile_report?global_id=T10000008716&mytab=esidata&subcmd=edfsummarytable#esidata (accessed May 14, 2025).

associated infrastructure, soil excavations, and quarterly monitoring. After the completion of site remediation, the site was granted a case closure in November 1994.[2]

A site investigation was conducted in May 2022 to evaluate whether contamination from the former dry cleaner posed a threat to residential properties located north of the shopping center. Various sampling activities were conducted, including vapor sampling at three residential properties located immediately north and northwest of the site of the former dry cleaner. A report documenting the results of the investigation was submitted to the State Water Board documenting that concentrations of shallow soil vapor north of the shopping center was decreasing rapidly and does not present a threat to indoor air in residential buildings along Cabrillo Avenue. The report concluded that no further investigation of shallow soil vapor north of the shopping center property is necessary.[3] The Water Board approved the report and request for concurrence in August 2022, and requested additional soil/vapor testing as well as indoor air sampling.[4]

Indoor air monitoring was conducted within commercial tenant spaces at the shopping center, on the project site. The indoor sampling concluded that, based on current occupancy and use, potential risks from vapor intrusion are within regulatory limits. Further remediation of both groundwater and soil vapor was completed at the site and submitted to the Water Board for approval.[5] Additional monitoring and testing have revealed that remediation of the project site has been successful in reducing contaminants at the project site, and the results have been submitted to the Water Board for approval.

4.6.1.3 Aviation Hazards

Airport-related hazards are generally associated with aircraft accidents, particularly during takeoffs and landings. Other airport operation hazards include incompatible land uses, power transmission lines, wildlife hazards (e.g., bird strikes), and tall structures that penetrate the regulated surfaces surrounding an airport. The nearest airport to the project site is Livermore Airport, which is a small public airport approximately 4 miles northwest of the project site. The project site is not within the Airport Influence Area as identified in the Airport Land Use Compatibility Plan.

4.6.2 Regulatory Setting

Federal, State, and local government laws, regulations, plans, or guidelines that are designed to reduce impacts related to hazards and hazardous materials and are potentially applicable to the proposed project are summarized below.

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2 AEI Consultants. 2012. *Project No. 305144 Pages 17-18.*

3 EnviroAssets, Inc. 2022. *ADDITIONAL INVESTIGATION UPDATE Pacific Avenue Cleaners.* Website: https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/7453600883/T10000008716.PDF (accessed September 9, 2025).

4 San Francisco Bay Regional Water Quality Control Board. 2022. *Document Submittal Response and Request– Pacific Avenue Cleaners, 3018 Pacific Avenue, Livermore, Alameda County.* Website: https://documents.geotracker.waterboards.ca.gov/regulators/deliverable_documents/9484433829/20208 09_Pacific%20Avenue%20Cleaners_Approval%20of%20Additional%20Investigation%20Update.pdf (accessed September 9, 2025).

5 EnviroAssets, Inc. 2024. *Indoor Air Sampling Summary Pacific Avenue Cleaners.*

4.6.2.1 Federal Regulations

At the federal level, the United States Environmental Protection Agency (EPA) administers hazardous materials and hazardous waste regulations, the Occupational Safety and Health Administration (OSHA) regulates worker safety related to hazardous material handling, and the United States Department of Transportation (DOT) regulates hazardous waste transportation. The authority of these agencies and applicable regulations are described below.

United States Environmental Protection Agency. The EPA is the federal agency responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials and hazardous waste. The federal regulations are primarily codified in Title 40 of the Code of Federal Regulations (CFR). The legislation includes the Resource Conservation and Recovery Act (RCRA) of 1976, the Superfund Amendments and Reauthorization Acts of 1986, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, and the Toxic Substances Control Act of 1976 (TSCA). The EPA provides oversight for site investigation and remediation projects and has developed protocols for sampling, testing, and evaluation of solid wastes.

In 1989, the EPA issued a final rule banning most asbestos-containing products. In 1991, this regulation was overturned and, as a result of the United States Court of Appeals for the Fifth Circuit's decision, the 1989 asbestos regulation only bans new uses of asbestos in products that would be initiated *for the first time* after 1989 and bans the following specific asbestos-containing products: flooring felt, rollboard, and corrugated, commercial, or specialty paper.[6]

Resource Conservation and Recovery Act. The RCRA is a combination of the first federal solid waste statutes and all subsequent amendments mandated by Congress. The RCRA establishes the framework for a national system of solid waste control. Subtitle D of the RCRA is dedicated to non-hazardous solid waste requirements, and Subtitle C focuses on hazardous solid waste. Solid waste includes solids, liquids, and gases and must be discarded to be considered waste. Under Subtitle C of the RCRA, the EPA has developed a comprehensive program to ensure that hazardous waste is managed safely from the moment it is generated to its final disposal (referred to as cradle-to-grave) and may authorize states to implement key provisions of hazardous waste requirements in lieu of the federal government. If a state program does not exist, the EPA directly implements the hazardous waste requirements in that state. Subtitle C regulations set criteria for hazardous waste generators, transporters, and treatment, storage, and disposal facilities. This includes permitting requirements, enforcement, and corrective action or cleanup.

Hazardous Materials Transportation Act (HMTA). The federal HMTA of 1975 is the statutory basis for the extensive body of regulations aimed at ensuring the safe transport of hazardous materials on water, rail, and highways and through air or pipelines. It includes provisions for material classification, packaging, marking, labeling, placarding, and shipping documentation.

[6] United States Environmental Protection Agency (EPA). 2023. Asbestos Ban and Phase-Out Federal Register Notices. Website: https://www.epa.gov/asbestos/asbestos-ban-and-phase-out-federal-register-notices (accessed March 3, 2025).

United States Department of Transportation. In 1990 and 1994, the federal HMTA was amended to improve the protection of life, property, and the environment from the inherent risks of transporting hazardous material in all major modes of commerce. The DOT developed hazardous material regulations that govern the classification, packaging, communication, transportation, and handling of hazardous materials, as well as employee training and incident reporting. The transportation of hazardous materials is subject to both RCRA and DOT regulations. The California Highway Patrol, California Department of Transportation (Caltrans), and the California Department of Toxic Substances Control (DTSC) are responsible for enforcing federal and State regulations pertaining to the transportation of hazardous materials.

Occupational Safety and Health Administration. OSHA regulates worker health and safety at the federal level. The federal Occupational Safety and Health Act of 1970 authorizes the states to establish their own safety and health programs with OSHA approval. Worker health and safety protections in California are regulated by the California Occupational Safety and Health Administration (Cal/OSHA), as described below. California standards for workers dealing with hazardous materials are contained in 8 California Code of Regulations (CCR), which includes practices for all industries (General Industrial Safety Orders) as well as specific practices for construction. Workers at hazardous waste sites (or workers who may be exposed to hazardous waste that might be encountered during excavation of contaminated soils) must receive specialized training and medical supervision according to OSHA Hazardous Waste Operations and Emergency Response regulations. Additional regulations have been developed for construction workers potentially exposed to lead and asbestos. Cal/OSHA enforcement units conduct on-site evaluations and issue notices of violation to enforce necessary improvements to health and safety practices.

4.6.2.2 State Regulations

At the State level, the California Environmental Protection Agency (CalEPA) implements and enforces environmental laws that regulate air, water, and soil quality; pesticide use; and waste recycling and reduction. CalEPA consists of the DTSC, the SWRCB (which operates via nine Regional Water Quality Control Boards [RWQCB]), the California Air Resources Board (CARB), the Department of Pesticide Regulation, the California Department of Resources, Recycling, and Recovery (CalRecycle), and the Office of Environmental Health Hazard Assessment. The DTSC and the SWRCB administer hazardous materials and hazardous waste regulations, CARB regulates air pollution control programs, and Cal/OSHA regulates worker safety related to hazardous materials handling. The authority of these agencies and applicable regulations are described below.

Department of Toxic Substances Control. In California, the DTSC is authorized by the EPA to enforce and implement federal hazardous material laws and regulations. California regulations pertaining to hazardous materials are equal to or exceed the federal regulation requirements. Most State hazardous material regulations are contained in CCR Title 22. The DTSC generally acts as the lead agency for soil and groundwater cleanup projects that affect public health and establishes cleanup levels for subsurface contamination that are equal to or more restrictive than federal levels. The DTSC has also developed land disposal restrictions and treatment standards for hazardous waste disposal in California.

California Health and Safety Code. Health and Safety Code Division 20, Chapter 6.5 – Hazardous Waste Control, is the primary hazardous waste statute in California and implements the RCRA as a "cradle-to-grave" waste management system in California. It specifies that generators have the primary duty to determine whether their wastes are hazardous and to ensure their proper management. It also establishes criteria for the reuse and recycling of hazardous wastes used or reused as raw materials. It exceeds federal requirements by mandating source reduction planning and a much broader requirement for permitting facilities that treat hazardous waste. It also regulates additional types of wastes and waste management activities that are not covered by federal law under the RCRA.

Chapter 6.95 of the Health and Safety Code also establishes minimum Statewide standards for Hazardous Materials Business Plans (HMBPs), including basic information on the location, type, quantity, and health risks of hazardous materials and/or waste. Each business must prepare an HMBP if that business uses, handles, or stores a hazardous material and/or waste or extremely hazardous material in quantities greater than or equal to:

- 55 gallons for a liquid
- 500 pounds of a solid
- 200 cubic feet for any compressed gas
- Threshold planning quantities of an extremely hazardous substance

State Water Resources Control Board. The SWRCB enforces regulations on implementation of UST programs. It also allocates funding to eligible parties that request reimbursement of costs to clean up soil and groundwater pollution from UST leaks. The SWRCB also enforces the Porter-Cologne Water Quality Control Act through its nine RWQCBs, including the San Francisco Bay RWQCB, which is described below.

California Air Resources Board. This agency is responsible for coordination and oversight of State and local air pollution control programs in California, including implementation of the California Clean Air Act of 1988. CARB has developed State air quality standards and is responsible for monitoring air quality in conjunction with the local air districts.

California Code of Regulations Title 22. Most State and federal regulations and requirements that apply to generators of hazardous waste are spelled out in CCR Title 22, Division 4.5. Title 22 contains the detailed compliance requirements for hazardous waste generators, transporters, and treatment, storage, and disposal facilities. Because California is a fully authorized state according to RCRA, most RCRA regulations (those contained in 40 CFR 260 et seq.) have been duplicated and integrated into Title 22. However, because DTSC regulates hazardous waste more stringently than the EPA does, the integration of California and federal hazardous waste regulations that make up Title 22 do not contain as many exemptions or exclusions as does 40 CFR 260. As with the California Health and Safety Code, Title 22 also regulates a wider range of waste types and waste management activities than the RCRA regulations in 40 CFR 260. To aid the regulated community, the State of California compiled the hazardous material, waste, and toxics-related regulations contained in CCR Titles 3, 8, 13, 17, 19, 22, 23, 24, and 27 into one consolidated CCR Title 26, "Toxics." However, the California hazardous waste regulations are still commonly referred to as Title 22.

California Occupational Safety and Health Administration. Cal/OSHA regulates worker health and safety protections in California. California's standards for workers dealing with hazardous materials are contained in CCR Title 8, which includes practices for all industries (General Industrial Safety Orders), as well as specific practices for construction. Workers at hazardous waste sites (or workers who may be exposed to hazardous waste that might be encountered during excavation of contaminated soils) must receive specialized training and medical supervision according to OSHA Hazardous Waste Operations and Emergency Response regulations. Additional regulations have been developed for construction workers potentially exposed to lead and asbestos. Cal/OSHA enforcement units conduct on-site evaluations and issue notices of violation to enforce necessary improvements to health and safety practices.

California Fire Code. The California Fire Code is Part 9 of CCR Title 24, also referred to as the California Building Standards Code. The California Fire Code incorporates the latest International Fire Code of the International Code Council with necessary California amendments. The purpose of the California Fire Code is to establish the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations.

California Fire Code Chapter 33 contains requirements for construction activities, including the development and implementation of a site safety plan establishing a fire prevention program. In addition, California Fire Code Chapter 35 contains specific requirements for welding and other hot work. The requirements are intended to maintain the required levels of fire protection, limit fire ignition and spread, establish the appropriate operation of equipment, and promote prompt response to fire emergencies. Regulated features include fire protection systems, firefighter access, water supply, means of egress, hazardous material storage and use, and temporary heating equipment and other ignition sources.

Government Code Section 65962.5. The provisions of Government Code Section 65962.5 require the DTSC, the SWRCB, the California Department of Health Services, and CalRecycle (formerly the California Integrated Waste Management Board) to submit information pertaining to sites associated with solid waste disposal, hazardous waste disposal, leaking UST sites, and/or hazardous materials releases to the Secretary of CalEPA.

4.6.2.3 Regional Regulations

The following regional agencies have regulatory authority over the proposed project's management of hazardous materials and hazards.

San Francisco Bay Regional Water Quality Control Board. The Porter-Cologne Water Quality Control Act established the SWRCB and divided the State into nine regional basins, each under the jurisdiction of an RWQCB. The RWQCB (Region 2) regulates water quality in the Bay Area, including the project site. The RWQCB has the authority to require groundwater investigations when the quality of groundwater or surface waters of the State are threatened, and to require remediation actions, if necessary. The RWQCB has developed environmental screening levels to help expedite the

preparation of environmental risk assessments at sites where contaminated soil and groundwater have been identified. The RWQCB issued the Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit, Order R2-2015-0049, NPDES Permit No. CAS612008, which addresses the potential discharge of hazardous materials in municipal stormwater from municipalities.

Bay Area Air District. The Bay Area Air District (Air District) has primary responsibility for control of air pollution from sources other than motor vehicles and consumer products (which are the responsibility of the EPA and CARB). The Air District is responsible for preparing attainment plans for non-attainment criteria pollutants, control of stationary air pollutant sources, and the issuance of permits for activities including asbestos demolition and renovation activities.

Air District Regulation 11-2 requires that, prior to commencement of any demolition or renovation, the owner or operator must thoroughly survey the affected structure or portion thereof for the presence of asbestos-containing materials (ACMs). The survey must be performed by a person who is certified by the Division of Occupational Safety and Health, who has taken and passed an EPA approved building inspector course, and who conforms to the procedures outlined in the course. The survey must include sampling and the reporting of results of laboratory analysis of the asbestos content of all suspected ACMs. This survey must be made available, upon request, by the Air Pollution Control Officer, prior to the commencement of any regulated ACM removal or any demolition. If ACMs are identified, the disturbance/removal and management of ACMs must be performed in accordance with Air District Regulations under Rule 11-2 to ensure that asbestos would not be released into the environment.

4.6.2.4 Local Regulations

City of Livermore General Plan. The City's General Plan Public Safety Element and Circulation Element contain various goals, objectives, and policies related to hazards which aim to protect the Livermore community from natural and created hazards, including geologic hazards, flooding, wildland fires, and hazardous materials.[7]

> **Objective PS-3.1** Plan new development with wildland fire hazards in mind.
>
> **Objective PS-4.1** Minimize Livermore residents' exposure to the harmful effects of hazardous materials and waste.
>
> > **Policy P3** The City shall promote the safe transport of hazardous materials through Livermore through implementation of the following measures:
> >
> > 1. Maintain formally designated hazardous material carrier routes to direct hazardous materials away from populated and other sensitive areas;

[7] City of Livermore. 2013. City of Livermore General Plan – Public Safety Element. Website: https://www.livermoreca.gov/home/showpublisheddocument/5555/637643624310900000 (accessed May 19, 2025).

2. Prohibit the parking of vehicles from transporting hazardous materials on City streets;

3. Require that new pipelines and other channels carrying hazardous materials avoid residential areas and other immobile populations to the greatest extent possible.

Policy P5 When reviewing applications for new development in areas historically used for commercial or industrial uses, the City shall require environmental investigation as necessary to ensure that soils, groundwater, and buildings affected by hazardous material releases from prior land uses, and lead and asbestos potentially present in building materials, would not have the potential to affect the environment or the health and safety of future property owners or users.

Policy P7 The City shall ensure that new development and redevelopment shall protect the public health and safety through environmental investigations, as required by State and Alameda County regulations, relating to potential hazardous material releases from prior uses and lead and asbestos present in building materials.

Objective CIR-6.2 Plan and maintain the circulation system to prevent or minimize environmental impacts.

Policy P3 Require all residential, commercial, and industrial areas to provide efficient and safe access for emergency vehicles.

4.6.3 Impacts and Mitigation Measures

The following describes the potential impacts of the proposed project related to hazards and hazardous materials. This section begins with the criteria of significance that establish the thresholds for determining whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as necessary.

4.6.3.1 Significance Criteria

Implementation of the proposed project would have a significant impact related to hazards and hazardous materials under the following conditions:

HAZ-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

HAZ-2 Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment;

HAZ-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;

HAZ-4 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;

HAZ-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;

HAZ-6 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;

HAZ-7 Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

4.6.3.2 Project Impacts

The following section provides an evaluation and analysis of the potential impacts of the proposed project for each of the criteria of significance listed above and potential cumulative impacts.

HAZ-1 The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Less Than Significant Impact. Hazardous materials (e.g., fuel, oils, and paints) would be routinely transported, stored, and used at the project site during construction activities. Chapter 13.45, Stormwater Management and Control Program, of the City's Municipal Code requires compliance with all applicable stormwater permits.[8] Because the proposed project would result in soil disturbance greater than 1 acre, management of soil and hazardous materials during construction activities would be subject to the requirements of the Stormwater Construction General Permit, which requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes hazardous material storage requirements. For example, construction site operators must store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

Construction of the proposed project would result in the generation of various waste materials that would require recycling and/or disposal, including some waste materials that could be classified as hazardous waste. Hazardous materials would be transported by a licensed hazardous waste hauler and disposed of at facilities that are permitted to accept such materials as required by the DOT, RCRA, State regulations, and Policy P3 of Objective PS 4.1 of the City's General Plan Public Safety Element.

Operation of the proposed project would involve the routine storage and use of small quantities of commercially available hazardous materials for routine maintenance (e.g., paint and cleaning supplies). In addition, equipment installed at the project site (e.g., backup generators) may involve

[8] City of Livermore. City of Livermore Municipal Code. Chapter 13.45, Stormwater Management and Control Program. Website: https://www.codepublishing.com/CA/Livermore/Municipal/Livermore13/Livermore1345.html?utm_ (accessed August 11, 2025).

the storage of hydraulic fluid, fuels, and other hazardous materials. As required by Policy P5 and Policy P7 of Objective PS 4.1 of the City's General Plan Public Safety Element, the proposed project would require environmental investigation to ensure any impacts relating to hazardous materials would not have the potential to affect the environment or the health and safety of future property owners or users. The City's Fire Department, Engineering Division, and Building Division coordinates the review of building permits to ensure that hazardous materials requirements are met prior to construction, including proper hazardous materials storage facilities.

The routine transportation, use, and disposal of hazardous materials during construction and operation may pose health and safety hazards to workers if the hazardous materials are improperly handled, or to the nearby public and the environment if the hazardous materials are accidentally released into the environment. Potential impacts associated with accidental releases of hazardous materials into the environment are discussed under Threshold 4.8.2*,* below.

Compliance with the regulations described in Section 4.6.2 above, including OSHA and Cal/OSHA regulations, the California Fire Code, the California Health and Safety Code Division 20, Chapter 6.5, CCR, DOT, RCRA, the City's General Plan, and other federal, State, regional, and local regulations, are mandatory and they would ensure that the proposed project would not create a significant hazard to the public or the environment associated with the routine transport, use, or disposal of hazardous materials by ensuring that these materials are properly handled during construction and operation of the proposed project. Therefore, this impact would be **less than significant**.

HAZ-2 The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment.

Less Than Significant Impact with Mitigation Incorporated. The public and/or the environment could be affected by the release of hazardous materials from the project site into the environment if (1) hazardous building materials (e.g., lead paint, asbestos, and PCBs) were disturbed and released into the environment during the demolition of existing structures; (2) leakage, spills, or improper disposal of hazardous materials would occur during construction or operation of the project; or (3) the project would expose construction workers, the public, future users of the project site (which include sensitive residential land uses), or the environment to potentially contaminated soil, groundwater, or soil vapor during construction or operation of the project.

Hazardous Building Materials. Asbestos is a known human carcinogen that was commonly used in building materials until the early 1980s. Asbestos-containing products remain in use within the United States and include some roof and non-roof coatings and other asbestos-containing building materials.[9] Section 19827.5 of the California Health and Safety Code requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos. Air District Regulation 11-2 requires that, prior to

[9] EPA. 2017. Preliminary Information on Manufacturing, Processing, Distribution, Use, and Disposal: Asbestos, February. Website: https://www.epa.gov/sites/production/files/2017-02/documents/asbestos.pdf (accessed March 3, 2025).

commencement of any demolition or renovation, the owner or operator must thoroughly survey the affected structure or portion thereof for the presence of ACMs. The survey must be performed by a person who is certified by the Division of Occupational Safety and Health, who has taken and passed an EPA approved building inspector course, and who conforms to the procedures outlined in the course. The survey must include sampling and the reporting of results of laboratory analysis of the asbestos content of all suspected ACMs. This survey must be made available, upon request by the Air Pollution Control Officer, prior to the commencement of any regulated ACM removal or any demolition. If ACMs are identified, the disturbance removal and management of ACMs must be performed in accordance with Air District Regulations under Rule 11-2 to ensure that asbestos would not be released into the environment.

Prior to 1978, lead compounds were commonly used in exterior and interior paints. Due to its health effects, the application of lead-based paint on residential structures was banned in 1978; however, lead-based paint can be found in commercial or industrial structures, regardless of construction date (because its use is still allowed in commercial and industrial applications).[10]

Lead paint may be present on the structures at the project site. The stabilization and/or removal of lead paint prior to demolition or renovation of structures would be required in accordance with applicable laws and regulations, including but not limited to California OSHA's Construction Lead Standard, Title 8 CCR Section 1532.1, and Department of Health Services regulation 17 CCR Sections 35001 through 36100, as may be amended.

Fluorescent lighting tubes and ballasts, computer displays, and several other common items containing hazardous materials (including mercury, a heavy metal) are regulated as "universal wastes" by the State of California and may be present on the project site. Universal waste regulations allow common, low hazard wastes to be managed under less -stringent requirements than other hazardous wastes. Management of other hazardous waste is governed by DTSC hazardous waste rules.

Compliance with existing regulations, as outlined above, would ensure that hazardous building materials, including ACMs, lead paint, and universal wastes, would be identified through a comprehensive hazardous building material survey and removed/stabilized as necessary prior to building demolition or renovation activities.

Polychlorinated biphenyls (PCBs) were historically used as coolants and lubricants in transformers, capacitors, heating/cooling equipment, and other electrical equipment, and were also used as plasticizers in paints, plastics, rubber products, and caulking. PCBs were demonstrated to cause cancer and a variety of other adverse health effects in animals, including effects on the immune system, reproductive system, nervous system, and endocrine system. Although manufacturing of PCBs was banned in the United States since 1979, they may still be

[10] Department of Toxic Substances Control (DTSC). 2006. Interim Guidance Evaluation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers. June 9 (Revised).Website: https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/Guidance_Lead_Contamination_050118-1.pdf (accessed March 3, 2025).

found in older electrical equipment and other building materials such as light ballasts and caulking. PCBs or PCB contaminated items require proper off-site transport and disposal at a facility that can accept such waste, in accordance with the TSCA and other federal and State regulations. PCBs in manufactured materials such as caulking may also move directly into adjoining materials, particularly porous materials such as wood, concrete, and other types of masonry.[11] The EPA has indicated there was potential widespread use of PCB containing building materials in buildings built or renovated between about 1950 and 1979. Prior to removal, the EPA recommends PCB testing of caulking and other building materials that are going to be removed to determine what protections are needed during removal and to determine proper disposal requirements.[12]

Electrical and lighting equipment that may contain hazardous materials (e.g., mercury and PCBs) can be readily identified and therefore would be appropriately managed/disposed of in accordance with applicable regulations including TSCA, DTSC hazardous waste rules, and other federal and State regulations; however, PCB containing building materials such as caulks, sealants, rubber window seals/gaskets, specialized paints, mastics, and other adhesives cannot be readily identified and require testing to evaluate whether these materials contain PCBs.

Impact HAZ-2a: **Demolition or renovation activities may result in the release of PCBs into the environment.**

Mitigation Measure HAZ-1 **Hazardous Building Materials Survey.** Prior to issuance of demolition or renovation permits for existing structures, the project sponsor shall perform a comprehensive Hazardous Building Materials Survey (HBMS) for the structures to be affected, which shall be prepared and signed by a qualified environmental professional, documenting the presence or lack thereof of polychlorinated biphenyls (PCBs) containing equipment and materials, and any other hazardous building materials. The HBMS shall include abatement specifications for the stabilization and/or removal of the identified hazardous building materials in accordance with all applicable laws and regulations. The project sponsor shall implement the abatement specifications and shall submit to the City evidence of completion of abatement activities prior to demolition or renovation of the existing structures.

To control the risk of releasing PCBs into the environment from demolition or renovation activities, **Mitigation Measure HAZ-1** shall be required. **Mitigation Measure HAZ-1** would ensure

[11] EPA. 2015a. PCBs in Building Materials – Questions & Answers. July 28. Website: https://www.epa.gov/sites/production/files/2016-03/documents/pcbs_in_building_materials_questions_and_answers.pdf (accessed March 3, 2025).

[12] EPA. 2015b. Practical Actions for Reducing Exposure to PCBs in Schools and Other Buildings, Guidance for school administrators and other building owners and managers. July 28. Website: https://www.epa.gov/sites/production/files/2016-03/documents/practical_actions_for_reducing_exposure_to_pcbs_in_schools_and_other_buildings.pdf (accessed March 3, 2025).

that any hazardous building materials are identified and removed in accordance with all applicable laws and regulations prior to demolition and construction activities. Prior to any demolition or renovation, the project sponsor would be required to complete a comprehensive Hazardous Building Materials Survey (HBMS) by a qualified environmental professional which documents any hazardous building materials which may be present. Necessary abatement procedures, if necessary, must be included as part of the HBMS and must be implemented by the project sponsor.

Spills, Leaks, or Improper Disposal of Hazardous Materials. An accidental release of hazardous materials (e.g., oils, fuels, solvents, paints, or contaminated soil) during project construction could result in exposure of construction workers, the public, and/or the environment to hazardous materials. As discussed above, the proposed project would be subject to the requirements of Chapter 13.45 of the City's Municipal Code, including the Construction General Permit, which requires preparation and implementation of a SWPPP to reduce the risk of spills or leaks from reaching the environment, including procedures to address minor spills of hazardous materials. Measures to control spills, leakage, and dumping must be addressed through structural as well as non-structural best management practices (BMPs), as required by the Construction General Permit. For example, equipment and materials for cleanup of spills must be available on site, and spills and leaks must be cleaned up immediately and disposed of properly. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage, leaks, sludge or waste disposal, or drainage from raw material storage.

As discussed above, the transportation of hazardous materials is subject to RCRA and DOT regulations as well as Policy P3 of Objective PS 4.1 of the City's General Plan Public Safety Element. If a discharge or spill of hazardous materials occurs during transportation, the transporter is required to take appropriate immediate action to protect human health and the environment (e.g., notify local authorities and contain the spill), and is responsible for the discharge cleanup.

Operation of the project would involve the routine storage and use of small quantities of commercially available hazardous materials for routine maintenance (e.g., paint and cleaning supplies) and project residents may generate household hazardous waste (e.g., batteries, cosmetics, and cleaning products). If larger quantities of hazardous materials would be stored on the project site, mandatory compliance with existing hazardous materials regulations including the California Fire Code and Health and Safety Code, as enforced by the City's Fire Department and the Alameda County Department of Environmental Health programs, and Policies P3, P5 and P7 of Objective PS 4.1 of the City's General Plan Public Safety Element would require hazardous materials to be properly stored, labeled, and disposed of, and requires training and planning to ensure appropriate responses to spills and emergencies.

Compliance with existing regulations regarding the management of hazardous materials, as discussed above and under Threshold 4.6.1, would ensure that potential impacts related to spills, leaks, or improper disposal of hazardous materials that would be routinely handled during construction and operation of the project would be less than significant. However, in order to control the risk of releasing subsurface hazardous materials into the environment from

demolition or renovation activities, **Mitigation Measure HAZ-2** shall be required. **Mitigation Measure HAZ-2** requires the preparation of a Soil and Groundwater Management Plan (SGMP) in coordination with the appropriate regulatory agencies prior to any demolition or other ground disturbing activities. The SGMP must outline any potential contamination sources and proper management protocols and procedures that must be adopted during construction of the proposed project and any remedial action that must take place.

Impact HAZ-2b: **Subsurface hazardous materials may be released into the environment during construction and operation of the project.**

Mitigation Measure HAZ-2 **Soil and Groundwater Management Plan.** The project sponsor shall engage with the appropriate regulatory agency (e.g., the San Francisco Bay Regional Water Quality Control Board [RWQCB] or Department of Toxic Substances Control [DTSC]) to provide oversight of additional subsurface investigation at the project site, preparation and implementation of a Soil and Groundwater Management Plan (SGMP), and the implementation of remedial actions, as necessary, at the project site. The additional subsurface investigation activities shall include additional investigation of potential contamination source areas to define the extent of subsurface contamination at the project site. The SGMP shall outline soil and groundwater management protocols that would be implemented during redevelopment of the project site to ensure that construction workers, the public, future occupants, and the environment would not be exposed to hazardous materials that may be present in the subsurface of the project site. The SGMP shall include, at a minimum, the following procedures to be implemented during construction:

- Health and safety requirements for construction workers that may handle contaminated soil or groundwater
- Guidelines for controlling airborne dust, vapors, and odors
- Air monitoring requirements for volatile organic compounds (VOCs) during construction
- Regulatory notification requirements if undocumented contamination or features of environmental concern (e.g., underground storage tanks [USTs] or clarifiers/sumps/vaults and associated piping) are encountered
- Inspection and sampling protocols for contaminated soil or groundwater by a qualified environmental professional

- Guidelines for groundwater dewatering, treatment, and disposal to ensure compliance with applicable regulations/permit requirements

- Guidelines for the segregation of contaminated soil, stockpile management, characterization of soil for off-site disposal or on-site reuse, and importing of clean fill material

The report(s) documenting additional investigation activities and the SGMP shall be submitted to the regulatory oversight agency for review and approval prior to the City issuing demolition or grading permits for the project. Remedial actions that may be required for the project could include, but would not necessarily be limited to, removal of hazardous materials containers/features (e.g., USTs, piping, clarifiers/sumps/vaults), removal and off-site disposal of contaminated soil or groundwater, in-situ treatment of contaminated soil or groundwater, or engineering/institutional controls (e.g., installation of vapor intrusion mitigation systems and establishing deed restrictions).

If remedial actions are required for the project, the project sponsor shall submit to the City evidence of approval from the regulatory oversight agency for any proposed remedial action plans prior to the City issuing demolition, grading, or building permits that would be required for the remedial action. The project sponsor shall document the implementation of the SGMP during construction and the completion of remedial actions. The project sponsor shall submit to the City evidence of approval from the regulatory oversight agency for the implementation of the SGMP and completion of any remedial actions prior to the City issuing a certificate of occupancy for the project site.

Implementation of **Mitigation Measure HAZ-2** would ensure that subsurface contamination on the project site would be properly investigated and remediated, and the risk of subsurface hazardous materials being released into the environment during construction and operation of the project would be **less than significant with mitigation**.

HAZ-3 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.

Less Than Significant Impact. No schools were identified within 0.25 mile of the project site.[13] Compliance with the existing hazardous materials regulation described under Section 4.6.12 above

[13] California Department of Education. 2023. California Schools Directory. Website: https://www.cde.ca.gov/schooldirectory/ (accessed March 3, 2025).

(e.g., OSHA and Cal/OSHA regulations, the California Fire Code, the California Health and Safety Code, CCR, DOT, RCRA, Air District, and other federal, State, regional, and local regulations) would ensure that potential impacts related to hazardous emissions within 0.25 mile of schools as a result of the project would be **less than significant**.

HAZ-4 The project could 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 create a significant hazard to the public or the environment.

Less Than Significant Impact with Mitigation Incorporated. The project site is not included on the lists of hazardous material release sites compiled pursuant to Government Code Section 65962.5.[14] However, as previously mentioned, the project site is listed on the SWRCB GeoTracker database as a Cleanup Program Site related to a previous dry cleaner use that operated from approximately 1966 to 2010. This Cleanup Program Site is listed as open and undergoing assessment and interim remedial action as of May 1, 2025. Recent testing has revealed that remediation of the project site was successful in reducing contaminants associated with previous operation of the dry cleaner, and the results were submitted to the SWRCB for approval.

In addition, a former gas station operated at the project site from approximately 1963 to 1988. The site of the former gas station was previously listed on the State Water Resources Control Board GeoTracker database due to the release of hazardous materials from USTs. The site underwent remediation, including the removal of all USTs and their associated infrastructure, soil excavations, and quarterly monitoring. After the completion of site remediation, the site was granted a case closure in November 1994.

Due to the documented occurrence of previous hazardous material contamination at the project site, the project would be required to implement **Mitigation Measure HAZ-2**, which would require the preparation an SGMP and ensure that subsurface contamination on the project site would be properly investigated and remediated, and the risk of subsurface hazardous materials being released into the environment during construction and operation of the project would be less than significant with mitigation incorporated.

HAZ-5 The project would be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport and would not result in a safety hazard for people residing or working in the project area.

Less Than Significant Impact. As discussed under Section 4.6.1.3 above, the nearest airport to the project site is Livermore Airport, which is a small public airport approximately 4 miles northwest of the project site. The project site is not within the Airport Land Use Compatibility Plan Influence Area. Given the distances from the project site to the nearest public or public use airports, the project would not be subject to any airport safety hazards and would not have an adverse effect on aviation

[14] California Environmental Protection Agency (CalEPA). 2024. Cortese List Data Resources. Website: https://calepa.ca.gov/sitecleanup/corteselist/ (accessed March 3, 2025).

safety or flight patterns. Therefore, the proposed project would have **a less than significant impact** related to aviation hazards.

HAZ-6 The project could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Less Than Significant Impact. The City of Livermore adopted the Emergency Operations Plan in 2018. The Emergency Operations Plan offers methods to mitigate natural hazards and enhance disaster resistance.[15] The plan focuses on natural disasters, including earthquake hazards (surface faulting, ground shaking, liquefaction, landslides, and tsunamis), and weather-related hazards (flooding, landslides, wildfires, drought, and climate change). The proposed project would be consistent with the policies in the Emergency Operations Plan and would be designed to meet all applicable federal, State and local fire safety codes.

The proposed project would not alter or block adjacent roadways, and implementation of the proposed project would not be expected to impair the function of nearby emergency evacuation routes. Within Livermore, emergency evacuation routes are not fixed streets but are determined dynamically based on the specific nature and location of an emergency. The city uses tools like Genasys Protect (formerly Zonehaven AWARE) to provide real-time evacuation information. Residents are encouraged to familiarize themselves with this platform to receive timely updates during emergencies.[16] While specific evacuation routes can vary depending on the situation, several major roads in and around Livermore are commonly used as primary evacuation corridors including:

- Interstate 580: A major east-west freeway facilitating large-scale evacuations.
- Vasco Road: Connects Livermore to Contra Costa County and serves as a key north-south route.
- Greenville Road: Provides access to rural areas and connects to Tesla Road.
- Tesla Road: Leads eastward towards Altamont Pass and is vital for evacuating eastern parts of the city.
- Arroyo Road: Runs through southern Livermore and is important for evacuations in that region.
- East Avenue: Serves as a connector within the city, linking various neighborhoods to major highways.

These roads are integral to the City's evacuation planning and are maintained to ensure accessibility during emergencies.

15 City of Livermore. 2018 Emergency Operations Plan. Website: https://www.livermoreca.gov/home/showpublisheddocument/11721/638579319829670000 (accessed March 3, 2025)

16 City of Livermore. n.d. *Emergency Preparedness*. Website: https://www.livermoreca.gov/our-community/emergency-preparedness/preparedness (accessed May 13, 2025).

In accordance with Policy P3 of Objective CIR-6.2 of the City's General Plan Circulation Element, the proposed project would design, construct, and maintain structures, roadways, and facilities in accordance with applicable standards associated with vehicular access, resulting in the provision of adequate vehicular access that would provide for adequate emergency access and evacuation. The proposed project would not reduce the number of traffic lanes on the surrounding roadways and would not alter the existing street layout, and therefore it would not alter or obstruct emergency evacuation routes. Therefore, the proposed project would not be expected to impair the function of nearby emergency evacuation routes and would have **less than significant** impacts on implementation of an adopted emergency response plan or emergency evacuation plan.

HAZ-7 The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Less Than Significant Impact. The project site is in urban and built-up land and is not within a designated High or Very High Fire Hazard Severity Zone.[17] However, the proposed project would be required to comply with the current California Fire Code, as specified in Section 15.06 of the Livermore Municipal Code. The California Fire Code calls for the installation, maintenance, and ongoing inspection of fire protection systems under the direction of the local Fire Chief. In addition, the Fire Code authorizes the Fire Chief to specify water supply and road design standards. Prior to approval of final maps and improvement plans for any development project within Livermore, plan review and approval by the Livermore Fire Department is required.

The proposed project would also be subject to requirements in Section 13000 et seq. of the California Health and Safety Code, the California Building Code, and the California State Fire Code, which include regulations concerning building standards for fire protection; fire protection and notification systems such as extinguishers and smoke alarms; safety for firefighters and emergency responders during emergency operations; minimum standards for hazardous vegetation and fuel management, defensible space, and building construction; and minimum standards for emergency access and water supply for fire response.

Compliance with these existing regulatory requirements would reduce impacts related to the exposure of people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires and impacts would be **less than significant.**

4.6.3.3 Cumulative Impacts

This section evaluates cumulative impacts related to hazards and hazardous materials. This cumulative analysis examines the effects of the project in the relevant geographic area in combination with buildout of the General Plan. Cumulative impacts are addressed only for those thresholds that would result in a project-related impact, whether it be less than significant or less than significant with mitigation. If the project would result in no impact with respect to a particular threshold (e.g., aviation), it would not contribute to a cumulative impact; therefore, no further discussion of cumulative effects related to these topics is required.

[17] CAL FIRE. 2024. Fire Hazard Severity Map Viewer. Website: https://experience.arcgis.com/experience/03beab8511814e79a0e4eabf0d3e7247/(accessed March 3, 2025).

Occurrence of a cumulative effect related to hazardous materials would require that multiple projects release hazardous materials at the same time near each other; therefore, the geographic area of concern for cumulative hazardous materials-related impacts is the project site and nearby areas. Based on the list of cumulative projects in Section 4.0, three projects were recently approved in vicinity of the project site. However, based on the project approvals, none would result in impacts related to hazardous resources. Of the three projects, the Pacific Avenue Senior Apartments Project assessed potential impacts associated with hazards and hazardous materials in a Phase I Environmental Site Assessment. The Phase I Environmental Site Assessment Prepared for the Pacific Avenue Senior Apartments Project did not identify any impacts associated with hazards and hazardous materials.[18] In addition, based on the project approval, the East Avenue Townhomes Project would not result in environmental impacts associated with hazards and hazardous materials.

The proposed project and cumulative projects assumed under General Plan buildout would involve the routine use of hazardous materials during construction and operation. Required compliance with existing hazardous materials regulations including, OSHA and Cal/OSHA regulations, the California Fire Code, the California Health and Safety Code, CCR, DOT, RCRA, and other federal, State, regional, and local regulations, would ensure that the project and cumulative projects would not create a significant hazard to the public or the environment associated with the routine transport, use, or disposal of hazardous materials or accidental spills, leaks, or improper disposal of hazardous material by ensuring that these materials are properly handled during construction and operation. The proposed project and cumulative projects would involve demolition and renovation activities that could release hazardous building materials into the environment. Compliance with existing hazardous building material regulations and implementation of **Mitigation Measure HAZ-1** would ensure that hazardous building materials on the project site are identified and appropriately managed prior to demolition or renovation activities.

Cumulative impacts to emergency response/evacuation can occur when an increase in vehicle traffic occurs in an area with limited vehicular access; therefore, the geographic area of concern for cumulative emergency response/evacuation impacts is the roadway network surrounding the project site. However, as discussed above and in Section 4.9, Transportation, the proposed project would not result in an exacerbation of traffic on the surrounding roadway network. Therefore, although the proposed project and cumulative projects would result in an increase in population within Livermore and within the immediate project area, resulting in an incremental increase in the demand for emergency response resources and services, the proposed project would not impair or interfere with implementation of established emergency response-related plans, because there would continue to be adequate roadway capacity to accommodate emergency evacuation.

Furthermore, implementation of the City's General Plan policies and programs would ensure that the City maintains an effective emergency response program that accounts for development of the proposed project and cumulative projects. The proposed project and cumulative projects could require temporary closure of traffic lanes during construction activities (e.g., for utility work). This could temporarily impede the implementation of emergency response and evacuation activities;

[18] Geocon Consultants, Inc. Update Phase I Environmental Site Assessment Report, Pacific Avenue Senior Apartments, Livermore California. June 2021. Website: https://www.livermoreca.gov/home/showpublisheddocument/9697/638067052952530000 (accessed August 11, 2025).

however, any construction activities that would result in temporary roadway closures would be required to obtain traffic permits from the City and prepare a traffic control plan that would maintain emergency response and evacuation access through appropriate traffic control measures and detours. Based on the above considerations, adequate emergency response and evacuation capabilities would be maintained at the project site, and cumulative projects and potential impacts of the proposed project related to impairing or interfering with the emergency response or evacuation plans would not be cumulatively considerable, and this cumulative impact would be **less than significant**.

4.7 LAND USE PLANNING

This section describes the environmental setting, including regulatory framework and existing conditions in the project site, and potentially significant environmental impacts of the proposed project related to land use and planning.

4.7.1 Environmental Setting

The following subsections provide an overview of the project location, the project site, and adjacent existing and planned land uses.

4.7.1.1 Overview

Livermore is in Alameda County in the eastern region of the San Francisco Bay Area. Livermore is bounded by mostly unincorporated county land to the north, east, and south and by the cities of Dublin and Pleasanton to the west. According to the United States Census Bureau, Livermore encompasses 26.45 square miles.

The approximately 6.54-acre project site is located at 2930 Pacific Avenue in Livermore, Alameda County (Assessor's Parcel Numbers 98A-412-106-5, -106-8, -106-3, and -106-6). The project site is in central Livermore, in an area primarily consisting of residential, commercial, and institutional uses. The project site is bounded by single-family residential uses to the north, Dolores Street to the east, Pacific Avenue to the south, and South Livermore Avenue to the west.

Regional vehicular access to the project site is provided by Interstate 580, on- and off-ramps for which are approximately 2 miles north of the project site along North Livermore Avenue, and State Route 84, also locally named Isabel Avenue in Livermore, which is accessed approximately 2.6 miles to the west of the project site from East Stanley Boulevard. Bus stops along Pacific Avenue provide transit access to the project site. **Figure 3-1, Project Location and Regional Vicinity,** shows the regional and local context of the project site.

4.7.1.2 Existing Land Uses

The project site is currently developed with two commercial buildings associated with the Livermore Town Center shopping center, totaling approximately 66,328 square feet in size, located along the northern and eastern property lines. Since construction in 1959, the existing buildings have been occupied by various commercial uses and are currently occupied by retail and food service uses. The remainder of the project site is covered with surface parking and ornamental landscaping, with the exception of the northwest corner, which is currently a vacant lot and was previously occupied by a gas station that has since been demolished.

Approximately 71 mature trees are planted throughout the project site, including in planters within the surface parking lot and along the western, southern, and eastern boundaries of the project site.

The project site has a history of uses that included a dry cleaner (approximately 1966–2010) and a gasoline service station (approximately 1963–1988). Dry cleaner operations resulted in the release of tetrachloroethene (PCE) into soil, soil vapor, and groundwater, with concentrations exceeding applicable Environmental Screening Levels (ESLs). The highest recorded concentrations were

detected in 2018 at two monitoring locations. More recent sampling near adjacent residences indicates soil vapor concentrations are below ESLs.

A former gas station occupied the northwest corner of the project site at 900 South Livermore Avenue. The gas station was equipped with two 10,000-gallon gasoline underground storage tanks (UST) and one 550-gallon waste oil UST. The site of the former gas station was previously listed on the State Water Resources Control Board GeoTracker database due to the release of hazardous materials from the USTs. The site underwent remediation, including the removal of all USTs and their associated infrastructure, soil excavations, and quarterly monitoring. After the completion of site remediation, the site was granted a case closure in November 1994.[1]

A site investigation was conducted in May 2022 to evaluate whether contamination from the former dry cleaner posed a threat to residential properties located north of the shopping center. Various sampling activities were conducted, including vapor sampling at three residential properties located immediately north and northwest of the site of the former dry cleaner. A report documenting the results of the investigation was submitted to the State Water Board documenting that concentrations of shallow soil vapor north of the shopping center was decreasing rapidly and does not present a threat to indoor air in residential buildings along Cabrillo Avenue. The report concluded that no further investigation of shallow soil vapor north of the shopping center property is necessary.[2] The Water Board approved the report and request for concurrence in August 2022 and requested additional soil/vapor testing as well as indoor air sampling.[3]

Indoor air monitoring was conducted within commercial tenant spaces at the shopping center, on the project site. The indoor sampling concluded that, based on current occupancy and use, potential risks from vapor intrusion are within regulatory limits. Further remediation of both groundwater and soil vapor was completed at the site and submitted to the Water Board for approval.4 Additional monitoring and testing have revealed that remediation of the project site has been successful in reducing contaminants at the project site, and the results have been submitted to the Water Board for approval

4.7.1.3 Surrounding Land Uses

The project site is in central Livermore in an area primarily consisting of residential and commercial uses, as well as some institutional uses, as further described below.

1 AEI Consultants. 2012. *Project No. 305144 Pages 17-18.*

2 EnviroAssets, Inc. 2022. *ADDITIONAL INVESTIGATION UPDATE Pacific Avenue Cleaners.* Website: https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/7453600883/T10000008716.PDF (accessed September 9, 2025).

3 San Francisco Bay Regional Water Quality Control Board. 2022. *Document Submittal Response and Request– Pacific Avenue Cleaners, 3018 Pacific Avenue, Livermore, Alameda County.* Website: https://documents.geotracker.waterboards.ca.gov/regulators/deliverable_documents/9484433829/20200809_Pacific%20Avenue%20Cleaners_Approval%20of%20Additional%20Investigation%20Update.pdf (accessed September 9, 2025).

4 EnviroAssets, Inc. 2024. *Indoor Air Sampling Summary Pacific Avenue Cleaners.*

- **North of the Project Site.** The project site is bordered to the north by single-family residential uses. Farther north is East Avenue, along which is a mix of residential and commercial uses, as well as Livermore High School, a Livermore Valley Joint Unified School District (LVJUSD) school serving grades 9 through 12.

- **East of the Project Site.** The project site is bounded to the east by Dolores Street, across which are multi-family residential uses, two cemeteries, and East Avenue Middle School, an LVJUSD school serving grades 6 through 8,, Sunken Garden Skatepark, and single-family residential uses.

- **South of the Project Site.** The project site is bordered to the south by Pacific Avenue, across from the Livermore Civic Center, which includes various City departments, including City Hall, the Police Department, and the Civic Center Branch of the Livermore Public Library. Farther south, uses generally consist of multi-family residences, agricultural facilities, and open space and recreational uses.

- **West of the Project Site.** The project site is bordered to the west by South Livermore Avenue, across which land uses predominantly consist of single-family and multi-family residential uses with some institutional uses intermixed. Bothwell Recreation Center and Park are west of the project site, as is the Del Valle Continuation School, an LVJUSD school serving grades 9 through 12.

4.7.2 Regulatory Setting

Federal, State, and local government laws, regulations, plans, or guidelines that affect land use and planning and are potentially applicable to the proposed project are summarized below.

4.7.2.1 State Regulations

California State Planning and Zoning Law. This law, which is codified in California Government Code Sections 65000–66037, delegates most of the State's local land use and development decisions to cities and counties. The California Government Code establishes specific requirements pertaining to the regulation of land uses by local governments, including general plan requirements, specific plans, subdivisions, and zoning. California Government Code Section 65302 requires that all California cities and counties include the following seven elements in their general plan: (1) land use, (2) circulation, (3) housing, (4) conservation, (5) open space, (6) noise, and (7) safety. Cities and counties that have identified disadvantaged communities must also address environmental justice in their general plans, including air quality.[5]

Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375). This statute requires California's regional planning agencies to include a Sustainable Communities Strategy (SCS)

[5] Senate Bill 1000 (SB 1000), adopted in 2016, requires both cities and counties that have disadvantaged communities to incorporate environmental justice (EJ) policies into their general plans, either in a separate EJ element or by integrating related goals, policies, and objectives throughout the other elements. This update, or revision if the local government already has EJ goals, policies, and objectives, must happen "upon the adoption or next revision of two or more elements concurrently on or after January 1, 2018."

or Alternative Planning Strategy (APS) in their Regional Transportation Plans (RTP). Senate Bill (SB) 375 was enacted to reduce greenhouse gas (GHG) emissions from automobiles and light trucks through integrated transportation, land use, housing, and environmental planning. The SCS provides a plan for meeting the regional emissions reduction targets established by the California Air Resources Board (CARB). If the emission reduction targets cannot be met through the SCS, an APS may be developed that shows how the targets would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies. SB 375 also offers local governments' regulatory and other incentives to encourage more compact new development and transportation alternatives.

The requirements of SB 375 are reflected in Plan Bay Area 2050,[6] which was adopted by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC), and serves the regional planning agencies in the nine-county region composed of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma counties. Plan Bay Area 2050 is further discussed below.

Government Code 66300 et seq. (Housing Crisis Act of 2019). Government Code 66300 et seq. has restrictions on implementing new development policies, standards, or conditions that may restrict housing developments, including any initiatives or referenda voted into law by the general populace. Cities and counties are restricted from implementing any new development policies, standards, or conditions that have any of the following effects with respect to residential land use:

- A change to the general plan land use designation, specific plan land use designation, or zoning that results in a less intensive use. Less intensive use means: (i) reductions in height, density, or floor-area ratio, (ii) new or increased open space or lot size requirements, (iii) new or increased setback requirements, minimum footage requirements, or maximum lot coverage limitations, and (iv) anything that would lessen the intensity of housing.

- A reduction of the intensity of land use within an existing general plan land use designation, specific plan land use designation, or zoning below what was allowed under the applicable land use designation and zoning ordinance in effect as of January 1, 2018 unless the City concurrently designates for residential use and rezones other land in Livermore in order to ensure there is no net loss in residential capacity in the city.

- A moratorium, or similar restriction or limitation, on housing development, including mixed-use development, unless it is necessary to specifically protect against an imminent threat to the health and safety of persons in the affected jurisdiction.

- After January 1, 2020, any new design standards that are not objective design standards.

- Enforcement of any rule that: (i) limits land use approvals or limits the issuance of permits necessary for the approval and construction of housing, (ii) imposes a cap on the number of

[6] Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC). 2021. Plan Bay Area 2050, A Vision for the Future. October 21. Website: https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf (Accessed March 24, 2025).

housing units, or (iii) limits the population. This restriction, however, does not apply to any laws passed prior to January 1, 2005, in cities or counties that are predominantly agricultural.

- Demolishing any existing housing units, unless the housing development project would create at least as many housing units.

Senate Bill 330 (SB 330). SB 330 includes restrictions on implementing new development policies, standards or conditions that may restrict housing developments, including any initiatives or referenda voted into law by the general populace. Under this law, among other things, cities and counties are restricted from implementing any new development policies, standards, or conditions that have any of the following effects:

- A change to the general plan land use designation, specific plan land use designation, or zoning that results in a less intensive use. Less intensive use means, for example: (i) reductions in height, density, or floor area ratio, (ii) new or increased open space or lot size requirements, (iii) new or increased setback requirements, minimum footage requirements, or maximum lot coverage limitations, and (iv) anything that would lessen the intensity of housing.

- A reduction of the intensity of land use within an existing general plan land use designation, specific plan land use designation, or zoning below what was allowed under the applicable land use designation and zoning ordinance in effect as of January 1, 2018.

California Housing Element Requirements (Government Code §§ 65580 to 65589). State law recognizes the vital role local governments play in the supply and affordability of housing. Local governments are required to adopt a comprehensive, long-term general plan for the development of the jurisdiction, including a Housing Element meeting the existing and projected housing needs. To that end, California Government Code requires that housing elements achieve legislative goals to:

- Identify adequate sites to facilitate and encourage the development, maintenance, and improvement of housing for households of all economic levels, including for persons with disabilities.

- Remove, as legally feasible and appropriate, governmental constraints to the production, maintenance, and improvement of housing for persons of all incomes, including those with disabilities.

- Assist in the development of adequate housing to meet the needs of low- and moderate-income households.

- Conserve and improve the condition of housing and neighborhoods, including existing affordable housing. Promote housing opportunities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, color, familial status, or disability.

- Preserve for lower income households the publicly assisted multifamily housing developments in each community.

State of California housing element laws (California Government Code §§ 65580 to 65589) require that each city and county identify and analyze existing and projected housing needs within its jurisdiction and prepare goals, policies, and programs to further the development, improvement, and preservation of housing for all economic segments of the community, commensurate with local housing needs. The Housing Elements of each city or county are required to be updated every eight years.

4.7.2.2 Regional Regulations

Plan Bay Area 2050. As discussed above, Plan Bay Area 2050 is a State-mandated, integrated long-range transportation and land use plan for the San Francisco Bay Area. As required by SB 375, all metropolitan regions in California must complete an SCS as part of an RTP. This strategy integrates transportation, land use, and housing to meet GHG reduction targets set by the CARB. Plan Bay Area 2050 meets those requirements. In addition, the plan sets a roadmap for future transportation investments and identifies what it would take to accommodate expected growth. The plan neither funds specific transportation projects nor changes local land use policies.

In the San Francisco Bay Area, the MTC and ABAG adopted Plan Bay Area 2050 in October 2021. To meet the GHG reduction targets, the plan identifies four growth geographies where future growth in housing and jobs should be focused: Priority Development Areas (PDAs), Priority Production Areas, Transit-Rich Areas (TRAs), and High-Resource Areas (HRAs). The agencies estimate more than 80 percent of housing growth would take place within TRAs, nearly 30 percent would be within HRAs, and more than 60 percent of job growth would be within walking distance of high-quality transit between 2015 and 2050.[7]

4.7.2.3 Local Regulations

City of Livermore General Plan. The City's General Plan includes smart growth principles that prohibit urban uses beyond the North Livermore Urban Growth Boundary and South Livermore Urban Growth Boundary and focuses infill and mixed-use development within the city limits where there are suitable services and utilities.

> **Objective LU-2.1** Develop and phase new housing at a rate that can be absorbed by public infrastructure and in a manner that fits within Livermore's character.
>
> **Objective LU-4.2** Ensure that new development compliments its local context and minimizes impacts on the environment
>
> > **Policy P1** New development shall be designed to respect and enhance Livermore's existing development and natural environment.

City of Livermore TDC Ordinance. Chapter 3.27 of the City of Livermore Municipal Code, Transferable Development Credits In-Lieu Fee, requires any properties located within the City

[7] Growth projections do not sum to 100 percent because Priority Development Areas, Transit-Rich Areas, and High-Resource Areas are not mutually exclusive.

boundary and urban growth boundary and designated as TDC receiving areas in the general plan to exceed the designated baseline density.[8]

4.7.3 Impacts and Mitigation Measures

The following describes the potential impacts of the proposed project related to land use and planning. This section begins with the criteria of significance that establish the thresholds for determining whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as necessary.

As noted earlier, conflicts between a project and applicable policies do not constitute significant physical environmental impacts in and of themselves; as such, the proposed project's consistency with applicable policies is discussed separately from the physical land use impacts associated with the proposed project. A policy inconsistency is considered to be a significant adverse environmental impact only when it is related to a policy adopted for the purpose of avoiding or mitigating an environmental effect, and it is anticipated that the inconsistency would result in a significant adverse physical impact when evaluated against the established significance criteria. The proposed project's consistency with regional policies related to physical environmental topics (e.g., air quality, transportation, and noise) is analyzed and discussed in those topical sections of the EIR.

4.7.3.1 Significance Criteria

Implementation of the proposed project would have a significant impact related to land use and planning under the following conditions:

LU-1 Physically divide an established community.

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.

4.7.3.2 Project Impacts

The following section provides an evaluation and analysis of the potential impacts of the proposed project for each of the criteria of significance listed above and potential cumulative impacts.

LU-1 The proposed project would not physically divide an established community.

Less Than Significant Impact. The division of an established community would typically involve the construction of a barrier to neighborhood access (e.g., a new freeway segment) or the removal of a means of access (e.g., a bridge or roadway) that would impair mobility within an existing community or between a community and outlying areas. For example, the construction of an Interstate highway

[8] City of Livermore. Municipal Code Chapter 3.27, Transferable Development Credits In-Lieu Fee. Website: https://www.codepublishing.com/CA/Livermore/Municipal/Livermore03/Livermore0327.html#:~:text=The%20TDC%20program%20grants%20development,exceed%20the%20designated%20baseline%20density. (accessed May 22, 2025).

through an existing community could constrain travel from one side of the community to another. Similarly, such construction could also impair travel to areas outside of the community.

The proposed project would result in the demolition of the existing buildings and surface parking lots on the project site and would construct 15 residential buildings (Buildings 1 through 15), and two recreational/support buildings (pool equipment and clubhouse buildings).

Pedestrian access to the project site would be provided by the existing sidewalks along South Livermore Avenue, Pacific Avenue, and Dolores Street. Pedestrian access to the residential buildings would be provided by the perimeter walkway, which would connect to the community park as well, the pedestrian paseos, and pedestrian paths and sidewalks along the internal roadways.

Vehicular access to the project site would be provided via one driveway on Pacific Avenue and one driveway on Dolores Street. In addition, the proposed project would include one emergency vehicle access point from South Livermore Avenue, and two emergency vehicle access points from Dolores Street. The driveways would provide access to internal roadways that would provide vehicular access to residential uses.

The proposed project would not alter the through travel lanes on South Livermore Avenue, Pacific Avenue, or Dolores Street (which surround the site) and would not impede access to adjacent uses. Construction of the proposed project would not limit pedestrian, bicycle, or vehicular connections to the project site. Additionally, the proposed project would not result in the modification of any nearby transit centers, including the bus stop on Pacific Avenue located on the southern boundary of the project site, or restrict access to employment areas, schools, parks, or governmental services or facilities. Therefore, implementation of the project would not result in the physical division of the adjacent surrounding areas or any other established community; this impact would be **less than significant**.

LU-2 The proposed project would not 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.

Less Than Significant Impact. The City's General Plan designates land use at the project site as Neighborhood Mixed Low Density (NML). This designation is intended to help improve the pedestrian orientation of Livermore's neighborhoods by providing neighborhood commercial services within walking distance of existing residents and integrating housing with commercial development on a single site. The NML designation allows a maximum floor-area ratio of 0.3 for commercial development and allows for a baseline density of 2 to 3 dwelling units per acre, or 12 to 15 dwelling units per acre when developers choose to comply with the City's TDC Ordinance. While the proposed project would have 17 dwelling units per acre, which exceeds the designated baseline density, the proposed project would be developing under "Builder's Remedy" rights, as described below.

The Project Applicant submitted a preliminary application pursuant to Senate Bill (SB) 330 to the City to redevelop the project site with residential townhomes exclusively. This application established the Project Applicant's "Builder's Remedy" rights pursuant to the Housing Accountability Act

(Government Code Section 65589.5). If a local jurisdiction has not adopted a housing element in substantial compliance with State law, project applicants may propose eligible housing development projects that do not comply with either the zoning or general plan. Pursuant to the Housing Accountability Act, a local jurisdiction may be required to approve an eligible housing development project because it cannot make any of the five required findings contained in Government Code Section 65589.5. In July 2023, prior to the City having a certified Housing Element, the Project Applicant submitted a full application to develop the project site with 115 residential townhomes; as such, although the height of some of the buildings and the absence of commercial use is inconsistent with the project site's existing General Plan land use designation and zoning, the proposed project is allowed under the Housing Accountability Act.

As shown in **Table 4.7.A**, below, the project would comply with the following strategies set forth in *Plan Bay Area 2050*.

Table 4.7.A: ABAG Plan Bay Area 2050 Consistency Analysis

Relevant ABAG Strategies	Consistency Analysis
Housing	
Strategy H3: Allow a greater mix of housing densities and types in Growth Geographies.	**Consistent**. The proposed project consists of the construction of 15 residential buildings totaling 115 units, pool area and associated pool equipment, and clubhouse buildings totaling approximately 1,577 square feet, landscaping, paseos, guest parking, and an interior park. The proposed project would contribute multi-family housing in an area largely characterized by single-family homes, therefore diversifying types of housing densities in the surrounding area. Therefore, the proposed project is consistent with **Strategy H3,** because it would implement a greater mix of housing densities.
Strategy H6: Transform aging malls and office parks into neighborhoods.	**Consistent**. The proposed project consists of the demolition of a commercial center and the construction of 15 residential buildings and two recreational/support buildings. Therefore, the proposed project is consistent with **Strategy H6,** because it would transform an aging mall into a residential complex.

Source: Plan Bay Area 2050 (Association of Bay Area Governments. 2021).
ABAG = Association of Bay Area Governments

As shown in **Table 4.7.B**, below, the project would comply with the following City's General Plan policies.

Table 4.7.B: General Plan Consistency Analysis

Relevant General Plan Goals/Policies	Consistency Analysis
Land Use Element	
Policy LU-2.1 P2: The City shall strive to achieve a balanced relationship between residential development and commercial and industrial development to provide local employment and to realize an adequate tax base.	**Consistent.** The proposed project would demolish an under-utilized strip mall and construct 15 residential buildings and two recreational/support buildings. Construction of the proposed project would provide revenue to the city through developer fees and provide housing to better meet the city's RHNA numbers for market rate and affordable housing. Therefore, the proposed project would be consistent with **Policy LU-2.1 P1**.
Policy LU-2.1 P3: Future growth shall not exceed the community's capability to provide services. School classroom facilities, sewage treatment capacity, treated	**Consistent.** As discussed in the Initial Study prepared for the proposed project, construction of the proposed project would have a less than significant impact on the existing sewer system

Table 4.7.B: General Plan Consistency Analysis

Relevant General Plan Goals/Policies	Consistency Analysis
Land Use Element	
domestic water, public parks and recreation, and public safety services shall be the principal factors considered.	and domestic water service. In addition, the Initial Study determined that the proposed project would result in less than significant impacts to school facilities, public safety services, and public parks and recreation. Therefore, any growth induced by the proposed project would not exceed the community's capability to provide services. The proposed project would be consistent with **Policy LU-2.1 P3**.
Policy LU-4.2 P1: New development shall be designed to respect and enhance Livermore's existing development and natural environment.	**Consistent.** The Initial Study determined that the proposed project would result in less than significant impacts related to aesthetic resources. Therefore, it would be consistent with existing development in the project vicinity. In addition, the proposed project includes the demolition of an existing strip mall and the construction of residential units. Therefore, the proposed project would not impact Livermore's natural environment, because construction would take place on already disturbed land. Therefore, the proposed project would be consistent with **Policy LU-4.2 P1**.
Policy LU-4.2 P2: The use of "green construction" and land development techniques shall be encouraged as a means to reduce the environmental impacts of construction activity.	**Consistent.** As described in Section 4.4, Energy, the proposed project would be required to comply with the CalGreen Code to reduce energy consumption in residential building construction. Therefore, the proposed project would be consistent with **Policy LU-4.2 P2**.
Policy LU-4.2 P3: Encourage all additions and new development to follow green building practices for design, construction, and operation and to incorporate as many LEED TM prerequisites and credits as feasible.	**Consistent.** As described above, the proposed project would implement the standards of the CalGreen Code. Therefore, the proposed project would be consistent with **Policy LU-4.2 P3**.
Community Character Element	
Policy CC-2.1 P6: New residential, commercial, and mixed-use neighborhoods shall promote comfortable, safe, and human-scaled design, pedestrian-oriented design features, and connections to pedestrian, bikeway and site amenities shall be incorporated into these new neighborhoods	**Consistent.** As discussed in Section 4.9, Transportation, of this EIR, the proposed project would incorporate adequate pedestrian circulation throughout the project site and surrounding pedestrian facilities, including contiguous walkways within the project site that would provide pedestrian access between the street frontages and all proposed buildings and shared outdoor spaces. In addition, the proposed project would comply with the City's Active Transportation Plan by maintaining the Class II bike lane along South Livermore Avenue and providing bicycle parking facilities within the project site for residents. Therefore, the proposed project would be consistent with **Policy CC-2.1 P6**.
Circulation Element	
Policy CIR-6.2 P3: Require all residential, commercial, and industrial areas to provide efficient and safe access for emergency vehicles.	**Consistent.** As discussed in Section 4.9, Transportation, emergency response vehicles would be able to access the project site via the driveways on Pacific Avenue and Dolores Street. In addition, one Emergency Vehicle Access driveway is proposed on South Livermore Avenue and two Emergency Vehicle Access driveways are proposed on Dolores Street. Therefore, the proposed project would provide adequate access for emergency vehicles and would be consistent with **Policy CIR-6.2 P3**.

Source: General Plan (City of Livermore 2003).
CalGreen = California Green Building Standards Code
City = City of Livermore
EIR = Environmental Impact Report
project = Pacific and Livermore Avenue Townhomes Project

The project site is in central Livermore in an area primarily consisting of residential and commercial uses. The "Builder's Remedy" would not change the character of the surrounding area, and the proposed project would be compatible with land uses and zoning in the vicinity. Additionally, the potential for the proposed project to result in environmental impacts has been individually considered in all topic areas of this document, and no significant impacts would occur after implementation of mitigation. Therefore, the project would have a **less than significant impact** related to conflicts with land use plans.

4.7.3.3 Cumulative Impacts

The cumulative geographic context for land use, planning, and policy considerations for development consists of the project site in addition to the surrounding areas and uses abutting the project site. Cumulatively considerable impacts would occur if a project conflicted with an established land use policy or program adopted to avoid or mitigate an environmental effect or result in a physical division of an established community. Based on the list of cumulative projects in Section 4.0,three projects were recently approved in vicinity of the project site. However, based on the project approvals, neither would result in impacts related to land use and planning. As described above, the proposed project would have a less-than-significant impact related to land use and planning, and no mitigation measures are required.

Future development within Livermore would result in changes to the existing land use environment through the conversion of vacant land to developed uses, or through conversions of existing land uses (e.g., from residential to commercial). Cumulative development would be reviewed for consistency with adopted land use plans and policies by the City, in accordance with the requirements of the California Environmental Quality Act and planning requirements. Development of future projects proposing changes in land use would require project-specific consistency analysis to ensure that such a change would not conflict with the General Plan or Municipal Code.

Cumulative development projects would also be required to comply with the goals and policies outlined in the applicable City plans and regional plans detailed in this EIR. Construction and operation of the proposed project combined with cumulative development in accordance with the City's General Plan would not result in significant land use and planning impacts. The proposed project would be generally consistent with applicable plans, goals, policies, and regulations of the City's General Plan and Municipal Code, as well as Plan Bay Area 2050. Therefore, the cumulative impact of the proposed project with respect to future development would not be cumulatively considerable, would not result in significant land use impacts, and is, therefore, **less than significant**.

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4.8 NOISE

This section describes the environmental setting, including regulatory framework and existing conditions at the project site, and potentially significant environmental impacts of the proposed project related to noise.

4.8.1 Environmental Setting

This section describes the fundamentals of noise and vibration and describes the existing noise environment of the project site and its vicinity.

4.8.1.1 Characteristics of Sound

Noise is generally defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is the number of complete vibrations or cycles per second of a wave that results in the range of tone from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment, and it is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with instruments. The analysis of a project defines the noise environment of the project area in terms of sound intensity and its effects on adjacent sensitive land uses.

Measurement of Sound. Sound intensity is measured through the A-weighted scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale, representing points on a sharply rising curve as explained below. **Table 4.8.A** contains a list of typical acoustical terms and definitions.

Table 4.8.A: Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit of sound level that denotes the ratio between two quantities proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted, unless reported otherwise.
L_{01}, L_{10}, L_{50}, L_{90}	The fast A-weighted noise levels equaled or exceeded by a fluctuating sound level for 1 percent, 10 percent, 50 percent, and 90 percent of a stated time period.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time varying sound.

Table 4.8.A: Definitions of Acoustical Terms

Term	Definitions
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of five decibels to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L_{max}, L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources at many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Caltrans *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (Caltrans 2013), Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Manual* (2018).

A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3 dB or less are only perceptible in laboratory environments. Audible increases in noise levels generally refer to a change of 3 dB or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of noise over a sample period of time. However, the predominant rating scales for human communities in the State of California are the L_{eq}, the Community Noise Equivalent Level (CNEL), and the day-night average level (L_{dn}) based on A-weighted decibels (dBA). CNEL is the noise over a 24-hour period, with a 5 dBA increase (referred to as a "weighting factor") applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours), to recognize that people may be more sensitive to noise during those times. L_{dn} is similar to the CNEL scale, but without the adjustment for events occurring during the evening relaxation hours. CNEL and L_{dn} are within 1 dBA of each other and are normally exchangeable. The noise adjustments are added to noise events occurring during the more sensitive hours.

Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level (L_{max}), which is the highest sound level that occurs during a stated time period. The noise

environments discussed in this analysis are specified in terms of maximum levels denoted by L_{max} for short-term noise impacts. L_{max} reflects peak operating conditions and addresses the annoying aspects of intermittent noise.

Noise standards in terms of percentile exceedance levels, L_n, are often used together with the L_{max} for noise enforcement purposes. When specified, the percentile exceedance levels are not to be exceeded by an offending sound over a stated time period. For example, the L_{10} noise level represents the level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half the time the noise level exceeds this level, and half the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time. For a relatively steady noise, the measured L_{eq} and L_{50} are approximately the same.

Noise impacts can be described in three categories. The first is audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3 dBA or greater, because, as described earlier, this level of noise change has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1 and 3 dBA. This range of noise levels has been found to be noticeable only in laboratory environments. The last category is changes in noise level of less than 1 dBA that are inaudible to the human ear. A change in noise level of at least 5 dBA would be required before any noticeable change in human response would be expected, and a 10 dBA change is subjectively heard as approximately a doubling in loudness and can cause an adverse response. Only audible changes in existing ambient noise levels are considered potentially significant.

Physiological Effects of Noise. The effects of noise on people can also be described in three categories: annoyance, interference with activities such as speech or sleep, and physiological effects such as hearing loss. Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, and thereby affecting blood pressure, functions of the ear, and the nervous system. In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling.

Unwanted community effects of noise occur at levels much lower than those that cause hearing loss and other health effects. Noise annoyance occurs when it interferes with sleeping, conversation, and noise-sensitive work, including learning or listening to the radio, television, or music. According to World Health Organization noise studies, few people are seriously annoyed by daytime activities with noise levels below 55 dBA, or are only moderately annoyed with noise levels below 50 dBA.[1]

4.8.1.2 Characteristics of Ground-Borne Vibration

Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may not be discernible, but without the effects associated with the shaking of a building

[1] World Health Organization. 1999. *Guidelines for Community Noise*.

there is less adverse reaction. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as the motion of building surfaces, the rattling of items sitting on shelves or hanging on walls, or a low-frequency rumbling noise. The rumbling noise is caused by the vibration of walls, floors, and ceilings that radiate sound waves.

Typical sources of ground-borne vibration are construction activities (e.g., blasting, pile-driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with both ground-borne vibration and noise from these sources are usually localized to areas within approximately 100 feet of the vibration source, although there are examples of ground-borne vibration causing interference out to distances greater than 200 feet as detailed in the Federal Transit Administration's (FTA) 2018 Transit Noise and Vibration Impact Assessment Manual. When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. It is assumed for most projects that the roadway surface will be smooth enough that ground-borne vibration from street traffic will not exceed the impact criteria; however, construction of the project could result in ground-borne vibration that may be perceptible and annoying.

Ground-borne noise is not likely to be a problem because noise arriving via the normal airborne path will usually be greater than ground-borne noise.

Ground-borne vibration has the potential to disturb people and damage buildings. Although it is very rare for train-induced ground-borne vibration to cause even cosmetic building damage, it is not uncommon for construction processes such as blasting and pile-driving to cause vibration of sufficient amplitudes to damage nearby buildings.[2] Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS) velocity or peak particle velocity (PPV). The RMS is best for characterizing human response to building vibration, and PPV is used to characterize the potential for damage. Decibel notation acts to compress the range of numbers required to describe vibration. Vibration velocity level in decibels is defined as

$$Lv = 20 \log10 [V/Vref]$$

where "Lv" is the vibration velocity in decibels (VdB), "V" is the vibration amplitude, and "Vref" is the reference velocity amplitude, or 1×10^{-6} inches per second (in/sec) used in the United States.

4.8.1.3 Existing Noise Environment

The ambient noise environment in Livermore is affected by a variety of noise sources, including vehicle traffic, aircraft, commercial, and industrial noise. The following section describes the existing noise environment and identifies the primary noise sources in the vicinity of the project site.

Existing Traffic Noise. Motor vehicles with their distinctive noise characteristics are a major source of noise in Livermore. The amount of noise varies according to many factors, such as volume of traffic, vehicle mix (percentage of cars and trucks), average traffic speed, and distance from the observer. Traffic noise depends primarily on traffic speed (high-frequency tire noise increases with

[2] Federal Transit Administration. 2018. 2018 Transit Noise and Vibration Impact Assessment Manual.

speed) and the proportion of truck traffic, which generates engine, exhaust, and wind noise. The proximity of freeways and major streets, and the large amount of truck traffic serving commercial uses in the area make the city susceptible to traffic noise. Traffic noise at the project site is primarily associated with vehicle traffic on Pacific and Livermore avenues, Dolores Street, and the surrounding suburban streetscape.

Existing Commercial Noise. Commercial activity from the parking lots associated with commercial uses, including the existing project site and residential uses, add to the existing ambient noise environment. Truck access and loading/unloading activities at commercial uses also add to the ambient noise environment sporadically.

Existing Aircraft Noise. As regulated by Federal Aviation Regulations Part 150, 65 dBA CNEL is considered the ambient noise level above which residential and other noise-sensitive land uses (including schools, hospitals, and places of worship) are considered incompatible with airport activity. For each public airport, a noise assessment is completed to determine the extent of noise generated from daily operations, also referred to as contours. The contours act as sort of a boundary at which noise levels would be exceeded relative to the airport. The nearest airport to the project site is Livermore Airport, a

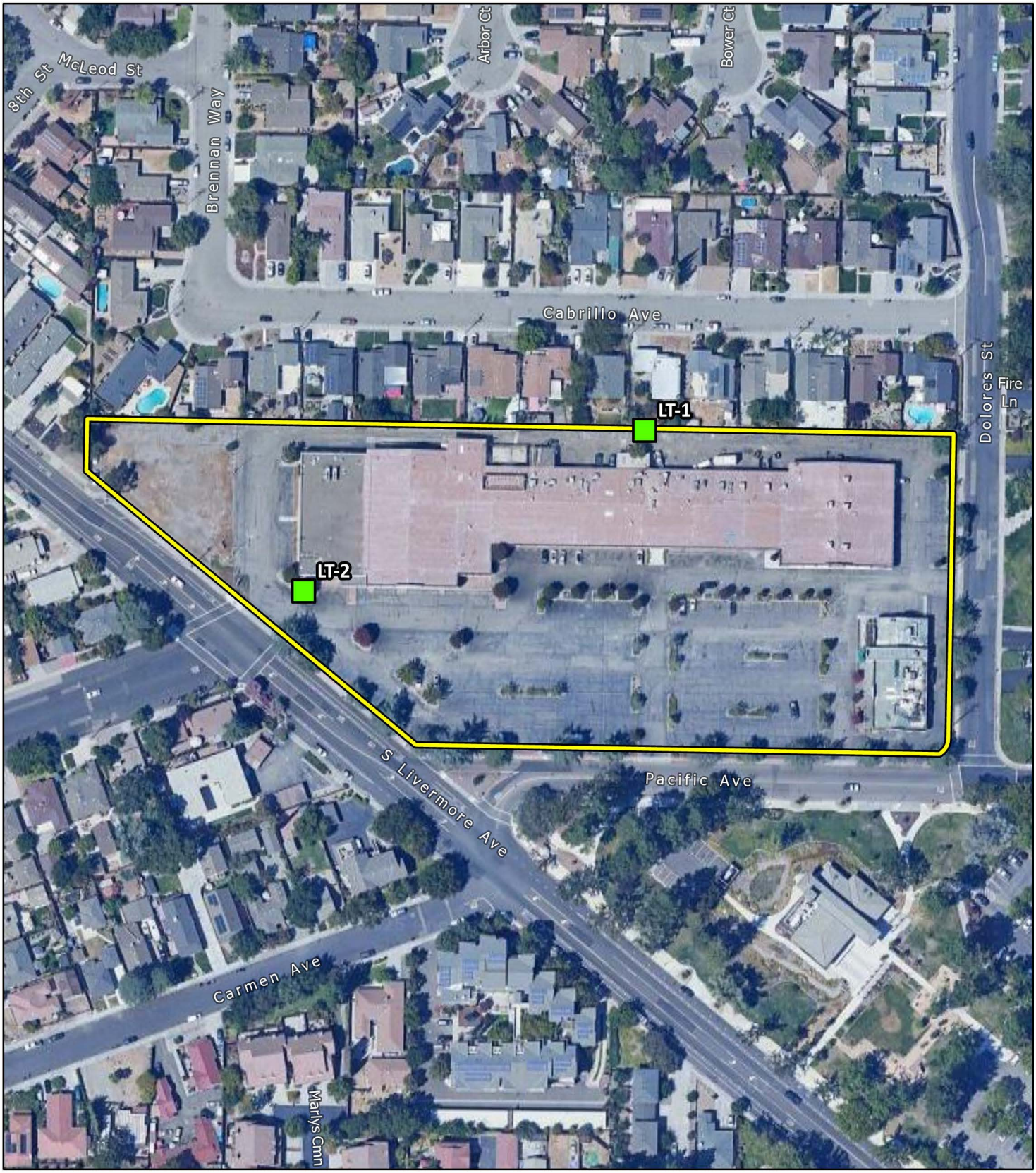
public airport approximately 4.2 miles northwest of the project site. The 55 dBA L_{dn} contour for airplane noise is more than 3 miles away from the project site, and the 65 dBA L_{dn} noise contour is within the airport property limits; hence, aviation noise exposures from this facility would be less than 65 dBA L_{dn}. The project site is also more than 25 miles from the nearest 65 dBA L_{dn} aviation noise contour of San Jose International Airport and Oakland International Airport. Although aircraft-related noise is occasionally audible on the project site, the site does not lie within the 65 dBA L_{dn} noise contours of any of these airports.

Existing Sensitive Land Uses. Certain land uses are considered more sensitive to noise than others. Examples of these include residential areas, transient lodging, educational facilities, hospitals, childcare facilities, and senior housing. The project site is surrounded by a mix of uses, including commercial, residential, open space, and institutional. Based on this understanding and for purposes of environmental review, the off-site sensitive receptors nearest to the project area or surface roadway segments likely to experience changes in noise due to the project are as follows:

- Single and Multi-Family Residences on Livermore Avenue, Pacific Avenue, Cabrillo Avenue, Carmen Avenue, Palm Avenue, 8th Street, and Dolores Street, and

- Axis Community Health Center on Pacific Avenue

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LSA

Project Location

Long-Term Noise Monitoring Locations

FIGURE 4.8-1

N

0 75 150

FEET

SOURCE: Google Maps (2024)

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Pacific and Livermore Townhomes Project

Noise Monitoring Locations

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Existing Noise Levels. To assess the existing noise conditions in the area, two long-term (24-hour) noise-level measurements were conducted on March 10 and 11, 2025, using two Larson Davis Spark 706RC Dosimeters at the project site. **Figure 4.8-1, Noise Monitoring Locations**, shows the long-term noise monitoring locations. **Table 4.8.B** provides a summary of the measured hourly noise levels and calculated CNEL level from the long-term noise level measurements as well as a brief description of the locations where the measurements were collected. As shown in **Table 4.8.B**, the calculated CNEL levels range from 56.7 dBA CNEL to 60.7 dBA CNEL. Hourly noise levels at surrounding noise-sensitive uses are as low as 42.3 dBA L_{eq} during nighttime hours and 44.7 dBA L_{eq} during daytime hours.

Table 4.8.B: Existing Noise Level Measurements

Location	Description	Daytime Noise Levels[1] (dBA L_{eq})	Evening Noise Levels[2] (dBA L_{eq})	Nighttime Noise Levels[3] (dBA L_{eq})	Daily Noise Level (dBA CNEL)
LT-1	At 3071 Cabrillo Avenue. On a utility pole, approximately 355 feet west of Dolores Street and 450 feet northeast of South Livermore Avenue.	44.7-63.1	44.7-51.1	42.3-54.3	56.7
LT-2	At 2930 Pacific Avenue. On a tree, approximately 65 feet northeast of South Livermore Avenue and 720 feet west of Dolores Street.	50.3-66.1	52.0-53.2	50.4-51.8	60.7

Source: LSA (2025).
Note: Noise measurements were conducted from March 10 to March 11, 2025, starting at 5:00 p.m.
[1] Daytime Noise Levels = noise levels during the hours of 7:00 a.m. to 7:00 p.m.
[2] Evening Noise Levels = noise levels during the hours from 7:00 p.m. to 10:00 p.m.
[3] Nighttime Noise Levels = noise levels during the hours of 10:00 p.m. to 7:00 a.m.
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
ft = foot/feet
L_{eq} = the average noise level during a specific hour
LT = long-term measurement

4.8.2 Regulatory Setting

Federal, State, and local laws, regulations, plans, or guidelines that are designed to reduce noise impacts and are potentially applicable to the proposed project are summarized below.

4.8.2.1 State Regulations

California Building Code. The California Building Code (Title 24, Part 2 of the California Code of Regulations) establishes uniform minimum noise insulation performance standards to protect persons within new buildings that house people, including hotels, motels, dormitories, apartment houses, and dwellings other than single-family dwellings. Title 24 mandates that interior noise levels attributable to exterior sources shall not exceed 45 dB L_{dn} or CNEL in any habitable room. Title 24 also requires that for structures containing noise-sensitive uses to be located where the exterior L_{dn} or CNEL exceeds 60 dB, an acoustical analysis must be prepared to identify mechanisms for limiting exterior noise to the prescribed allowable interior levels. If the interior allowable noise levels are

met by requiring that windows be kept closed, the design for the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment.

4.8.2.2 Local Regulations

City of Livermore General Plan

Goal N-1 Minimize the exposure of community residents to excessive noise.

Objective N-1.1 Establish appropriate noise levels, design standards, and noise techniques for all areas to minimize the adverse effects of noise.

Policy P3 The City shall maintain a pattern of land uses that separates noise-sensitive land uses from major noise sources to the extent possible.

Policy P4 The City shall use the Land Use Compatibility Guidelines for Exterior Noise (measured in dBA CNEL or L_{dn}) contained in General Plan Table 9-7 to direct the siting, design, and insulation of new development to reduce exposure to excessive noise. Within the 2030 Airport CNEL Noise Contours illustrated in Figure 9-2 of the General Plan, the Noise Compatibility policies contained in section 3.3.1 et. Seq. of the Livermore Airport Land Use Compatibility Plan ("ALUCP"), dated August 2012, shall apply in conjunction with citywide General Plan Noise Element policies.[3]

Policy P5 Review development proposals with respect to the Land Use compatibility Guidelines for Exterior Noise in Table 9-7 of the General Plan as follows:

(a) Normally Acceptable: If the noise level is within the "normally acceptable" level, noise exposure would be acceptable for the intended land use. Development may occur without requiring an evaluation of the noise environment unless the use could generate noise impacts on adjacent uses.

(b) Conditionally Acceptable: If the noise level is within the "conditionally acceptable" level, noise exposure would be conditionally acceptable; a specified land use may be permitted only after detailed analysis of the noise environment and the project characteristics to determine whether noise insulation or protection features are required. Such noise insulation features may include measures to protect noise-sensitive outdoor activity areas (e.g., at residences, schools, or parks) or may include building sound insulation treatments such as sound rated windows to protect interior spaces in sensitive receptors.

[3] City of Livermore. 2013. Livermore General Plan – Noise Element.

(c) Normally Unacceptable: If the noise level is within the "normally unacceptable" level, analysis and mitigation are required. Development should generally not be undertaken unless adequate noise mitigation options have been analyzed and appropriate mitigations incorporated into the project to reduce the exposure of people to unacceptable noise levels.

(d) Clearly Unacceptable: If the noise level is within the "clearly unacceptable" level, new construction or development should not be undertaken unless all feasible noise mitigation options have been analyzed and appropriate mitigations incorporated into the project to adequately reduce exposure of people to unacceptable noise levels.

Objective N-1.2 Adopt design standards and identify effective noise attenuation programs to prevent noise or reduce noise to acceptable levels.

Policy P1 When crafting mitigation programs for adverse noise from new development, the City shall encourage the use of noise attenuation programs that avoid constructing sound walls.

Policy P2 The City shall require applicants for new noise sensitive development, such as private schools, residences, and private hospitals, in areas subject to noise levels greater than 65 dBA CNEL to obtain the services of a professional acoustical engineer to provide a technical analysis and to design mitigation measures to attenuate noise to acceptable levels. Policy P3 The City shall require the control of noise at the source for new development deemed to be noise generators through site design, building design, landscaping, hours of operation, and other techniques

Policy P4 The City shall require operational limitations and feasible noise buffering for new uses that generate significant noise impacts near sensitive uses.

Policy P5 During all phases of construction, the City shall take measures to minimize the exposure of neighboring properties to excessive noise levels from construction-related activity.

Policy P8 It shall be the responsibility of new development or new land uses to be consistent with noise standards appropriate and sensitive to adjacent land uses.

Objective N-1.4 Reduce noise levels from traffic, which is the single largest continual source of unacceptable noise in the City.

Policy P2 The City shall minimize potential transportation noise through proper design of street circulation, coordination of routing, and other traffic control measures.

Policy P3 The City shall provide planned industrial areas with truck access routes separated from residential areas to the maximum feasible extent. Consider methods to restrict truck travel times in sensitive areas.

Policy P4 The City shall require exterior noise in backyards to be Normally Acceptable at a maximum of 60 dBA CNEL for single-family development and a maximum of 65 dBA CNEL for multi-family development.

Policy P5. The City will consider sound walls as a means of noise mitigation along proposed and existing roadway segments and railroad rights-of-way only after other noise attenuation programs such as building construction, larger landscaped berms, and distances have been considered to reduce noise to appropriate levels in residential areas.

Objective N-1.5 Reduce the level of noise generated by mechanical and other noise-generating equipment by means of public education, regulation, and/or political action.

Policy P1 The City shall require that industrial and commercial uses be designed and operated so as to avoid the generation of noise effects on surrounding sensitive land uses (e.g., residential, churches, schools, hospitals) from exceeding the following noise levels for exterior environments: (a) 55 dBA L50 (7:00 AM to 10:00 PM) (b) 45 dBA L50 (10:00 PM to 7:00 AM)

Policy P2 In order to allow for temporary construction, demolition or maintenance noise and other necessary short-term noise events, the stationary source noise standards in Policy N1.5.P1, above, may be exceeded within the receiving land use by: (a) 5 dBA for a cumulative period of no more than fifteen (15) minutes in any hour. (b) 10 dBA for a cumulative period of no more than five (5) minutes in any hour. (c) 15 dBA for a cumulative period of no more than one (1) minute in any hour.

Policy P3 In order to allow for temporary construction, demolition or maintenance noise and other necessary short-term noise events, the stationary noise standards in Policy N-1.5.P1, above, shall not be exceeded within the receiving land use by more than 15 dBA for any period of time.

Policy P4 The following sources of noise are exempt from the standard in Policy N-1.5.P1: motor vehicles on public streets; trains; emergency equipment, vehicles, devices, and activities; temporary construction, maintenance, or demolition activities conducted between the hours of 7:00 AM and 8:00 PM.

City of Livermore Municipal Code. Chapter 9.36 of the City of Livermore Municipal Code outlines noise regulations that govern activities in the city. Section 9.36.020 of the City's Municipal Code prohibits any person to make or continue, or cause to be made or continued, any loud, disturbing, unnecessary, unusual or habitual noise, or any noise which annoys, disturbs, injures or endangers the comfort, health, repose, peace or safety of other persons within Livermore. Noise sources from both construction and operations of the proposed project are discussed in comparison to the foregoing general standard included in the City's Municipal Code. Section 9.36.060 of the City's Municipal Code prohibits the creation of loud and excessive noise in connection with loading or unloading any vehicle or the opening and destruction of bales, boxes, crates, and containers.

Pursuant to Section 9.36.080 of the Municipal Code, operation of construction equipment is prohibited between the hours of 6:00 p.m. Saturday to 7:00 a.m. Monday; 8:00 p.m. to 7:00 a.m. on Monday, Tuesday, Wednesday, and Thursday; 8:00 p.m. Friday to 9:00 a.m. on Saturday; or at all on City of Livermore (City) observed holidays. Pursuant to Section 9.36.110, industrial areas more than 500 feet from a residential development are exempt from noise hour restrictions.

Vibration Standards. Due to the lack of vibration standards within the City's General Plan or Municipal Code, vibration standards included in the California Department of Transportation (Caltrans) Transportation and Construction Vibration Guidance Manual (2020) (Caltrans Manual) are used in this analysis for ground-borne vibration impacts, as shown in **Table 4.8.C.**

Table 4.8.C: Construction Vibration Damage Criteria

Structure / Condition	PPV (in/sec)
Extremely fragile historic buildings, ruins, ancient monuments	0.08
Fragile buildings	0.10
Historic and some old buildings	0.25
Older residential structures	0.30
New residential structures	0.50
Modern industrial / commercial buildings	0.50

Source: Table 19, *Transportation and Construction Vibration Guidance Manual* (Caltrans 2020).
in/sec = inch/inches per second
PPV = peak particle velocity

The criteria for environmental impact from ground-borne vibration and noise are based on the maximum levels for a single event. **Table 4.8.C** lists the potential vibration damage criteria associated with construction activities, as suggested in the Caltrans Manual.

Caltrans guidelines show that a vibration level of up to 0.5 in/sec in PPV is considered safe for newer residential structures and modern industrial or commercial buildings and would not result in any construction vibration damage.

4.8.3 Impacts and Mitigation Measures

The following describes the potential impacts of the proposed project related to noise. This section begins with the criteria of significance that establish the thresholds for determining whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as necessary.

4.8.3.1 Significance Criteria

Implementation of the proposed project would have a significant impact related to noise under the following conditions:

NOI-1 Generate 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 in other applicable local, state, or federal standards.

NOI-2 Generate excessive groundborne vibration or groundborne noise levels.

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

4.8.3.2 Project Impacts

NOI-1 Generate 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 in other applicable local, state, or federal standards.

Less Than Significant Impact with Mitigation Incorporated. Potential impacts related to construction noise and long-term off-site traffic noise impacts are discussed below.

Short-term Construction Noise Impacts. Short-term noise impacts would be associated with demolition of the existing commercial buildings, excavation, grading, and construction of the proposed structures. Construction-related short-term noise levels would be higher than existing ambient noise levels in the vicinity of the project site at the present time but would no longer occur once construction of the proposed project is completed.

Two types of short-term noise impacts could occur during construction of the proposed project. First, construction crew commutes and the transport of construction equipment and materials to the project site would incrementally increase noise levels on access roads leading to the site. The number of construction-related vehicle trips would be small compared to the daily traffic on surrounding roadways , therefore traffic noise would not increase by 3 dBA. A noise level increase of less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, short-term, construction-related impacts associated with worker commute and equipment transport to the project site would be **less than significant**.

In addition to the reference maximum noise level, the usage factor provided in **Table 4.8.D** is used to calculate the hourly noise level impact for each piece of equipment based on the following equation:

$$L_{eq}(equip) = E.L. + 10\log(U.F.) - 20\log\left(\frac{D}{50}\right)$$

where: $L_{eq}(equip)$ = L_{eq} at a receiver resulting from the operation of a single piece of equipment over a specified time period

E.L. = noise emission level of the particular piece of equipment at a reference distance of 50 feet

U.F. = usage factor that accounts for the fraction of time that the equipment is in use over the specified period of time

D = distance from the receiver to the piece of equipment

Table 4.8.D: Typical Maximum Construction Equipment Noise Levels (L_{max})

Type of Equipment	Acoustical Usage Factor	Suggested Maximum Sound Levels for Analysis (dBA L_{max} at 50 ft)
Air Compressor	40	80
Backhoe	40	80
Cement Mixer	50	80
Concrete/Industrial Saw	20	90
Crane	16	85
Excavator	40	85
Forklift	40	85
Generator	50	82
Grader	40	85
Loader	40	80
Pile Driver	20	101
Paver	50	85
Roller	20	85
Rubber Tire Dozer	40	85
Scraper	40	85
Tractor	40	84
Truck	40	84
Welder	40	73

Source: Highway Construction Noise Handbook (FHWA 2006).
dBA = A-weighted decibel(s)
ft = foot/feet
L_{max} = maximum instantaneous noise level

Each piece of construction equipment operates as an individual point source. Using the following equation, a composite noise level can be calculated when multiple sources of noise operate simultaneously:

$$Leq\ (composite) = 10 * \log_{10}\left(\sum_{1}^{n} 10^{\frac{Ln}{10}}\right)$$

Once composite noise levels are calculated, reference noise levels can then be adjusted for distance using the following equation:

$$Leq\ (at\ distance\ X) = Leq\ (at\ 50\ feet) - 20 * \log_{10}\left(\frac{X}{50}\right)$$

In general, this equation shows that doubling the distance would decrease noise levels by 6 dBA, while halving the distance would increase noise levels by 6 dBA.

Using the equations from the methodology above, the reference information in **Table 4.8.D**, and the construction equipment list provided, the composite noise level of each construction phase was calculated. The project construction composite noise levels at a distance of 50 feet would range from 74 dBA L_{eq} to 88 dBA L_{eq}, with the highest noise levels occurring during the site preparation phase.

Based on the information in **Table 4.8.D**, the noise level generated by the construction phases were calculated. . The combination of construction equipment during the site preparation phase would generate a composite noise level of approximately 75 dBA Leq at the nearest sensitive receptors, approximately 205 feet from the center of the site, with construction activity at 50 feet ranging from 74 to 88 dBA Leq. These predicted noise levels would only occur when all construction equipment is operating simultaneously; therefore, the noise levels are assumed , to be conservative While construction activities would be temporary and would no longer occur once construction is complete would surpass these thresholds both in magnitude and in allowable duration, construction-related noise impacts would be considered **potentially significant**. **Impact NOI-1: The proposed project would result in potentially significant impacts related to construction noise levels in excess of existing ambient noise levels in the project vicinity.**

Compliance with the allowed construction hours in the City's Noise Ordinance would ensure that construction noise does not disturb residents during typical sleeping hours or during hours when ambient noise levels are likely to be lower (i.e., at night). However, due to the proximity of sensitive receptors, without implementation of additional measures to lower potential impacts during construction, project impacts would be potentially significant. As such, **Mitigation Measure NOI-1**, shall be required.

Mitigation Measure NOI-1

Construction Noise and Vibration. Prior to issuance of grading permits, the City of Livermore (City) Director of Community Development Department, or designee, shall verify that grading and construction plans include the following requirements:

- Construction equipment, fixed or mobile, shall be equipped with properly operating and maintained noise mufflers consistent with manufacturers' standards.
- Construction staging areas shall be located away from off-site sensitive uses, including residential uses located directly north of the project site, during the later phases of project development.
- The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from noise-sensitive receptors nearest the project site.
- The construction contractor shall use on-site electrical sources to power equipment rather than diesel generators where feasible.
- A sign, legible at a distance of 50 feet, shall also be posted at the construction site. All notices and the signs shall indicate the dates and duration of construction activities, as well as provide a telephone number for the "noise disturbance coordinator."
- A "noise disturbance coordinator" shall be established by the construction contractor. The disturbance coordinator shall be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler) and shall be required to implement reasonable measures to reduce noise levels. All signs posted at the construction site shall list the telephone number for the disturbance coordinator. A report detailing noise complaints as well as actions to ameliorate disturbances shall be submitted to the City on as needed bases, but no less than every 3 months.

Implementation of **Mitigation Measure NOI-1,** as described above, would require the City of Livermore to verify that grading and construction plans include noise-reduction practices including but not limited to maximizing distance from sensitive receptors, utilizing equipment mufflers, and strategically locating staging areas, would ensure that impacts related to construction noise would be reduced to the extend feasible. Therefore, although construction noise would be higher than the ambient noise in the vicinity of the project site, it would cease

once project construction is completed, and impacts related to construction noise would be **less than significant with mitigation incorporated**.

Long-Term Off-Site Traffic Noise Impacts. The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used to evaluate traffic-related noise conditions in the vicinity of the project site. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resultant noise levels are weighted and summed over 24-hour periods to determine the CNEL values. The existing and existing plus project traffic volumes in the vicinity of the project site were obtained from the 2930 Pacific Avenue Draft Transportation Analysis.[4] **Table 4.8.E** lists the existing and existing plus project traffic noise levels adjacent to roadway segments in the project site vicinity. These noise levels represent worst-case scenarios, which assume that no shielding is provided between the traffic and the location where the noise contours are drawn.

The results indicate that the increase in noise associated with project-related traffic would be very small, up to 0.2 dBA along the road segments analyzed. These noise level increases are not perceptible by the human ear; therefore, off-site traffic noise impacts would be **less than significant**. No mitigation is required.

NOI-2 Generate excessive groundborne vibration or groundborne noise levels.

Less Than Significant Impact. Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Vibration energy propagates from a source, through intervening soil and rock layers, to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure.

Typical sources of ground-borne vibration are construction activities (e.g., pavement breaking and operating heavy-duty earthmoving equipment), rail activity, and occasional traffic on rough roads. In general, ground-borne vibration from standard construction practices is only a potential issue when within 25 feet of vibration-sensitive uses. Ground-borne vibration levels from construction activities very rarely reach levels that can damage structures; however, these levels are perceptible near the active construction site. With the exception of older buildings built prior to the 1950s or buildings of historic significance, potential structural damage from heavy construction activities rarely occurs. When roadways are smooth, vibration from traffic (even heavy trucks) is rarely perceptible.

The roadways surrounding the project site, including Pacific Avenue and South Livermore Avenue, and the existing driveways, are paved, smooth, and unlikely to cause significant ground-borne vibration. In addition, the rubber tires and suspension systems of buses and other on-road vehicles make it unusual for on-road vehicles to cause ground-borne noise or vibration problems. It is, therefore, assumed that no such vehicular vibration impacts would occur and, therefore, no vibration impact analysis of on-road vehicles is necessary.

[4] Hexagon Transportation Consultants. 2023. 2930 Pacific Avenue Draft Transportation Analysis.

Table 4.8.E: Traffic Noise Levels Without and With Proposed Project

Roadway Segment	Background		Background With Project			Cumulative		Cumulative With Project		
	ADT	CNEL (dBA) 50 feet from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 feet from Centerline of Nearest Lane	Increase from background Conditions	ADT	CNEL (dBA) 50 feet from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 feet from Centerline of Nearest Lane	Increase from Cumulative Conditions
Fourth Street West of Livermore Avenue	14,410	65.0	14,580	65.0	0.0	18,700	66.1	18,870	66.2	0.1
Fourth Street East of Livermore Avenue	4,960	60.4	4,970	60.4	0.0	6,440	61.5	6,450	61.5	0.0
Livermore Avenue North of Fourth Street	8,270	62.6	8,300	62.6	0.0	10,730	63.7	10,760	63.7	0.0
Livermore Avenue South of Fourth Street	18,000	66.0	18,210	66.0	0.0	23,370	67.1	23,580	67.1	0.0
Palm Avenue West of Livermore Avenue	480	50.2	490	50.3	0.1	620	51.3	630	51.4	0.1
Pacific Avenue between Livermore Avenue and Dolores Street	2,870	56.9	2,990	57.0	0.1	3,720	58.0	3,840	58.1	0.1
Pacific Avenue East of Dolores Street	1,610	54.4	1,610	54.4	0.0	2,090	55.5	2,090	55.5	0.0
Dolores Street North of Pacific Avenue	2,640	58.1	2,760	58.3	0.2	3,430	59.3	3,550	59.4	0.1
East Avenue West of Dolores Street	16,270	65.5	16,210	65.5	0.0	21,140	66.7	21,080	66.6	-0.1
East Avenue East of Dolores Street	17,910	65.9	17,890	65.9	0.0	23,240	67.1	23,220	67.1	0.0

Source: Compiled by LSA (2025).
Note: Traffic noise within 50 feet of the roadway centerline should be evaluated with site-specific information.
Shaded cells indicate roadway segments adjacent to the project site.
ADT = average daily traffic
CNEL= Community Noise Equivalent Level
dBA = A-weighted decibels

Construction Vibration Impacts. Construction of the proposed project could result in the generation of ground-borne vibration. This construction vibration impact analysis discusses the potential for building damage using vibration levels in PPV (in/sec) because vibration level in PPV is best used to characterize potential for damage. Caltrans' Guidelines show that a vibration level of up to 0.5 in/sec in PPV is considered safe for newer residential structures and modern industrial or commercial buildings and would not result in any construction vibration damage.

Table 4.8.F shows the PPV values at 25 feet from a construction vibration source. As shown in **Table 4.8.F**, bulldozers and other heavy-tracked construction equipment generate approximately 0.089 in/sec PPV of ground-borne vibration when measured at 25 feet, based on the Caltrans Manual.

Table 4.8.F: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV (in/sec) at 25 ft
Pile Driver (Impact), Typical	0.644
Pile Driver (Sonic), Typical	0.170
Vibratory Roller	0.210
Hoe Ram	0.089
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer	0.003

Source: *Transportation and Construction Vibration Guidance Manual* (California Department of Transportation 2020).
ft = foot/feet
in/sec = inches per second
L_V = velocity in decibels
PPV = peak particle velocity

Construction activities for the proposed project are expected to include the use of bulldozers and loaded trucks. The greatest levels of vibration are anticipated during the foundation preparation phase. All other phases are expected to result in lower vibration levels.

The distance to the nearest buildings for the vibration impact analysis is measured between the nearest off-site buildings and the project site boundary (assuming the construction equipment would be used at or near the project site boundary) because vibration impacts occur normally within buildings. The formula for vibration transmission is provided below.

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

For typical construction activity, the equipment with the highest vibration generation potential is the large bulldozer, which would generate 0.089 PPV in/sec at 25 feet. The closest surrounding buildings to the project site include existing residential uses approximately 10 feet north of the edge of the project site. The residential building would experience vibration levels of up to 0.352 in/sec PPV. This vibration level at the nearest building from construction equipment would not exceed the Caltrans threshold of 0.5 in/sec PPV for building damage. Therefore, impacts would be **less than significant**, and no mitigation is required.

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

Less than Significant Impact. The nearest airport to the project site is Livermore Airport, a small public airport located approximately 4.2 miles northwest of the project site. The 55 dBA L_{dn} contour for airplane noise is more than 3 miles away from the project site, and the 65 dBA L_{dn} noise contour is within the airport property limits; hence, aviation noise exposures from this facility would be less than 65 dBA L_{dn}. The project site is also more than 25 miles from the nearest 65 dBA L_{dn} aviation noise contour of San Jose International Airport and Oakland International Airport. Although aircraft-related noise is occasionally audible on the project site, the site does not lie within the 65 dBA L_{dn} noise contours of any of these airports, and therefore project impacts would be **less than significant**.

4.8.3.3 Cumulative Impacts

As defined in the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and reasonably foreseeable probable future projects. A cumulative noise or vibration impact would occur if multiple sources of noise and vibration combine to create impacts close to a sensitive receptor. Therefore, the cumulative area for noise and vibration impacts is the project site and any sensitive receptors in the immediately surrounding area. Based on the list of cumulative projects in Section 4.0, three projects were recently approved in vicinity of the project site. However, based on the project approvals, none would result in impacts related to noise.

Construction Noise. Construction activities associated with the proposed project and other construction projects in the area may overlap, resulting in construction noise in the area. However, construction noise impacts primarily affect the areas immediately adjacent to each construction site. Construction noise for the proposed project was determined to be **less than significant with mitigation**. Cumulative development in the vicinity of the project site could result in elevated construction noise levels at sensitive receptors in the area surrounding the project site. However, the proposed project would be required to implement **Mitigation Measure NOI-1**, which would reduce potential construction related noise impacts on nearby sensitive receptors to a **less than significant** level, and other nearby projects would be required to comply with Chapter 9.36, Noise, of the City's Municipal Code. Specifically, pursuant to Section 9.36.080, operation of loud construction equipment would be prohibited between the hours of 6:00 p.m. Saturday to 7:00 a.m. Monday; 8:00 p.m. to 7:00 a.m. Monday through Thursday; 8:00 p.m. Friday to 9:00 a.m. Saturday, and all city-observed holidays.[1] Therefore, cumulative construction noise impacts would be **less than significant with mitigation incorporated.**

Operational Traffic Source Noise Impacts. According to the United States Environmental Protection Agency, cumulative noise impacts represent the combined and incremental effects of human

[1] City of Livermore. City of Livermore Municipal Code. Chapter 9.36, Noise. Website: https://www.codepublishing.com/CA/Livermore/Municipal/Livermore09/Livermore0936.html? (accessed August 11, 2025).

activities that accumulate over time. Although the incremental impacts may be insignificant by themselves, the combined effect may result in a significant impact. Conversely, although there may be a significant noise increase due to the proposed project in combination with other related projects (combined effects), it must also be demonstrated that the project has an incremental effect. In other words, a significant portion of the noise increase must be due to the proposed project.

As previously shown in **Table 4.8.E**, above, project-related traffic for the Cumulative With Project Traffic Volumes would result in noise level increases between 0.0 to 0.2 dBA CNEL along roadway segments in the vicinity of the project site. These levels are below the significance criteria for off-site traffic noise. Therefore, none of the roadway segments in the vicinity of the project site would experience a substantial noise level increase greater than the applicable noise thresholds. As such, cumulative traffic noise impacts would be **less than significant**.

Operational Stationary Source Noise. Long-term stationary noise sources associated with the development of the proposed project, combined with other cumulative projects, could cause local noise level increases. Noise levels associated with the proposed project and related projects together could result in higher noise levels than considered separately. As previously described, on-site noise sources associated with the proposed project would not exceed any applicable noise standards. Additionally, each of the related projects would be required to comply with the City's noise level standards and include mitigation measures if standards are exceeded. Therefore, cumulative noise impacts from stationary noise sources would be **less than significant**.

4.9 TRANSPORTATION

This section describes the environmental setting, including regulatory framework and existing conditions at the project site, and potentially significant environmental impacts of the proposed project related to transportation.

4.9.1 Environmental Setting

An overview of existing transportation conditions in the region and in Livermore is discussed below.

4.9.1.1 Existing Roadway Network

Interstate 580. Interstate 580 (I-580) is an east-west freeway with four mixed-flow lanes and two express lanes in the eastbound direction, and four mixed-flow lanes and one express lane in the westbound direction within the project vicinity. I-580 provides regional access from Marin County and the East Bay cities in Alameda County to San Joaquin County, where it merges with Interstate 5. Access to the project study area is provided via its interchange with North Livermore Avenue.

Local access to the site is provided on South Livermore Avenue and Pacific Avenue. Other roadways in the study area include East Avenue, Fourth Street, and Dolores Street. These roadways are described below.

South Livermore Avenue is primarily a two-lane, north-south arterial roadway that begins at Railroad Avenue and continues south past Concannon Boulevard, where it becomes Tesla Road. North of Railroad Avenue, it continues as North Livermore Avenue with four lanes and has a full interchange with I-580. North of I-580, it continues as a two-lane roadway up to Manning Road. South Livermore Avenue is adjacent to the project site and provides direct access to the project site via an existing driveway that is directly opposite Palm Avenue.

Pacific Avenue is primarily a two-lane, east-west roadway that begins at South Livermore Avenue and continues east and ends in a cul-de-sac approximately 1,800 feet east of the project site. Pacific Avenue is adjacent to the project site and would provide primary access to the proposed townhomes via a new driveway. There are no speed limit signs on Pacific Avenue. On-Street parking is generally permitted on both sides of the street, except along the frontage of the project site.

East Avenue is primarily a four-lane, east-west arterial roadway that begins at South Livermore Avenue and continues east past Vasco Road to Greenville Road. East Avenue is designated as a major street between South Livermore Avenue and Vasco Road in the City of Livermore General Plan. The posted speed limit on East Avenue is 30 mph. Parking is generally permitted on both sides of East Avenue in the project vicinity.

Fourth Street is primarily a four-lane, east-west arterial roadway that begins at Holmes Street and continues east to Inman Road. Fourth Street is designated as a major Street in the City of Livermore General Plan. The posted speed limit on Fourth Street is 30 mph. Parking is generally permitted on both sides of the street.

Dolores Street is primarily a two-lane, north-south roadway that begins at Pacific Avenue and extends north to East Avenue. A secondary access for the proposed project's residential townhouse neighborhood would be provided on Dolores Street. There are no speed limit signs on Dolores Street. On-street parking is generally permitted on both sides of the street.

4.9.1.2 Existing Pedestrian and Bicycle Facilities

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. In the project vicinity, sidewalks are provided on both sides of South Livermore Avenue, Pacific Avenue, Dolores Street, and East Avenue. Crosswalks with pedestrian signal heads and pushbuttons are provided at the signalized intersection of South Livermore Avenue and Fourth Street and the signalized intersection of South Livermore Avenue and East Avenue. In the immediate vicinity of the project, crosswalks are provided on all approaches at the unsignalized intersection of South Livermore Avenue and Palm Avenue.

According to the Alameda County Transportation Commission (ACTC) Bicycle Plan and the City of Livermore Active Transportation Plan, there are several designated bikeways within the vicinity of the project site. Bicycle facilities in Livermore can be categorized into different classifications: Class I multi-use trail, Class II bike lane, Class III bike route and Class IV bike boulevard. Class I multi-use trails have a separate right of way exclusive for bicycles and pedestrians. Class II bike lanes are dedicated pavement within a roadway with striping and signage separating bicyclists from motorists. Class III bike routes are roadways where the travel lane is wide enough for both bicycles and vehicles and have low traffic volume. While no Class IV bike boulevards are designated in the City, they are considered bike routes with additional modifications intended to provide cyclists with a higher level of comfort and safety.[1] Designated bicycle facilities are provided along segments of the following roadways in the study area:

- The existing Class I Arroyo Mocho Trail is a part of a network of multi-use trails in Livermore and links with Pleasanton. The trail provides access to neighborhoods, schools, parks, the business district and municipal facilities. Some sections are immediately adjacent to high-traffic streets, while other segments follow a paved route along the arroyo, removed from traffic. In the vicinity of the project site, the Arroyo Trail can be accessed from the east end of Pacific Avenue, approximately 1,800 feet east of the project site.

- South Livermore Avenue has Class II bicycle lanes in both directions south of Fifth Street.

- East Avenue is designated as a Class III bike route between South Livermore Avenue and the Robert Livermore Community Center and has Class II bicycle lanes in both directions between the Robert Livermore Community Center and Greenville Road.

[1] City of Livermore. Bicycle, pedestrian, & trails Active Transportation Plan. June 11, 2018. Website: https://www.livermoreca.gov/home/showpublisheddocument/4529/637229929948370000 (accessed August 20, 2025).

4.9.1.3 Existing Transit Services

Existing transit service to the study area is provided by the Livermore-Amador Valley Transit Authority (LAVTA). Bus stops within the vicinity of the project site are along Pacific Avenue, Dolores Street, and East Avenue. LAVTA bus lines with stops within the study area include Route 14 (Local) and Route 30R (Rapid).

Local Route 14 provides transit service between the East Dublin/Pleasanton Bay Area Rapid Transit (BART) Station and the Livermore Transit Center with 30- to 45-minute headways during peak hours. The bus stops closest to the project site are along the project frontage on Pacific Avenue and Dolores Street.

The Rapid Route 30R provides service between West Dublin/Pleasanton BART and Sandia Laboratory between 5:07 a.m. and 10:51 p.m. with headways of 15-minutes during the peak hours. The bus stops closest to the project site are on East Avenue near Dolores Street.

4.9.2 Proposed Project Transportation Network Improvements

South Livermore Avenue: The existing driveway on South Livermore Avenue would be converted to provide pedestrian access for residents of the project site, and an Emergency Vehicle Access (EVA) driveway would be constructed on Livermore Avenue at the northwest corner of the proposed project site. Livermore Avenue south of I-580 has been designated as a major street and north of I-580 has been designated as an intercounty route, per the City of Livermore General Plan. The speed limit on South Livermore Avenue, near the project site is 30 miles per hour (mph). On street parking is generally permitted on both sides of the street along South Livermore Avenue, except on the east side between Pacific Avenue and Palm Avenue. As part of the proposed project, a Rectangular Rapid Flashing Beacon (RRFB) would be installed at the crosswalk on the north side of the intersection of Palm and South Livermore Avenues, and the southern crossing would be removed. Parking on the west side of Livermore Avenue would continue to be permitted, while parking on the east side would no longer occur.

Dolores Street: The proposed project would include two additional emergency vehicle access points from Dolores Street.

Pedestrian Facilities: Due to existing and projected traffic volumes, a Rectangular Rapid Flashing Beacon (RRFB) would be installed as part of the proposed project at the crosswalk on the north side of the intersection of Palm and South Livermore Avenues, and the southern crossing would be removed.

Bicycle Facilities: The proposed project would remove the existing driveway on South Livermore Avenue and the associated left turn lane and parking spaces. This space would be re-purposed to provide a buffer for the existing Class II bike lane

Transit Facilities: As part of the proposed project, LAVTA determined that an approved bus shelter would need to be installed at the westbound transit stop located on Pacific Avenue.

4.9.3 Regulatory Setting

Federal, State, and local laws, regulations, plans, or guidelines that are designed to reduce transportation impacts and are potentially applicable to the proposed project are summarized below.

4.9.3.1 State Regulations

California Department of Transportation. The California Department of Transportation (Caltrans) is responsible for the maintenance and operation of State routes and highways. In Livermore, Caltrans facilities include I-580 and State Route 84.

Caltrans released a VMT-Focused Transportation Impact Study Guide[2] that recommends use of the OPR recommendations for land use projects and plans.

Senate Bill 375. As a means to achieve the statewide emission reduction goals set by Assembly Bill (AB) 32 ("The California Global Warming Solutions Act of 2006"), SB 375 ("The Sustainable Communities and Climate Protection Act of 2008") directs the California Air Resources Board (CARB) to set regional targets for reducing GHG emissions from cars and light trucks. Using the template provided by the State's Regional Blueprint program to accomplish this goal, SB 375 seeks to align transportation and land use planning to reduce VMT through modified land use patterns. There are five basic directives of the bill: (1) creation of regional targets for GHG emission reduction tied to land use; (2) a requirement that regional planning agencies create a Sustainable Communities Strategy (SCS) to meet those targets (or an Alternative Planning Strategy if the strategies in the SCS would not reach the target set by CARB); (3) a requirement that regional transportation funding decisions be consistent with the SCS; (4) a requirement that the Regional Housing Needs Allocation numbers for municipal general plan housing element updates must conform to the SCS; and (5) CEQA exemptions and streamlining for projects that conform to the SCS. The implementation mechanism for SB 375 that applies to land use in Livermore is Plan Bay Area 2050.[3]

Senate Bill 743.SB 743 was signed into law in 2013 and fundamentally changed the way transportation impacts under CEQA are analyzed. It required OPR to "prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed revisions to the [CEQA] guidelines …establishing criteria for determining the significance of transportation impacts of projects" to "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses."

On December 28, 2018, the Natural Resources Agency adopted *State CEQA Guidelines* Section 15064.3, which establishes specific criteria for evaluating a project's transportation impacts and states that "vehicle miles traveled is the most appropriate measure of transportation impacts." It gives agencies the "discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per

[2] California Department of Transportation (Caltrans). 2020. VMT-Focused Transportation Impact Study Guide. May 20.

[3] Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC). 2018. *Plan Bay Area Projections 2040*. Website: http://projections.planbayarea.org/ (accessed May 23, 2024).

household or in any other measure" provided that "[a]ny assumptions used to estimate vehicle miles traveled… should be documented and explained in the environmental document prepared for the project." Section 15064.3 further states that except for certain transportation projects, "a project's effect on automobile delay shall not constitute a significant environmental impact." See *Citizens for Positive Growth & Preservation v. City of Sacramento* (2019) 43 Cal. App. 5th 609, 626 (holding that a general plan's impact on LOS, which effectively measures automobile delay, can no longer constitute a significant environmental impact).

Additionally, OPR issued a technical advisory memorandum in December 2018 that includes general guidance and information for lead agencies to use in implementing SB 743, including choosing VMT methodology and establishing VMT thresholds. Lead agencies were given until July 1, 2020 to implement methodologies and thresholds related to VMT to comply fully with SB 743.

4.9.3.2 Regional Regulations

Metropolitan Transportation Commission. The Metropolitan Transportation Commission (MTC) is responsible for planning, coordinating, and financing transportation projects in the nine-county Bay Area. The local agencies that comprise these nine counties help the MTC prioritize projects based on need, feasibility, and conformance with federal and local transportation policies. In addition to coordinating with local agencies, the MTC distributes State and federal funding through the Regional Transportation Improvement Program.

Metropolitan Transportation System. The Metropolitan Transportation System is a regionally significant network of roadways, transit routes, and facilities identified by the MTC. The MTS provides a consistent system of critical transportation facilities to monitor, plan for, and fund. MTS Roadways include all freeways and state highways, principal arterials, and major local arterials designated as vital to regional mobility and goods movement. Local Congestion Management programs often utilize MTS in planning efforts.

Plan Bay Area 2050. Plan Bay Area 2050 is a State-mandated, integrated long-range transportation and land use plan. As required by SB 375, all metropolitan regions in California must complete an SCS as part of a Regional Transportation Plan. This strategy integrates transportation, land use, and housing to meet GHG reduction targets set by the CARB. Plan Bay Area 2050 meets those requirements. In addition, the plan sets a roadmap for future transportation investments and identifies what it would take to accommodate expected growth. The plan neither funds specific transportation projects nor changes local land use policies.

In the Bay Area, the MTC and the Association of Bay Area Governments (ABAG) adopted Plan Bay Area 2050 in October 2021. To meet the GHG reduction targets, the plan identifies four Growth Geographies where future growth in housing and jobs should be focused: Priority Development Areas, Priority Production Areas, Transit-Rich Areas, and High-Resource Areas. The agencies estimate more than 80 percent of housing growth would take place within Transit-Rich Areas, nearly

30 percent would be within High-Resource Areas, and more than 60 percent of job growth would be within walking distance of high-quality transit between 2015 and 2050.[4]

4.9.3.3 Local Regulations

Alameda County Congestion Management Program. Pursuant to state legislation, ACTC (formerly the Alameda County Congestion Management Agency) has been required to update the Congestion Management Plan (CMP) every 2 years since 1991. The CMP is a technical document that describes strategies and procedures to measure the performance of the County's multimodal transportation system, address roadway congestion and improve the performance of a multimodal system, and connect transportation and land use. The CMP is aligned with other long-range planning efforts including the Countywide Transportation Plan and the 2040 Regional Transportation Plan and Sustainable Communities Strategy (Plan Bay Area 2040). The CMP specifically describes strategies to monitor and improve the performance of every mode of travel in Alameda County, which includes monitoring congestion, transit performance, bicycle and pedestrian activity throughout Alameda County, and major new land use developments. ACTC also maintains a countywide travel model in compliance with the 2040 Regional Transportation Plan and Sustainable Communities Strategy (Plan Bay Area 2040), and CMP legislation. Current CMP legislation is in conflict with SB 743. CMP legislation requires use of a delay-based metric, LOS, to measure roadway performance. However, recently amended CEQA guidelines based on SB 743 require VMT as the primary metric for traffic impacts. ACTC is evaluating strategies to resolve this legislative conflict.

Alameda CMP Transportation Impact Analysis Technical Guidelines The CMP Transportation Impact Analysis (TIA) Technical Guidelines were developed in tandem with the CMP in 2017. The Guidelines provide standardized methodology for evaluating how new development projects affect the county's CMP roadway and transit network. Projects that are subject to the CMP TIA Technical guidelines include those which could potentially impact the CMP roadway network, or those which generate more than a specified number of peak hour trips. The CMP TIA Technical Guidelines provide methodologies for project trip generation and types of impacts and impact assessment for autos, transit, bicycles, pedestrians, and other impacts and opportunities for Alameda County.

Alameda County Transportation Commission. The ACTC is a joint powers authority that plans, funds, and delivers transportation programs and projects that expand access and improve mobility within Alameda County. As discussed above, VMT procedures, standards, methodology, and implementation guidelines were adopted by the ACTC in July 2020. The ACTC guidelines include a screening process that describes five scenarios in which a project would be exempted from a VMT analysis requirement:

1. Projects exempt from CEQA analysis
2. Small projects
3. Local serving projects

[4] Note: Growth projections do not sum to 100 percent because Priority Development Areas, Transit-Rich Areas, and High-Resource Areas are not mutually exclusive.

4. Projects in transit priority areas
5. Projects in low VMT areas

It should be noted that even if a project satisfies one or more of the screening criteria, lead agencies may still require a VMT analysis if there is evidence that the project has characteristics that might lead to a significant amount of VMT.

Under the ACTC VMT methodology, a low VMT area is defined as a city or unincorporated portion within one of the ACTC subregions where home-based VMT per resident is at least 15 percent below the countywide average for a residential project, or where the commute VMT per employee is at least 15 percent below the regional average for an office project. A conservative reading of the methodology would indicate that when the citywide average VMT per resident is above the countywide average, projects cannot be screened out based on location, and a VMT analysis must be completed. In such cases, the appropriate significance thresholds based on countywide or regional average would be applied. The methodology also permits the applicable average VMT for the subject municipality or unincorporated ACTC subregion to be utilized instead of the countywide or regional average, if it is less stringent. Under ACTC guidelines, an office project would have a significant impact on VMT if it would generate employee VMT per employee higher than 85 percent of the Alameda County average.

ACTC also serves as Alameda County's congestion management agency. The most relevant plans, including the Alameda Countywide Transportation Plan and the Alameda County Congestion Management Plan, are discussed below.

Alameda County East Planning Area The Alameda East County Planning area encompasses the cities of Livermore, Dublin, and Pleasanton. The Alameda County Transportation Commission includes VMT Tables and Maps which outline VMT per Capita in different Alameda Areas based on the Alameda Countywide Travel Demand Model. As Livermore is located within the Alameda County East Planning Area, the VMT per Capita from the Alameda County East Planning Area is used in this analysis.

Alameda Countywide Transportation Plan. In November 2020, the ACTC adopted the 2020 Countywide Transportation Plan (CTP) along with the Community-Based Transportation Plan and the New Mobility Roadmap.[5] The CTP establishes near-term priorities and guides long -term decision-making for the ACTC. The CTP establishes a vision for Alameda County's complex transportation system that supports vibrant and livable communities. The CTP is updated every 4 years and serves as a key input into the region's transportation plan, Plan Bay Area. The 2020 CTP covers transportation projects, policies, and programs out to the year 2050 for Alameda County.

City of Livermore General Plan. The relevant goals, objectives, and policies from the adopted City of Livermore General Plan related to transportation are presented below.

[5] Alameda County Transportation Commission. 2020. Countywide Transportation Plan. Website: https://www.alamedactc.org/planning/countywidetransportationplan (accessed May 8, 2025).

Goal CIR-1 Provide safe, efficient, comfortable, and convenient mobility for all users.

Objective CIR-1.3 Make Complete Streets practices a routine part of everyday operations.

Policy P1 The City shall incorporate Complete Streets into all planning, funding, design, approval, and implementation processes for any construction, reconstruction, retrofit, expansion, maintenance, operations, alteration, or repair of streets.

Policy P3 The City shall approach transportation projects, programs, and practices as opportunities to improve streets and the transportation network for all categories of users.

Policy P5 The City shall consider Complete Streets when adopting or amending the General Plan, Specific Plans, Zoning Ordinances, Master Plans, or the Capital Improvement Program.

Goal CIR-2 Promote multi-modal transportation.

Objective CIR-2.3 Provide a bicycle, pedestrian, and trails network.

Policy P1 Develop a comprehensive bikeway and trails system as a viable alternative to the automobile for all trip purposes in order to maximize the number of daily trips made by non-motorized means for residents of all abilities.

Policy P2 Consider bicycle, pedestrian, and equestrian access in all aspects of City Planning and coordinate with other agencies to improve non-motorized access within the City of Livermore and to surrounding regional areas and facilities.

Policy P3 Provide related facilities and services necessary to allow bicycle and pedestrian travel to assume a significant role as a local alternative mode of transportation.

Policy P4 Improve the safety of bicyclists and pedestrians by educating all Livermore residents about bicycle and pedestrian safety and by enforcing bicycle and motorist laws and regulations effecting bicycle and pedestrian safety. Increase bicycle and pedestrian mode share by increasing public awareness of benefits of bicycling and walking and of the available bike and trail facilities and programs.

Policy P5 Maintain all roadways and multi-use trails so that they provide safe and comfortable bicycling, walking, and equestrian conditions.

Policy P6 Implement a bikeway system with community input on the priorities and with a minimal impact on the environment.

Objective CIR-2.4 Provide a pedestrian network that encourages walking for transportation and recreation.

Policy P1 The City shall ensure the safe and convenient movement of pedestrians throughout the City and within neighborhoods.

Policy P2 The City's design guidelines for public and private facilities shall aid and encourage pedestrian activity.

Policy P3 The City shall require development to meet the requirements of the Americans with Disabilities Act to further facilitate the mobility of persons with accessibility needs.

Goal CIR-3 Identify and develop a circulation system consistent with the Land Use Element.

Objective CIR-3.1 Plan, manage, and develop the local circulation system to support the Land Use Element.

Policy P1 The City shall consider the impacts to the existing and proposed circulation system when considering changes in land use.

Policy P2 Development projects shall be reviewed for impacts on the adjacent circulation system. Identified impacts shall be addressed and mitigated to the greatest extent feasible.

Policy P3 High traffic-generating land uses shall be located along or close to major streets.

Goal CIR-4 Provide a local roadway system for the safe, efficient, and convenient movement of vehicular traffic.

Objective CIR-4.1 The City shall provide adequate road linkages throughout Livermore.

Policy P1 The City shall maximize the carrying capacity of major streets by providing a well-coordinated traffic/signal control system, controlling the number of intersections and driveways, limiting residential access points, and requiring sufficient off-street parking.

Policy P2 The City shall ensure that adequate roadway connections are provided between areas north of I-580 and areas south of I-580.

Policy P3 The City shall pursue and protect adequate right-of-way to accommodate future circulation system improvements.

Policy P4 The City shall provide neighborhoods and commercial areas with adequate freeway access.

Goal CIR-6 Protect neighborhood quality and community character through circulation planning.

Objective CIR-6.2 Plan and maintain the circulation system to prevent or minimize environmental impacts.

Policy P1 Require local roadway improvements to minimize adverse land use, air quality, noise, community appearance, health, safety, vegetation and wildlife, drainage, and other environmental impacts.

Policy P2 The City shall evaluate the effects on transportation systems of public utility improvements, including extensions of underground pipelines and overhead transmission lines and associated utility rights-of-way.

Policy P3 Require all residential, commercial, and industrial areas to provide efficient and safe access for emergency vehicles.

Goal CIR-10 Provide adequate safe and convenient short- and long-term vehicle and bicycle parking for all land uses in the City.

Objective CIR-10.1 Minimize spillover vehicle parking impacts by ensuring adequate parking enforcement and requiring sufficient parking for new development.

Policy P1 The City shall ensure that new developments provide adequate safe and convenient short and long-term parking.

Objective CIR-10.3 Strive to expand bicycle parking facilities throughout the City.

Policy P1 On- and off-street bicycle parking facilities should be provided near destinations for all bicycle users, including commuters, residents, shoppers, students, and others.

Goal CIR-11 Support goods movement within the City.

Objective CIR-11.2 Minimize adverse impacts to residents or businesses from rail and truck traffic.

Policy P1 No through truck traffic shall be allowed in residential areas

Livermore Active Transportation Plan. Adopted in 2018, the Livermore Active Transportation Plan includes policies guiding new development projects to include trail and bikeway and pedestrian facilities to facilitate on-site circulation for non-motorized modes of travel. In 2024, the City adopted an Interim Update to the Active Transportation Plan. The Active Transportation Plan also guides the implementation of connections to the bikeways and trails system from all existing and future transit facilities, stations, and terminals in Livermore; safe and efficient off-street and on-street crossings of I-580 that make logical connections to the bikeways and trails; and connections between school/work/public facility areas to residential areas.

4.9.4 Impacts and Mitigation Measures

The following describes the potential impacts of the proposed project related to transportation. This section begins with the criteria of significance that establish the thresholds for determining whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as necessary.

Until July 1, 2020, roadway congestion or level of service (LOS) was used as the primary study metric for planning and environmental review of development projects in California. However, Senate Bill (SB) 743 required the Governor's Office of Planning and Research (OPR) (now the California Office of Land Use and Climate Innovation) to establish a new metric for identifying and mitigating transportation impacts pursuant to the California Environmental Quality Act (CEQA) to meet the State's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through more active transportation. OPR identified vehicle miles traveled (VMT) as the required CEQA transportation metric, and beginning July 1, 2020, VMT (not LOS) is the only legally acceptable threshold for transportation-related environmental impacts pursuant to CEQA.

VMT is a measure of the total amount of vehicle travel occurring on a given roadway system. VMT is a metric that accounts for the number of vehicle trips generated and the length or distance of those trips. For analysis purposes, VMT refers to automobile VMT, specifically passenger vehicles and light trucks; heavy truck traffic is typically excluded. VMT does not directly measure traffic operations; instead, VMT is a measure of transportation network use and efficiency, especially when expressed as a function of population (i.e., VMT per capita). As a result of SB 743, passed in 2013, local jurisdictions may not rely on vehicle LOS and similar measures related to delay as the basis for determining the significance of transportation impacts under CEQA. Thus, consistent with the *State CEQA Guidelines*, VMT is the primary metric used to identify transportation impacts to roadway systems within this chapter. Although the City of Livermore (City) has not adopted VMT procedures or standards, methodology and implementation guidelines were adopted by the ACTC (Alameda County Transportation Commission) in July 2020. As such, the VMT analysis prepared for the proposed project has been estimated based on ACTC estimates of VMT per Capita, as described below.

4.9.4.1 Significance Criteria

Implementation of the proposed project would have a significant impact related to transportation under the following conditions:

TRA-1 Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;

TRA-2 Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b);

TRA-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);

TRA-4 Result in inadequate emergency access.

4.9.4.2 Project Impacts

The following section provides an evaluation and analysis of the potential impacts of the proposed project for each of the criteria of significance listed above and potential cumulative impacts.

TRA-1 Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;

Less Than Significant Impact. As discussed in more detail below, the proposed project would be required to comply with applicable plans, ordinances, and policies that address the circulation system. In addition, Section 4.7, Land Use and Planning, of this EIR, evaluates the proposed project's consistency with applicable planning policies, including those that regulate transportation and the circulation system. As discussed in Section 4.7, the proposed project would use "Builder's Remedy" rights pursuant to the Housing Accountability Act (Government Code Section 65589.5), allowing the applicant to develop housing inconsistent with the existing land use and zoning on the project site. However, the proposed project would still be required to comply with all General Plan policies and other regulations related to transportation and circulation, as described below. Pursuant to Policy P2 of Objective CIR-3.1, a Transportation Analysis was prepared for the proposed project in June of 2023, and in May of 2025, the continued validity of that study was confirmed. The *2930 Pacific Avenue Transportation Analysis* **(Appendix I)** outlines transportation impacts related to construction and operation of the proposed project. Therefore, the proposed project would be consistent with applicable plans, ordinances, and policies that address the circulation system; and impacts would be **less than significant**.

Transit. As previously discussed, LAVTA provides transit service adjacent to and in the vicinity of the project site. According to the Transportation Analysis prepared for the proposed project, public transportation trips comprise approximately 3.2 percent of the total commute mode share in Livermore. The proposed project would result in one new transit trip during peak commute hours. The addition of one new transit trip would not cause a significant degradation in transit operations, therefore, the proposed project would not substantially impact transit operations, or be inconsistent with the *Alameda County Congestion Management Program (CMP) Transportation Impact Analysis Technical Guidelines.*[6] The proposed project would not include features that would disrupt existing or planned transit routes or facilities, such as road closures or relocation of transit stops, and would construct a new LAVTA approved bus shelter at the westbound transit stop along Pacific Avenue. In addition, the proposed project driveways would not cause disruptions to existing or planned transit service or transit stops located on Pacific Avenue and Dolores Street. Therefore, the proposed project would not conflict with any adopted transit system plans, guidelines, policies, or standards and impacts to transit facilities would be **less than significant**.

Roadway System. Under existing conditions, the project site is surrounded by South Livermore Avenue to the west, Pacific Street on the south, Dolores Street on the east, and existing

[6] Alameda County Transportation Commission. CMP Transportation Impact Analysis Technical Guidelines. 2017. Website: https://www.alamedactc.org/wp-content/uploads/2018/11/CMP_AppendixJ_TIA_TechGuidelines_2017.pdf (accessed August 20, 2025).

residential development on the north. Main vehicular access to the proposed project would be provided via a full -access unsignalized driveway on Pacific Avenue, while secondary access would be provided on the east side of the project site on Dolores Street. The proposed project would not include any changes to the roadway system.

Pursuant to SB 743, transportation impacts related to vehicle delay or LOS are no longer considered significant environmental impacts in the City. Therefore, conflicts with a program, plan, ordinance, or policy related to the roadway system would be considered significant if the project exceeded the applicable VMT threshold of significance. According to the *Transportation Analysis* prepared for the proposed project, VMT for the proposed project based on Traffic Analysis Zone estimates from the Alameda Countywide Travel Demand Model is 24.43, which is below the threshold of 25.93 VMT per capita for the Alameda County East Planning Area.[7] Therefore, VMT generated by the proposed project would result in a **less than significant impact.**

The ACTC, as part of the Alameda County CMP, requires the assessment of development-driven impacts on Metropolitan Transportation System Roadways.[8] The proposed project would generate approximately 138 daily trips, net new daily trips, including 111 net new trips during the a.m. peak hour and 828 fewer trips during the p.m. peak hour , compared to existing uses on the project site. As the proposed project would result in fewer than 100 peak -hour trips, an Alameda County CMP analysis was not required.

Because project implementation would not result in a significant VMT impact or conflict with the Alameda County CMP and would comply with all required City regulations, the proposed project would not conflict with an applicable plan, ordinance, or policy governing the roadway system and impacts would be **less than significant**.

Bicycle and Pedestrian Facilities. Under existing conditions, there are several designated bikeways within the vicinity of the project site. The City includes Class I, Class II, and Class III bike routes, including the Arroyo Mocho Trail, a Class I pedestrian and bicycle network, Class II lanes on South Livermore Avenue, and Class III bike routes on East Avenue. As part of the proposed project, the vehicular entrance to the project site on South Livermore Avenue would be closed and street parking would be removed on the east side of the street. This space would be re-purposed to provide a buffer for the existing Class II bike lane.

The proposed project would incorporate adequate pedestrian circulation throughout the project site and surrounding pedestrian facilities, including installing an RRFB at the crosswalk located on the north side of the intersection of Palm and South Livermore Avenues. In addition to sidewalks along South Livermore Avenue, Pacific Avenue, and Dolores Stret, the site plan

7 Alameda County Transportation Commission. Vehicle Miles Traveled Per capita East Planning Area. May 2019. Website: https://www.alamedactc.org/wp-content/uploads/2020/06/VMT_per_Capita_East_Planning_Area.pdf (accessed August 20, 2025).

8 Alameda County Transportation Commission. Congestion Management Program. Website: https://www.alamedactc.org/wp-content/uploads/2018/11/CMP_02_Designated_CMP_Roadway_Network_2017.pdf?utm_source=chatgpt.com (accessed August 20, 2025).

includes continuous walkways within the project site that would provide pedestrian access between the street frontages and all proposed buildings and shared outdoor spaces.

The proposed project would generate pedestrian trips from residents and guests of residents who work within walking distance of the project site or who are traveling to or from transit stops or to other nearby destinations like schools and Downtown Livermore. However, the volume of pedestrian trips generated by the project is expected to be relatively low and would not exceed the carrying capacity on existing nearby pedestrian facilities. In addition, the proposed project would provide bicycle parking facilities within the project site.

The proposed project would implement Policy P2 and P3 of Objective CIR-2.3, Policy P2 of Objective CIR-2.4, and Policy P1 of Objective CIR-10.3 of the City's General Plan Circulation Element, which would ensure that the proposed project considers bicycle, pedestrian, and equestrian access, provides related facilities and services necessary to allow bicycle and pedestrian travel to assume a significant role as a local alternative mode of transportation, complies with the City's design guidelines for public and private facilities to aid and encourage pedestrian activity, and provide on- and off-street bicycle parking facilities near destinations for all bicycle users.

With adherence to the above General Plan objectives and policies, no inconsistencies with adopted bicycle or pedestrian system plans, guidelines, or policy standards would occur, and potential impacts related to bicycle and pedestrian facilities would **less than significant**.

TRA-2 Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b);

Less Than Significant Impact. Based on the significance thresholds adopted by the City, impacts related to VMT would be considered significant if the project would generate greater than 15 percent below the Alameda County East Planning Area Year 2020 average of 30 VMT per capita, which calculates to a VMT per capita of 25.9. The VMT estimates for the proposed project, as estimated by the ACTC Model, is 24.43, below the per capita average. Therefore, the proposed project would have a **less than significant impact** on VMT.

TRA-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);

Less Than Significant Impact with Mitigation. For purposes of CEQA, transportation-related hazards refer to engineering aspects of a project (e.g., speed, turning movements, complex designs, substantial distance between street crossings, sight lines) that may cause a greater risk of collisions that result in serious or fatal physical injury than a typical project. This analysis focuses on hazards that could reasonably stem from the project, beyond collisions that may result due to unsafe drivers or collisions that could not be prevented by design of the circulation system.

Impact TRA-3: The proposed project could potentially increase hazards related to inadequate site access and circulation.

As the proposed project would include changes to site access it could create potentially hazardous conditions and the impact would be potentially significant. Therefore, the proposed project would be required to implement **Mitigation Measure TRA-1** outlined below:

Mitigation Measure TRA-1 The proposed project would be required to adopt the recommendations outlined in the Transportation Analysis prepared for the proposed project including:

- Include 25 feet of red curb to the west and 50 feet of red curb to the east of the driveway on Pacific Avenue and 20 feet of red curb to the south of the driveway on Dolores Street.
- Include a turnaround space for residential guests at the end of the parking aisle in the southeast corner of the project site, adjacent to the EVA access on Dolores Street.
- Provide a minimum of eight short-term bicycle parking spaces for guests in well-lit, highly visible locations on site.

Additionally, the proposed project would be required to comply with the Caltrans *Highway Design Manual* as well as all safety and hazard requirements of the City of Livermore General Plan, including Policy P3 of Objective CIR-6.2, which would require the proposed project to provide efficient and safe access for emergency vehicles. As discussed above in TRA-1, the proposed project would install an RRFB at the crosswalk located on the north side of the intersection of Palm and South Livermore Avenues, which would improve pedestrian safety at this intersection. Implementation of project-specific recommendations outlined in **Mitigation Measure TRA-1** and compliance with applicable regulations would ensure that implementation of the proposed project would not substantially increase hazards due to design features or incompatible uses. Impacts related to increased hazards due to a geometric design feature or incompatible use would be **less than significant with mitigation.**

TRA-4 Result in inadequate emergency access.

Less Than Significant Impact. As discussed in Section 4.6, Hazards and Hazardous Materials, there are multiple emergency response and -evacuation related plans that apply to the city, including the General Plan's Public Safety and Circulation Element. The proposed project would not obstruct designated emergency evacuation routes in the area of the project site and would not alter or interfere with any critical facilities. Refer to Section 4.9, Hazards and Hazardous Materials, for further discussion of potential impacts associated with impairing implementation or physically interfering with an adopted emergency response plan or emergency evacuation plan.

Emergency response vehicles would be able to access the project site via the driveways on Pacific Avenue and Dolores Street. In addition, one Emergency Vehicle Access driveway is proposed on South Livermore Avenue, and two emergency vehicle access driveways are proposed on Dolores Street. In accordance with the California Fire Code, the project applicant is required to design, construct, and maintain structures, roadways, and facilities to maintain appropriate emergency/evacuation access to and from the project site. All site access points and driveways

would be designed and constructed to adequate widths for public safety pursuant to the Livermore Pleasanton Fire Department (LPFD). Site design and compliance with standard and emergency LPFD and City requirements, such as the size and location of fire access routes and fire truck turning radii, would allow for proper site evacuation, if necessary, during project operations. Therefore, the project would not result in inadequate emergency access during project operation, impacts would be **less than significant**, and no mitigation is required.

4.9.4.3 Cumulative Impacts

Less Than Significant Impact with Mitigation Incorporated. This section discusses potential cumulative impacts to the transportation and circulation network in the surrounding area. As discussed in this section, the proposed project, in combination with cumulative projects, would have a **less than significant impact** with respect to conflicts with applicable plans, VMT, design features, and emergency access.

Conflicts with Applicable Plans, Ordinances, or Policies. The proposed project and other future development in the project vicinity would be required to comply with existing regulations, including General Plan policies that have been adopted to minimize impacts related to transportation and circulation. Therefore, the proposed project, in combination with cumulative projects, would have a **less than significant impact** with respect to conflicting with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities.

Vehicle Miles Traveled. Consistent with the OPR Technical Advisory on Evaluating Transportation Impacts under CEQA, a project's cumulative impacts are based on an assessment of whether the "incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." A project that falls below an efficiency-based threshold that aligns with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. As previously mentioned, the proposed project would not result in any impacts related to VMT. Therefore, the proposed, in combination with cumulative projects, would have a **less than significant impact** with respect to VMT.

Design Features or Incompatible Uses. Overall, cumulative land use development and transportation projects would promote accessibility for people walking to and through the project site by conforming to General Plan policies and zoning regulations, and by adhering to planning principles that emphasize providing convenient connections and safe routes for people walking, bicycling, driving, and taking transit. As with current practice, the proposed project and cumulative projects would be required to pay development impact fees including Parks Facilities Fees and a Traffic Impact Fee on Development to minimize any potential impacts to transportation by offsetting potential costs with funding for public improvements. Additionally, the proposed project would be required to implement **Mitigation Measure TRA-1**, which would reduce project impacts related to a geometric hazard or incompatible use to a less than significant level. As a result, the cumulative projects would not generate activities that would increase hazards due to a design feature or incompatible use. For these reasons, the proposed project, in combination with cumulative projects, would have a **less than significant impact** related to cumulative impacts with respect to design features or incompatible uses.

Emergency Access. Future development as part of the City's project approval process would be required to comply with existing regulations, including General Plan policies and zoning regulations that have been prepared to minimize impacts related to emergency access. Furthermore, the implementation of the local regulations would help to minimize traffic congestion that could impact emergency access. The proposed project would be designed to provide adequate emergency access. For these reasons, the proposed project, in combination with cumulative projects, would have a less than significant cumulative impact with respect to emergency access.

Based on the information in this transportation section and for the reasons stated above, development of the proposed project would not contribute to any significant adverse cumulative transportation impacts when considered together with other cumulative development, and this impact would be **less than significant**.

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4.10 TRIBAL CULTURAL RESOURCES

This section describes the environmental setting, including regulatory framework and existing conditions in the project site, and potentially significant environmental impacts of the proposed project related to tribal cultural resources.

4.10.1 Environmental Setting

The prehistoric and historical context of the project area is discussed below.

4.10.1.1 Prehistoric and Historical Background

As described in Section 4.3, Cultural Resources, cultural resources in the City of Livermore's General Plan planning area are associated with the Livermore-Amador Valley's prehistoric past, the Spanish and Mexican periods, and the civic and agricultural development of Livermore. The City of Livermore (City) prepared a Historic Resources Survey Update in March 2021 that determined that a total of 30 properties were identified to be eligible for individual listing in the National Register of Historic Places and California Register of Historical Resources.

The Livermore-Amador Valley was initially occupied by native Californians between 6,000 and 12,000 years ago. The area's earliest inhabitants are referred to by archaeologists as "Paleoindians". Paleoindian groups were the first humans to enter California and subsisted primarily on big game and, to a minimal extent, processed plant foods. The Paleo-Archaic-Emergent cultural sequence developed by David Fredrickson at the University of California, Davis, Department of Anthropology, is commonly used to interpret the prehistoric occupation of Central California. The sequence is broken into the following three broad periods:

- The Paleoindian period (8,000 to 6,000 B.C.) began with the first entry of people into California. Such people probably subsisted mainly on big game, and to a lesser extent, on plant foods, with few or no trade networks. Current research, however, indicates more plant processing, trading, and sedentism occurred in the period than previously thought.

- The Archaic period (Lower Archaic, 6,000 to 3,000 B.C.; Middle Archaic, 3,000 to 500 B.C.; and Upper Archaic, 500 B.C. to 1000 A.D.) is characterized by increased use of plant foods, elaboration of burial and grave goods, and increasingly complex trade networks.

- The Emergent period (1,000 to 1,800 A.D.) is marked by the introduction of the bow and arrow, the ascendance of wealth-linked social status, and the elaboration and expansion of trade networks, signified in part by the appearance of clam disc bead money.

Pursuant to the General Plan Environmental Impact Report[1], the descendants of the native groups who lived in the Livermore area prefer to be called Ohlone, although they are often referred to by the name of their linguistic group, Costanoan. The General Plan planning area is within the former

[1] City of Livermore. 2003. Livermore Draft General Plan and Downtown Specific Plan Environmental Impact Report (SCH No. #2003032038). June.

territories of the Ssoam, Luecha, and Pelnen tribelets, three of approximately 40 Ohlone tribes that existed in the Bay Area prior to European settlement in the region.

According to the Cultural Resources Studies prepared for the Surface Mining Permit (SMP) 39 and 40 sites, as identified in the cultural resources background search, early occupants appear to have had an economy based largely on hunting with limited exchange, and social structures based on the extended family unit. Milling technology and an inferred acorn economy were later introduced, with the foregoing diversification of the economy appearing concurrently with the development of sedentism, population growth, and expansion. Sociopolitical complexity and status distinctions based on wealth are also observable in the archaeological record, as evidenced by an increased range and distribution of trade goods (e.g., shell beads, obsidian tool stone), possible indicators of both status and increasingly complex exchange systems. Prehistoric archaeological site indicators expected to be found in the region include, but are not limited to, obsidian and chert flakes and chipped stone tools; grinding and mashing implements, such as slabs, hand-stones, and mortars and pestles; and locally darkened midden soils containing some of the previously listed items, plus fragments of bone, shellfish, and fire -affected stones.

4.10.1.2 Ethnographic Overview

Linguists and ethnographers tracing the evolution of languages have found that most of the indigenous languages of the California region belong to one of five widespread North American language groups: the Hokan and Penutian phyla and the Uto-Aztecan, Algic, and Athabaskan language families. The distribution and internal diversity of four of the foregoing groups suggest that their original centers of dispersal were outside, or peripheral to, the core territory of California, which is the Central Valley, the Sierra Nevada, the Coast Range from Cape Mendocino to Point Conception, and the Southern California coast and islands. Only languages of the Hokan phylum can plausibly be traced back to populations inhabiting parts of the aforementioned core region during the Archaic period, and hints of connections between certain branches of Hokan, such as that between Salinan and Seri, suggest that at least some of the Hokan languages could have been brought into California by later immigrants, primarily from the U.S. Southwest and northwestern Mexico.

Linguistic evidence shows that, between 10,000 and 4,000 years ago, inhabitants in the area were Pre-Hokan speakers and that by 6,000 years ago, Hokan languages had developed in the San Francisco Bay Area. Penutian (Utian) speakers have been hypothesized to have begun migration into the Bay Area from the lower Sacramento Valley approximately 4,000 years ago, establishing themselves in the East Bay Area. Proto-Costanoan people were also hypothesized to have originated in the East Bay Area, whereas early Costanoans are thought to have spread to the peninsula by approximately 3,200 years ago.

The Ohlone/Costanoan were hunter-gatherers who lived in rich environments that allowed for dense populations with complex social structures. They settled in large, permanent villages, in which seasonal camps and task-specific sites were distributed. Permanent villages were occupied throughout the year and satellite sites were visited to procure particular resources that were especially abundant or only seasonally available. Sites were often near fresh water sources and in ecotones where plant life and animal life were diverse and abundant. Between 1777 and 1797,

Spanish missionaries established seven missions in Costanoan territory, disrupting Costanoan lifeways and cultural identities and decimating the population. The Costanoan population is estimated to have declined from 10,000 in 1770 to fewer than 2,000 in 1832 as new diseases were introduced, leading to higher mortality rates and lower birth rates.

4.10.1.3 Project Site

The project site was undeveloped from 1906 to 1941, set within an orchard or vineyard by 1953, and built to its existing condition by 1968. Today, the project site consists of a parking lot and two single-story, multi-unit commercial buildings constructed in 1960 and remodeled in 1975–1977 on four assessor's parcels comprising a total of 6.54 acres. The western portion of the project site is an undeveloped triangular area that, until circa 1993, contained a gasoline filling station that fronted South Livermore Avenue.

The project site was the subject of a record search, literature review, and field survey. No trace of intact or disturbed midden, or any other conclusively prehistoric cultural materials have been identified on the site, in current or past studies. On March 27, 2025, a record search request was submitted to the Northwest Information Center for the project area and a 0.25-mile area around the project. According to this record search, no previous studies or resources were recorded from the project area or its vicinity, but three previous surveys were conducted outside of the 0.25-mile radius area. According to the pedestrian field survey conducted on March 18, 2025, the undeveloped triangular parcel on the project site exhibited a low growth of weeds with 80–95 percent ground visibility. Sediment was observed to be mainly gravel, concrete pieces, small rocks, and recent trash including small pieces of glass, metal, plastic, and paper.

On February 10, 2025, LSA requested a search of the Sacred Lands File (SLF) by the Native American Heritage Commission (NAHC). On February 13, 2025, the NAHC replied, stating that no tribal cultural resources were known from the project area of vicinity. The NAHC provided a list of 26 Native American contacts for additional information and consultation purposes. Per Assembly Bill (AB) 52, letters requesting participation in consultation were then sent to various Native American contacts using the list provided by the NAHC with the results of the SLF search.

4.10.2 Regulatory Setting

Federal, State, and local government laws, regulations, plans, or guidelines that are designed to protect significant tribal cultural resources and are potentially applicable to the proposed project are summarized below.

4.10.2.1 State Regulations

The following State regulations, related to tribal cultural resources that would be applicable to the project, are described below.

California Health and Safety Code Section 7050.5. California Health and Safety Code Section 7050.5 states that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the Coroner of the county in which the

remains are discovered has determined whether or not the remains are subject to the Coroner's authority. If the human remains are of Native American origin, the County Coroner must notify the NAHC within 24 hours of this identification. The NAHC will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Public Resources Code Section 5097.5. Section 5097.98 of the Public Resources Code (PRC) states that the NAHC, upon notification of the discovery of Native American human remains pursuant to Health and Safety Code Section 7050.5 (discussed above), shall immediately notify those persons (i.e., the MLD) it believes to be descended from the deceased. With permission of the landowner or a designated representative, the MLD may inspect the remains and any associated cultural materials and make recommendations for treatment or disposition of the remains and associated grave goods. The MLD shall provide recommendations or preferences for treatment of the remains and associated cultural materials within 48 hours of being granted access to the site. See also *State CEQA Guidelines* Section 15064,5(d) and (e).

Assembly Bill 52 Tribal Consultation. California PRC Sections 21080.3.1 and 21080.3.2 and Chapter 532, Statutes 2014 (i.e., AB 52), require that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment. AB 52, specifically PRC Section 21080.3.1(d), requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project, if the tribe requested the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation, prior to determining whether an Environmental Impact Report (among other types of environmental documents) is required for a project. The bill specifies examples of mitigation measures that may be considered to avoid or minimize impacts on tribal cultural resources. The bill makes the above provisions applicable to projects that have a Notice of Preparation filed on or after July 1, 2015. By requiring the lead agency to consider these effects relative to tribal cultural resources and to conduct consultation with California Native American tribes, this bill imposes a State-mandated local program.

4.10.2.2 Local Regulations

City of Livermore General Plan. The relevant goals, policies, and actions from the adopted City of Livermore General Plan related to cultural and tribal cultural resources are presented below.

> **Goal CC-3** Preserve and enhance the City's cultural and historic resources not merely as positive reminders of the past, but also as relevant and unique alternatives for the present and the future – a source of community identity, architecture, and social, ecological and economic vitality.
>
> > **Objective CC-3.1:** Establish and maintain a comprehensive, Citywide preservation program.
> >
> > > **Policy P2** The City shall encourage, and when possible require, the preservation of places, sites, areas, buildings, structures, and works of humans which have cultural,

archaeological, or historical significance or other special distinction to the community.

Objective CC-3.4: Identify and protect archaeological and paleontological resources that enrich our understanding of early Livermore and the surrounding region.

Policy P1 The City shall require proper archaeological or paleontological testing, research, documentation, monitoring, and safe retrieval of archaeological and cultural resources as part of a City established archaeological monitoring and mitigation program.

Policy P2 Whenever there is evidence of an archaeological or paleontological site within a proposed project area, an archaeological survey by qualified professionals shall be required as a part of the environmental assessment process.

Policy P3 If an archaeological site is discovered during construction, all work in the immediate vicinity shall be suspended pending site investigation by qualified professionals. If, in the opinion of a qualified professional, the site will yield new information or important verification of previous findings, the site shall not be destroyed.

Policy P4 Archaeological sites should be preserved for research and educational programs. Where possible, such sites shall be made accessible to the public as part of the open space/recreation/educational system.

4.10.3 Impacts and Mitigation Measures

The following describes the potential impacts of the proposed project related to tribal cultural resources. This section begins with the criteria of significance that establish the thresholds for determining whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as necessary.

4.10.3.1 Significance Criteria

Implementation of the proposed project would have a significant impact related to tribal cultural resources under the following conditions:

TCR-1 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:

i) 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);

ii) 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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

4.10.3.2 Project Impacts

The following section provides an evaluation and analysis of the potential impacts of the proposed project for each of the criteria of significance listed above and potential cumulative impacts.

TCR-1 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:

i) 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);

ii) 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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less Than Significant Impact with Mitigation Incorporated. As previously mentioned, a request to search the SLF by the NAHC was submitted on February 10, 2025. On February 13, 2025, the NAHC replied stating that no tribal cultural resources were known from the project area or vicinity. The NAHC also provided a list of 26 Native American contacts for additional information and consultation purposes. Pursuant to AB 52, on March 31, 2025 the City sent an email describing the project with a map to each of the 26 listed Native American contacts for purposes of AB 52 consultation. The following responses were received:

- On April 1, 2025, a response was received from the Cultural Preservation Department of Wilton Rancheria acknowledging receipt of the March 31 email.

- On April 3, 2025, a response was received from Richard Massiatt, Councilmember and Most Likely Descendant Tribal Representative of the Muwekma Ohlone Tribe of the San Francisco Bay Area thanking the City for the notification and stating that the tribe was interested in conducting consultation on the proposed project.

- On April 9, 2025, a response was received from Lucy Gill of the Confederated Villages of Lisjan Nation, who also thanked the City for the notification and requested consultation on the project. Ms. Gill also requested a copy of the NAHC SLF search results, the results of the record search,

copies of any other cultural resource reports prepared for the proposed project, and any specific information concerning proposed project ground disturbance. This information was provided to Ms. Gill and the Lisjan Nation on August 19, 2025. On September 5, 2025, an additional response was received from Ms. Gill requesting that mitigation measures regarding the inadvertent discovery of tribal cultural resources or human remains be incorporated into the project, and that the Lisjan Nation be notified if any resources are discovered.

- On April 16, 2025, a response was received from Ed Ketchum of the Amah Mutsun Tribal Band, stating that the subject property was outside of their traditional territory and suggesting the City contact the Muwekma Tribal Band's representatives.

As discussed above, even though no trace of intact or disturbed midden, or any other conclusively prehistoric cultural materials have been identified on the project site, -ground disturbing activities associated with the proposed project have the potential to uncover unknown archaeological resources.

Impact TCR-1: The proposed project could potentially impact tribal cultural resources through unknown discovery of tribal cultural resources.

The proposed project would be required to comply with **Mitigation Measure CUL-1** and **Mitigation Measure CUL-2**, which would ensure that impacts to any archaeological resources or human remains discovered during project-related ground disturbing activities would be reduced to **a less than significant** level.

Mitigation Measure CUL-1 Unknown Archaeological Resources. In the event that archaeological resources are discovered during excavation, grading, or construction activities, work shall cease within 50 feet of the find until a qualified archaeologist has evaluated the find in accordance with federal, State, and local guidelines to determine whether the find constitutes a "unique archaeological resource," as defined in Section 21083.2(g) of the California Public Resources Code (PRC). The Applicant and its construction contractor shall not collect or move any archaeological materials and associated materials. Construction activity may continue unimpeded on other portions of the project site. Any found deposits shall be treated in accordance with federal, State and local guidelines, including those set forth in PRC Section 21083.2, and shall be assessed, handled, and treated consistent with accepted standards, such as the Secretary of the Interior's standards and guidelines for archaeology and historic preservation. Prior to commencement of grading activities, the Director of the City of Livermore (City) Community Development Department, or designee, shall verify that all project grading and construction plans include specific requirements regarding California PRC (Section 21083.2[g]) and the treatment of archaeological resources as specified above.

Mitigation Measure CUL-2 Cultural Resources Monitoring and Accidental Discovery, Human Remains. In the event that human remains are encountered on the project site, work within 50 feet of the discovery shall be redirected and the County Coroner notified immediately consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e). State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which shall determine and notify a Most Likely Descendant (MLD). With the permission of the property owner, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the City of Livermore shall consult with the MLD as identified by the NAHC to develop an agreement for treatment and disposition of the remains. Prior to the issuance of grading permits, the Director of the City of Livermore Community Development Department, or designee, shall verify that all grading plans specify the requirements of CCR Section 15064.5(e), State Health and Safety Code Section 7050.5, and PRC Section 5097.98, as stated above.

4.10.3.3 Cumulative Impacts

Potential impacts of the proposed project, including any actions required for the conceptual development project, to unknown tribal cultural resources, when combined with other past, current, and reasonably foreseeable projects in Livermore and on land traditionally used by culturally affiliated tribes, could contribute to a cumulatively significant impact due to the overall loss of tribal cultural resources in the region. However, each development proposal received by the City is required to undergo individual environmental review pursuant to the California Environmental Quality Act (CEQA), including AB 52 outreach. Furthermore, impacts of other projects on tribal cultural resources are generally site-specific because they result from ground disturbing activities that would require a site-specific impact analysis to determine the nature and extent of the resources and identify appropriate mitigation measures that would reduce or avoid significant impacts. Based on the list of cumulative projects in Section 4.0, three projects were recently approved in vicinity of the project site. However, based on the project approvals, none would result in impacts related to tribal cultural resources. Thus, there is no potential for the proposed project to contribute to a significant cumulative impact associated with the significance of a tribal cultural resource pursuant to California Code of Regulations Section 15064.5.

Similar to the proposed project, ground disturbance associated with cumulative projects could result in potentially significant impacts on previously unidentified tribal cultural resources and associated human remains that may be unearthed. However, impacts on resources that may be inadvertently discovered during implementation of these projects would be mitigated to less than significant levels with appropriate mitigation measures. Proposed projects in the area would also be required to comply with the City's General Plan Policies that reduce impacts to tribal cultural resources. Collectively, recent past, approved, and probable future projects that may occur in the vicinity—including the proposed project—would not result in a cumulative increase in impacts on tribal cultural resources or human remains, because these resources would be avoided or otherwise removed, analyzed, and reported (i.e., by a qualified archaeologist). In addition, through required tribal consultation, additional mitigation measures for ensuring tribal cultural resources are not significantly impacted would also be developed and prescribed on a project-specific basis.

In most cases, this environmental review and compliance with project conditions of approval and relevant policies of the General Plan would ensure that significant impacts on tribal cultural resources would be avoided or otherwise mitigated to less-than-significant levels. Based on the information in this section and in Section 4.3, Cultural Resources, and for the reasons summarized above, the proposed project would not contribute to significant adverse cumulative impacts related to tribal cultural resources when considered together with other cumulative development. Therefore, this cumulative impact would be **less than significant**.

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5.0 ALTERNATIVES

The California Environmental Quality Act (CEQA) (Public Resources Code [PRC], Section 21000 et seq.) and the *State CEQA Guidelines* (California Code of Regulations [CCR], Title 14, Section 15000 et seq.) require that an Environmental Impact Report (EIR) "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" (*State CEQA Guidelines* Section 15126.6(a)). If mitigation measures or a feasible project alternative that would meet most of the basic project objectives would substantially lessen the significant environmental effects of a proposed project, then the lead agency should not approve the proposed project unless it determines that specific technological, economic, social, or other considerations make the mitigation measures and the project alternative infeasible (PRC Section 21002, *State CEQA Guidelines* Section 15091(a)(3)). The EIR must also identify alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and should briefly explain the reasons underlying the lead agency's determination (*State CEQA Guidelines* Section 15126.6(c)).

This chapter describes alternatives to the proposed project and compares the impacts of the alternatives to the environmental impacts of the proposed project as proposed, consistent with the guidance in *State CEQA Guidelines* Section 15126.6(d). At the conclusion of the analysis, the environmentally superior alternative is identified (*State CEQA Guidelines* Section 15126.6(e)(2)). One of the alternatives that must be analyzed is the "No Project" Alternative. The purpose of the No Project analysis is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. CEQA states that an EIR should not consider alternatives "whose effect cannot be ascertained and whose implementation is remote and speculative."

5.1 PROJECT OVERVIEW

As described in detail in Chapter 3.0, Project Description, the Pacific and Livermore Townhomes Project (project) would:

1. Result in the demolition of two existing commercial buildings on the project site.

2. Construct 15 residential buildings totaling 115 units and two recreational/support buildings (pool equipment and clubhouse buildings), landscaping, parking, paseos, and an interior park.

3. Utilize the "Builder's Remedy" established in Senate Bill 330 (SB 330).

5.2 METHODOLOGY FOR SELECTION OF ALTERNATIVES

5.2.1 Potential Feasibility

As required by *State CEQA Guidelines Section* 15126.6(a), an EIR is required to, "describe a range of reasonable alternatives to the project." Section 15126.6(f)(1) explains that project alternatives must be feasible and meet most of the basic objectives of the project as follows:

> Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

While an EIR must contain a discussion of "potentially feasible" alternatives, the ultimate determination on feasibility of alternatives is determined by the lead agency's decision-making body, here the .Planning Commission. As a result, the EIR only concludes whether an alternative is potentially feasible.

5.2.2 Attainment of Project Objectives

As described above, one factor that must be considered in selection of alternatives is the ability of a specific alternative to attain most of the basic objectives of the proposed project (*State CEQA Guidelines* Section 15126.6(a)). The project objectives are identified in Chapter 3, "Project Description," and included below:

- Provide a combination of residential units mix on a desirable site compatible with surrounding residential development.
- Diversify the City's existing housing stock by providing various housing product types and densities to meet a range of housing needs for the City of Livermore residents.
- Provide more outdoor recreational opportunities in the City by providing new open spaces.
- Design the structures and site improvements to be sensitive to the surrounding neighborhoods.
- Better utilize an urban area in the City that is currently underutilized.

5.2.3 Potential to Avoid or Substantially Reduce a Significant Impact

As established in section 15126.6(a) of the *State CEQA Guidelines,* alternatives considered in an EIR must avoid or substantially lessen any of the significant effects of the proposed project. The Draft EIR does not identify any significant and unavoidable impacts after implementation of mitigation measures. (see Chapter 4.0, Setting, Impacts, and Mitigation Measures).

5.3 ALTERNATIVES CONSIDERED BUT REJECTED

The *State CEQA Guidelines* state that an EIR should identify any alternatives that were considered by the lead agency but were rejected during the scoping process and briefly explain the reasons underlying the lead agency's determination (Section 15126.6(c)). The following alternatives were considered, but were rejected:

- **Off-Site Alternative**: CEQA Guidelines section 15126.6 (a) states that an EIR "shall describe a range of reasonable alternatives to the project or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project …" (emphasis added). Because the proposed project's objectives are grounded in better utilizing this particular parcel, there is no alternative location that could meet this fundamental project objective. While development of an off-site alternative would result in additional housing in Livermore it would not meet the objective of revitalizing the specific project site. Under CEQA Guidelines section 15126.6(f)(3), an EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative. There are no off-site properties nearby that are comparable to the project site that are owned by the project applicant. For these reasons, no off-site alternative was carried forward for detailed evaluation.

- **Additional Driveways**: As part of the public outreach process, input was requested on the proposed alternatives. A request was made for the proposed project to include a driveway at the northeastern boundary of the project site to accommodate access to the residential development abutting the project site. Due to site planning constraints, site ownership and site circulation issues, this alternative was considered but rejected.

5.4 COMPARISON AND ANALYSIS OF ALTERNATIVES

The following discussion summarizes the alternatives evaluated, how each alternative meets CEQA requirements for consideration of project alternatives, and then provides an evaluation of each alternative. Alternatives evaluated in this Draft EIR are:

- The **No Project Alternative** is established in *State CEQA Guidelines Section 15126.6(e)* and assumes that no construction on the project site would occur. The existing commercial buildings on the project site would not be demolished and would instead remain in place and unchanged from existing conditions.

- The **General Plan Compliant Alternative** assumes that the project site would be redeveloped pursuant to current land use and zoning designations as established in the City's General Plan. Implementation of the General Plan Compliant Alternative would allow for the development of Neighborhood Mixed Use facilities on the project site. The Land Use designation for the project site is Neighborhood Mixed Low Density (NML) which allows for 12-15 dwelling unit/acre (du/ac). The General Plan Compliant Alternative would result in a mixed-use development that would include commercial uses, residential uses and open space uses.

- The **Reduced Development Alternative** assumes the project site would still be developed solely with residential uses but assumes a 20 percent reduction in the number of dwelling units, parking spaces, passive recreation areas, and open space.

5.4.1 No Project Alternative

The following provides a description of the No Project Alternative and its anticipated environmental impacts. The emphasis of the analysis is on comparing the anticipated environmental impacts of the No Project Alternative to the environmental impacts associated with the proposed project. The discussion includes a determination of whether the No Project Alternative would reduce, eliminate, or create new significant environmental impacts, and whether the alternative would or would not meet the objectives of the proposed project.

5.4.1.1 Description of Alternative

The No Project Alternative assumes that the project site would remain unchanged from existing conditions. The project site would continue to be used solely for commercial uses and the existing commercial buildings would not be modified or demolished. No modifications to existing site access or infrastructure would take place.

5.4.1.2 Ability to Meet Project Objectives

Implementation of the No Project Alternative would not meet any of the identified project objectives as no development would occur within the project site.

5.4.1.3 Comparison of Environmental Impacts

The potential impacts associated with the No Project Alternative are described below.

Air Quality. Implementation of the No Project Alternative would not include demolition of the existing commercial uses on the project site and would not construct residential uses on the project site. As a result, pollutant and odor concentrations would not be increased and dust, exhaust, and organic emissions related to construction would not be generated. Similarly, this alternative would not result in new exposure of residents to toxic air contaminants (TACs). Though the proposed project's net increase in trips would not result in a significant impact, implementation of the No Project Alternative would not result in an increase in operational vehicle trips in the city. Because no construction would occur at the project site under the No Project Alternative, Mitigation Measure AIR-1 would not be required. Additionally, because the No Project Alternative would not facilitate any development at the project site, no other emissions (such as those leading to odor) would be generated. Therefore, compared to the **less than significant impact with mitigation** impact identified in Section 4.1 of this EIR, there would be **no impact** on air quality.

Biological Resources. Implementation of the No Project Alternative would not result in any changes at the project site, and there would be no project impacts related to biological resources. There would be no impacts to special status plant or animal species, and no potential conflicts with a local ordinance protecting a biological resource. The inclusion of Mitigation Measures BIO-1, BIO-2.1, and BIO-2.2 would not be required. In addition, the No Project Alternative would not interfere with the movement of any native resident or migratory fish or wildlife species, impede the use of native

wildlife nursery sites, conflict with the provisions of an approved local, regional or State policy or ordinance protecting biological resources (such as a tree preservation policy or ordinance), or conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Therefore, compared to the **less than significant with mitigation incorporated impacts** resulting from the proposed project, the No Project Alternative would have **no impact** on biological resources.

Cultural Resources. Implementation of the No Project Alternative would result in no changes to the existing conditions of the project site and would not result in the demolition of existing commercial uses and their associated structures. Residential uses would not be constructed on the project site and therefore no ground disturbing activities or construction would occur that could result in the discovery of unknown archeological and/or cultural resources. Therefore, Mitigation Measures CUL-1 and CUL-2 would not be required. Therefore, compared to the **less than significant with mitigation incorporated impacts** of the proposed project, the No Project Alternative would have **no impact** on built-environment historic resources as defined in *State CEQA Guidelines* Section 15064.5.

Energy. Because no demolition or construction activities would occur, the No Project Alternative would not result in construction-related energy demand. Similarly, the No Project Alternative would not result in an increase in vehicle miles traveled (VMT), daily vehicle trips, or utility use (i.e., electricity) on the project site; therefore, the No Project Alternative would not result in impacts related to operational-period energy usage. Therefore, compared to the proposed project's **less than significant** energy impact, there would be **no impact** on energy as a result of this alternative.

Greenhouse Gas Emissions. The No Project Alternative would not result in the generation of construction-period greenhouse gas (GHG) emissions. Similarly, the No Project Alternative would not result in an increase in VMT, daily vehicle trips, or utility use (i.e., electricity, water, and wastewater) on the project site; therefore, the No Project Alternative would not result in any impacts related to project operations. For the same reasons, State and City of Livermore CAP Mitigation Strategies regarding the reduction of GHG emissions such as the construction of electric vehicle (EV) charging stations would not be applicable. Therefore, compared to the proposed project's **less than significant** GHG emissions impact, there would be **no impact** on GHG emissions as a result of this alternative.

Hazards and Hazardous Materials. Implementation of the No Project Alternative would not include any demolition or construction activity within the project site. Therefore, the No Project Alternative would not create significant hazards to the public or to the environment through the routine transport, use, or disposal of hazardous materials or as a result of an accident involving the release of hazardous materials into the environment. No modifications to existing site access or infrastructure would occur, and therefore no impacts related to emergency evacuation plans would occur. The No Project Alternative would also not result in any impacts related to hazardous materials sites pursuant to airport-related safety hazards, or wildland fires. Because no demolition or construction would occur on the project site, Mitigation Measures HAZ-1 and HAZ-2 would not be required. Therefore, compared to the proposed project's **less than significant with mitigation incorporated** impacts, there would be **no impact** related to Hazards and Hazardous Materials as a result of this alternative.

Land Use and Planning. Implementation of the No Project Alternative would not result in the construction of any new residential, commercial, or mixed-use development on the project site. The existing commercial uses on the project site would remain unchanged. The implementation of a "Builder's Remedy" application to allow for the construction of residential uses on the project site would not be utilized. Therefore, compared to the **less than significant impacts** of the proposed project, the No Project Alternative would have **no impact** related to land use and planning.

Noise. The No Project Alternative would not expose surrounding land uses to short-term noise or vibration during construction. Noise at the project site would not increase above that already occurring on the project site and no increase in traffic noise would occur. Local policies in the City's General Plan and Municipal Code would not be applicable to the No Project Alternative. Therefore, compared to the proposed project's **less than significant with mitigation incorporated** there would be **no impact** related to noise as a result of this alternative.

Transportation. Implementation of the No Project Alternative would not result in the demolition of commercial uses on the project site and the construction of residential uses. There would be no changes in the existing circulation pattern, roadway improvements, or modifications to emergency access, and there would be no increase to VMT. Therefore, compared to the **less than significant with mitigation incorporated impacts** of the proposed project, there would be **no impact** related to conflicts with applicable transportation-related plans, policies and ordinances; vehicle miles traveled (VMT); design hazards; or emergency access as a result of this alternative.

Tribal Cultural Resources. Implementation of the No Project Alternative would result in no changes to the existing conditions of the project site and would not facilitate nor include demolition, construction, or other ground disturbance activities that could result in the accidental discovery of tribal cultural resources, and Mitigation Measures CUL-1 and CUL-2 would not be required. Therefore, compared to the **less than significant impacts** with mitigation **incorporated** of the proposed project, the No Project alternative would have **no impact** on tribal cultural resources.

5.4.2 General Plan Compliant Alternative

The following provides a description of the General Plan Compliant Alternative and its anticipated environmental impacts. The emphasis of the analysis is on comparing the anticipated environmental impacts of the General Plan Compliant Alternative to the environmental impacts associated with the proposed project. The discussion includes a determination of whether or not the General Plan Compliant Alternative would reduce, eliminate, or create new significant environmental impacts and whether it would or would not meet the objectives of the proposed project.

5.4.2.1 Description of Alternative

The General Plan Compliant Alternative assumes the project site would be built pursuant to the current General Plan and Zoning designations. The project site is currently designated as Neighborhood Mixed Low Density (NML) in the Livermore General Plan and is zoned as Neighborhood Mixed Use. The purpose of the NML designation is to allow for commercial development to occur mixed with residential uses. Projects developed primarily for residential uses must provide a minimum of 20-percent floor area for commercial uses, and a maximum of .30 Floor Area Ratio (FAR) is allowed for the commercial portion development on these sites. The residential

baseline density is 2 du/ac – 3 du/ac (maximum density when developers decline to use Transfer Development Credit [TDC] option) or 12 du/ac – 15 du/ac maximum when developers choose to exceed the baseline density and comply with City's TDC Ordinance.

The General Plan Compliant Alternative would include commercial, residential, and open space uses. Similar to the proposed project, the General Plan Compliant Alternative would include several new buildings but would include both residential and commercial uses. Under this alternative, approximately 20% of developed uses at the project site would be commercial and approximately 80% would be residential, as required by the Neighborhood Mixed Zoning.

5.4.2.2 Ability to Meet the Project Objectives

Implementation of the General Plan Compliant Alternative would meet some but not all of the identified project objectives. The General Plan Compliant Alternative would provide residential units on a desirable site surrounded by residential development, would diversify the City's housing stock, design structures which are sensitive to surrounding areas, and could better utilize an urban area. However, the General Plan Compliant Alternative would construct fewer residential units and would not necessarily include all of the elements proposed under the proposed project such as an open space component.

5.4.2.3 Comparison of Environmental Impacts

The potential impacts associated with the General Plan Compliant Alternative are described below.

Air Quality. Pollutant and odor concentrations would be increased and dust, exhaust, and organic emissions related to construction would be generated, similar to the proposed project, with implementation of the General Plan Compliant Alternative. Similarly, this alternative may result in new exposure of nearby sensitive receptors to TACs. Therefore, Mitigation Measure AIR-1 and Mitigation Measure AIR-1 would still be prescribed under the General Plan Compliant Alternative, as construction activities would be similar to those under the proposed project. All applicable State, Regional, and Local policies would still apply. Compliance mitigation measures and all applicable policies would reduce emissions associated with construction of the General Plan Compliant Alternative to a **less than significant level after mitigation**.

In addition, the General Plan Compliant Alternative would result in the development of new uses at the project site which would result in an increase in long-term air pollutant emission impacts associated with mobile sources (e.g., vehicle trips), energy sources (e.g., natural gas combustion), area sources (e.g., architectural coatings and the use of landscape maintenance equipment), and stationary sources (e.g., emergency generators). In addition, because a commercial component would be included under this alternative, there is the potential for uses to emit greater air pollutant concentrations and include more energy intensive uses than that of the proposed project, including natural gas. Accordingly, potential development under the General Plan Compliant Alternative could result in a significant impact due to operational emissions, including potentially significant impacts due to usage of natural gas. Therefore, operation of the General Plan Compliant Alternative could result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or State ambient air quality standard. Unlike the

proposed project where impacts would be **less than significant,** this alternative would result in greater cumulative impacts to air quality.

Additionally, operation of future mixed-use development under the General Plan Compliant Alternative could result in other emissions (including those leading to odors) that could adversely affect nearby people and sensitive receptors. An increase in other emissions (including those leading to odors) under this alternative could result in a **significant impact.** Therefore, although some air quality impacts under the General Plan Compliant Alternative would be mitigated to a less than significant level, similar to the proposed project, there is the potential for significant impacts to occur based on mixed-use development of the project site.

Biological Resources. Implementation of the General Plan Compliant Alternative would facilitate the demolition of all existing onsite structures and construction activity within the project site would be consistent with the existing General Plan mixed-use land use designation. Accordingly, implementation of the General Plan Compliant Alternative would result in potential impacts to special status plant or animal species, and potential conflicts with a local ordinance protecting a biological resource. The inclusion of Mitigation Measures BIO-1, BIO-2.1, and BIO-2.2 would reduce the potential impacts to special-status species to a **less than significant impact.** Similar to the proposed project, the General Plan Compliant Alternative would not have a substantial adverse effect on any riparian habitat, other sensitive natural community, or federally protected wetlands as defined by Section 404 of the Clean Water Act. In addition, the General Plan Compliant Alternative would not interfere with the movement of any native resident or migratory fish or wildlife species, impede the use of native wildlife nursery sites, conflict with the provisions of an approved local, regional or State policy or ordinance protecting biological resources (such as a tree preservation policy or ordinance), or conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Therefore, the General Plan Compliant Alternative would result in **less than significant impacts** on biological resources, similar to the proposed project.

Cultural Resources. The General Plan Compliant Alternative would include the demolition of the existing commercial uses on the project site and the construction of mixed-use development including both residential and commercial uses. While there are no known historic or archaeological resources within the project site, future construction and ground disturbing activities have the potential to uncover unknown resources. Accordingly, implementation of the General Plan Compliant Alternative would result in similar, potentially significant impacts on archeological resources. Therefore, the General Plan Compliant Alternative would also be required to implement Mitigation Measures CUL-1 and CUL-2, which would result in **less than significant impacts** to cultural resources, similar to the proposed project.

Energy. The General Plan Compliant Alternative would result in an increase in energy demand during construction. Similarly, the General Plan Compliant Alternative would result in an increase in VMT, daily vehicle trips, and utility use (i.e., electricity) on the project site, increasing energy demand during operation. Energy demand associated with construction and operation of the General Plan Compliant Alternative would likely be similar to the proposed project and would not cause or result in the need for additional energy facilities or an additional or expanded delivery systems. Therefore, fuel consumption during construction and operation of development under the

General Plan Compliant Alternative would not be inefficient, wasteful, or unnecessary, and this impact would be **less than significant**. Therefore, implementation of the General Plan Compliant Alternative would result in **less than significant** energy impacts, similar to the proposed project.

Greenhouse Gas Emissions. The General Plan Compliant Alternative would result in the generation of construction-period GHG emissions, which would be lower than the proposed project. Similar to the proposed project, the General Plan Compliant Alternative would result in an increase in VMT, daily vehicle trips, and utility use (i.e., electricity, water, and wastewater) on the project site. In addition, because a commercial component would be included under this alternative, there is the potential for uses to emit greater air pollutant concentrations and include more energy intensive uses than that of the proposed project, including natural gas. Accordingly, potential development under the General Plan Compliant Alternative could result in a significant impact due to operational emissions, including potentially significant impacts due to usage of natural gas. The General Plan Compliant Alternative would result in **a potentially significant impact** related to GHG emissions, higher than the proposed project.

Hazards and Hazardous Materials. Hazardous materials (e.g., fuel, oils, and paints) would be routinely transported, stored, and used at the project site during implementation of the General Plan Compliant Alternative. However, management of soil and hazardous materials during construction activities would be subject to the requirements of the Stormwater Construction General Permit. Construction of the General Plan Compliant Alternative would result in the generation of various waste materials that would require recycling and/or disposal, including some waste materials that could be classified as hazardous waste. Hazardous materials would be transported by a licensed hazardous waste hauler and disposed of at facilities that are permitted to accept such materials as required by the Department of Transportation (DOT), Resource Conservation and Recovery Act (RCRA), and State regulations. Under this alternative, commercial uses could involve the routine storage and use of hazardous materials. Therefore, Mitigation Measures HAZ-1 and HAZ-2 would also be required for the General Plan Compliant Alternative. Overall, implementation of the General Plan Compliant Alternative would result in **less than significant impacts with mitigation** related to hazards and hazardous materials, similar to the proposed project.

Land Use and Planning. The General Plan Compliant Alternative assumes that the Builder's Remedy application would no longer be utilized, and that mixed use development which includes residential and commercial uses would be constructed at the project site. Similar to the proposed project, future development applications would be required to include site and circulation plans that would not limit or impede access to the site and adjacent uses. Further, development under the General Plan Compliant Alternative would be required to adhere to all relevant policies found in the City's General Plan, and all applicable ordinances adopted for the purposes of avoiding or mitigating an environmental effect. Therefore, the General Plan Compliant Alternative would have a **less than significant impact** related to land use and planning, lower the proposed project as it would fully comply with general plan and zoning designation.

Noise. Implementation of the General Plan Compliant Alternative would expose surrounding land uses to short-term noise and vibration during project construction. Implementation of Mitigation Measure NOI-1 and Mitigation Measure NOI-1 would still be required. In addition, the General Plan

Compliant Alternative would be required to adhere to all applicable city policies regarding noise in the City's General Plan. During operation of the General Plan Compliant Alternative, noise at the project site would increase compared to existing conditions and an increase in traffic noise would occur, however potentially at a lower level than the proposed project, due to the reduced intensity of uses compared to the proposed project. Overall, with adherence to applicable policies and the implementation of Mitigation Measure NOI-1, implementation of the General Plan Compliant Alternative would result in a **less than significant impact with mitigation** related to noise, similar to the proposed project.

Transportation. Because the General Plan Compliant Alternative would result in mixed use development of the project site, it would result in similar automobile, transit, bicycle, and pedestrian travel to and from the project site. Residential uses of the project site would still result in an increase in VMT, but like the proposed project, these would be under the City's adopted threshold and would result in a **less than significant impact**. However, the General Plan Compliant Alternative would include commercial development which could result in VMT trips above the adopted threshold, depending on the nature of commercial use as a site, regional versus local serving. As such, the General Plan Compliant Alternative may require additional mitigation measures to lower VMT.

As with the proposed project, the General Plan Compliant Alternative would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. Similar to the proposed project, the implementation of the General Plan Compliant Alternative would require the implementation of **Mitigation Measure TRA-1**, to ensure safe access to the project site and as such it would not increase hazards due to a geometric design feature and would not result in inadequate emergency access. Therefore, the General Plan Compliant Alternative would result in **less than significant impact** with mitigation **related to** transportation. As a result, this alternative would result in a potentially greater impact related to transportation when compared to the proposed project.

Tribal Cultural Resources. Implementation of the General Plan Compliant Alternative would result in similar, **potentially significant impacts** on tribal cultural resources, particularly undiscovered resources, as the proposed project. Construction and other ground disturbing activities would still occur under the General Plan Compliant Alternative, and the implementation of Mitigation Measures CUL-1 and CUL-2 would still be required. Therefore, implementation of the General Plan Compliant Alternative would result in **less than significant impacts** on tribal cultural resources, similar to the proposed project.

5.4.3 Reduced Development Alternative

The following provides a description of the Reduced Development Alternative and its anticipated environmental impacts. The emphasis of the analysis is on comparing the anticipated environmental impacts of the Reduced Development Alternative to the environmental impacts associated with the proposed project. The discussion includes a determination of whether or not the Reduced Development Alternative would reduce, eliminate, or create new significant environmental impacts and would or would not meet the objectives of the proposed project. While the Reduced Development Alternative would reduce housing on the site, it was chosen to minimize potential

construction and operation noise impacts related to residential development located adjacent to the project site.

5.4.3.1 Description of Alternative

The Reduced Development Alternative assumes the project site would still be developed solely with residential uses but assumes a 20 percent reduction in the number of dwelling units, parking spaces, recreation areas, and open space. While not explicitly quantified, it is assumed that a 20 percent reduction in development would reduce associated project impacts including but not limited to air quality, energy, greenhouse gas emissions, noise, and transportation. The existing commercial building and commercial uses on the project site would be demolished, and no future commercial uses would occur at the project site.

Under the Reduced Development Alternative, the number of residential development units would be reduced from 115 units to approximately 92 units, landscaped areas would be reduced from 55,201 square feet to approximately 44,161 square feet, the 8,865 square foot park would be reduced to approximately 7,092 square feet, and the total number of parking spaces would be reduced from 268 vehicle parking spaces to approximately 214 parking spaces, including reducing the 27 EV charging spaces to 22 spaces.

5.4.3.2 Ability to Meet Project Objectives

The Reduced Development Alternative would meet all project objectives, as it would implement a variety of housing uses on the site, in a similar manner to the proposed project.

5.4.3.3 Comparison of Environmental Impacts

The potential impacts associated with the Reduced Development Alternative are described below. The proposed project does not include any significant impacts after incorporated mitigation, and the reduced development alternative would produce similar impacts to the proposed project.

Air Quality. Pollutant and odor concentrations, as well as dust, exhaust, and organic emissions related to demolition and construction would be generated; however, with implementation of the Reduced Development Alternative the levels would be lower than that of the proposed project. Mitigation Measure AIR-1 would continue to be implemented as part of the Reduced Development Alternative, because construction activities would be similar to those under the proposed project. With compliance with the prescribed Mitigation Measure, emissions associated with construction of the Reduced Development Alternative would be below the BAAQMD's thresholds of significance, and impacts would be **less than significant with mitigation**, but lower than the proposed project.

The Reduced Development Alternative would result in the demolition of the existing commercial buildings and their associated commercial uses at the project site would be discontinued. The project site would be redeveloped for residential uses which would result in an increase in long-term air pollutant emission impacts associated with mobile sources (e.g., vehicle trips), energy sources, area sources (e.g., architectural coatings and the use of landscape maintenance equipment), and stationary sources (e.g., emergency generators). The Reduced Development Alternative like the

proposed project would result in a **less than significant impact** related to air quality, but lower than the proposed project.

Biological Resources. Implementation of the Reduced Development Alternative would facilitate the demolition of existing commercial buildings on the project site and construction activity within the project site related to the construction of residential uses. Accordingly, implementation of the Reduced Development Alternative would result in potential impacts to special status plant or animal species, and potential conflicts with a local ordinance protecting a biological resource. The inclusion of Mitigation Measures BIO -1, BIO-2.1, and BIO-2.2 would reduce the potential impacts to special-status species to a **less than significant impacts.** Similar to the proposed project, the Reduced Development Alternative would not have a substantial adverse effect on any riparian habitat, other sensitive natural community, or federally protected wetlands as defined by Section 404 of the Clean Water Act. In addition, the Reduced Development Alternative would not interfere with the movement of any native resident or migratory fish or wildlife species, impede the use of native wildlife nursery sites, conflict with the provisions of an approved local, regional or State policy or ordinance protecting biological resources (such as a tree preservation policy or ordinance), or conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Therefore, the Reduced Development Alternative would result in **less than significant impacts** on biological resources, similar to the proposed project.

Cultural Resources. The Reduced Development Alternative would include demolition and construction activities similar to the proposed project, but with a reduction in the number of residential units and associated uses. While there are no identified cultural resources within the project site, implementation of the Reduced Development Alternative would result in similar, **potentially significant impacts,** on undiscovered archaeological and cultural resources. The Reduced Development Alternative would be required to implement Mitgiation Measures CUL-1 and CUL-2. Therefore, implementation of the Reduced Development Alternative would result in **less than significant impacts** on archaeological resources, similar to the proposed project.

Energy. The Reduced Development Alternative would result in an increase in energy demand during demolition of existing commercial uses and construction of residential uses on the project site. Similar to the proposed project, the Reduced Development Alternative would result in an increase in VMT, daily vehicle trips, and utility use (i.e., electricity) on the project site, increasing energy demand during operation, although lower than the proposed project. Energy demand associated with construction of the Reduced Development Alternative also would be lower than the proposed project. Similar to the proposed project, the Reduced Development Alternative would not cause or result in the need for additional energy facilities or an additional or expanded delivery systems. The project is served by existing bus stops and is within walking distance to surrounding residential, commercial, and institutional uses. EV charging stations would be reduced from 27 to 22. Therefore, implementation of the Reduced Development Alternative would result in **less than significant** energy impacts, however lower than the proposed project.

Greenhouse Gas Emissions. The Reduced Development Alternative would result in the generation of construction-period GHG emissions, which would be lower than the proposed project. Similar to the proposed project, the Reduced Development Alternative would result in an increase in VMT,

daily vehicle trips, and utility use (i.e., electricity, water, and wastewater) on the project site. Similar to the proposed project, the Reduced Alternative would be an all-electric development and would not require the use of natural gas. As such, the Reduced Development Alternative would not result in the generation of operational-period GHG emissions and would not conflict with applicable plans, policies, and regulations adopted for the purposes of reducing the emission of GHGs. For the same reasons, State and City of Livermore CAP Mitigation Strategies regarding the reduction of GHG emissions such as the construction of EV charging stations would be applicable. The Reduced Development Alternative would result in **less than significant impacts** related to GHG emissions, with emissions lower than the proposed project.

Hazards and Hazardous Materials. Hazardous materials (e.g., fuel, oils, and paints) would be routinely transported, stored, and used at the project site during construction of the Reduced Development Alternative. However, management of soil and hazardous materials during construction activities would be subject to the requirements of the Stormwater Construction General Permit. Construction of the Reduced Development Alternative would result in the generation of various waste materials that would require recycling and/or disposal, including some waste materials that could be classified as hazardous waste. Hazardous materials would be transported by a licensed hazardous waste hauler and disposed of at facilities that are permitted to accept such materials as required by DOT, RCRA, and State regulations. Additionally, Mitigation Measures HAZ-1 and HAZ-2 would also be prescribed for the Reduced Development Alternative. Overall, implementation of the Reduced Development Alternative would result in **less than significant impacts with mitigation** related to hazards and hazardous materials, similar to the proposed project.

Land Use and Planning. The Reduced Development Alternative assumes that the Builder's Remedy application would still be used to construct residential uses on the project site without a mixed-use component. Similar to the proposed project, future development applications would be required to include site and circulation plans that would not limit or impede access to the site and adjacent uses. Further, development under the Reduced Development Alternative would be required to adhere to all relevant policies found in the City's General Plan, and all applicable ordinances adopted for the purposes of avoiding or mitigating an environmental effect. Therefore, the Reduced Development Alternative would have **a less than significant impact** related to land use and planning, similar to the proposed project.

Noise. Implementation of the Reduced Development Alternative would expose surrounding land uses to short-term noise and vibration during project construction. Implementation of Mitigation Measure NOI-1 would still be required. In addition, the Reduced Development Alternative would be required to adhere to all applicable city policies regarding noise in the City's General Plan. The Reduced Development Alternative would include less construction near the adjacent residential neighborhood, as it would include 20% less units. Therefore, construction noise impacts would be lower than the proposed project. During operation of the Reduced Development Alternative, noise at the project site would increase compared to existing conditions and an increase in traffic noise would occur, however at a lower level than the proposed project as it would include lower development.

Overall, with adherence to applicable policies and Mitigation Measure NOI-1, implementation of the Reduced Development Alternative would result in a **less than significant impact with mitigation** related to noise, potentially lower than the proposed project.

Transportation. Because the Reduced Development Alternative would result in a smaller footprint program than the proposed project, it would result in a smaller increase in automobile, transit, bicycle, and pedestrian travel to and from the project site. Residential uses of the project site would still result in an increase in VMT, but like the proposed project, these would be under the City's adopted threshold and would result in a **less than significant impact**. As with the proposed project, the Reduced Development Alternative would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, would not increase hazards due to a geometric design feature, and would not result in inadequate emergency access. Therefore, the Reduced Development Alternative would result in **less than significant** transportation impacts, similar to the proposed project.

Tribal Cultural Resources. Implementation of the Reduced Development Alternative would result in similar, **potentially significant impacts** on tribal cultural resources, particularly undiscovered resources, as the proposed project. Construction and other ground disturbing activities would still occur, and the Reduced Development Alternative would be required to implement Mitigation Measures CUL-1 and CUL-2. Therefore, implementation of the Reduced Development Alternative would result in **less than significant impacts** on tribal cultural resources, similar to the proposed project

5.5 ALTERNATIVES SUMMARY COMPARISON OF IMPACTS AND ABILITY TO MEET PROJECT OBJECTIVES

Table 5.A identifies the level of impact that would result from the proposed project and each alternative (e.g., no impact, less than significant impact, less than significant impact with mitigation, significant and unavoidable impact, or significant and unavoidable impact with mitigation). Table 5.A also identifies whether the potential impacts of each alternative would be similar, less than, or greater than the proposed project impacts. In some cases, the proposed project and an alternative would result in the same significance determination, but the degree of that impact resulting from the alternative might be less than or greater than the proposed project.

Table 5.A Comparison of Environmental Impacts of the Proposed Project to Impacts of the Alternatives

Impacts	Proposed Project	No Project Alternative	General Plan Compliant Alternative	Reduced Development Alternative
4.1: Air Quality				
Impact AIR-1: Conflict with or obstruct implementation of the San Francisco Bay Area Clean Air Plan.	LTSM	NI Less Than	LTS Higher	LTS Less Than
Impact AIR-2: Result in a cumulatively considerable impact related to the net increase of a criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard.	LTSM	NI Less Than	LTS Similar	LTS Less Than

Table 5.A Comparison of Environmental Impacts of the Proposed Project to Impacts of the Alternatives

Impacts	Proposed Project	No Project Alternative	General Plan Compliant Alternative	Reduced Development Alternative
Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations.	LTSM	NI Less Than	LTSM Similar	LTSM Less Than
Impact Air-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	LTS	NI Less Than	LTS Similar	LTS Less Than
4.2: Biological Resources				
Impact BIO-1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	LTSM	NI Less Than	LTS Similar	LTS Similar
Impact BIO-2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	NI	NI Similar	NI Similar	NI Similar
Impact BIO-3: Would the project 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?	NI	NI Similar	NI Similar	NI Similar
Impact Bio-4: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	NI	NI Similar	NI Similar	NI Similar
Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	LTSM	NI Less Than	LTS Similar	LTS Similar
Impact BIO-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	NI	NI Similar	NI Similar	NI Similar
4.3: Cultural Resources				
Impact CUL-1: Would the project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5.	LTS	NI Similar	NI Similar	NI Similar
Impact CUL-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5.	LTSM	NI Less Than	LTS Similar	LTS Similar
Impact CUL-3: Would the project disturb any human remains, including those interred outside of dedicated cemeteries.	LTSM	NI Less Than	LTS Similar	LTS Similar
4.4: Energy				
Impact EN-1: Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	LTS	NI Less Than	LTS Similar	LTS Less Than
Impact EN-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	LTS	NI Less Than	LTS Similar	LTS Less Than
4.5: Greenhouse Gas Emissions				
Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	LTS	NI Less Than	LTS Higher	LTS less Than

Table 5.A Comparison of Environmental Impacts of the Proposed Project to Impacts of the Alternatives

Impacts	Proposed Project	No Project Alternative	General Plan Compliant Alternative	Reduced Development Alternative
Impact GHG-2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases.	LTS	NI Less Than	LTS Higher	LTS Less Than
4.6: Hazards and Hazardous Materials				
Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	LTS	NI Less Than	LTS Similar	LTS Similar
Impact HAZ-2: 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,	LTSM	NI Less Than	LTSM Similar	LTSM Similar
Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	LTS	NI Less Than	LTSM Similar	LTSM Similar
Impact HAZ-4: Be located on a site that is included on a list of hazardous materials sites compiled by Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?	LTSM	NI Less Than	LTSM Similar	LTSM Similar
Impact HAZ-5: For a project located within an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	LTS	NI Similar	NI Similar	NI Similar
Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	LTS	NI Less Than	LTS Similar	LTS Similar
Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	LTS	NI Less Than	LTS Similar	LTS Similar
4.7: Land Use and Planning				
Impact LU-1: Eliminate or reduce existing levels of connectivity within Livermore or other community.	LTS	NI Less Than	LTS Similar	LTS Similar
Impact LU-2: Result in a conflict between the proposed project and the provisions of the following planning and policy documents, due to any of the significant impacts identified in this EIR: Livermore General Plan, Livermore Zoning Ordinance, Plan Bay Area 2050	LTS	NI Less Than	LTS Similar	LTS Similar
4.8: Noise				
Impact NOI-1: 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?	LTSM	NI Less Than	LTSM Similar	LTSM Less Than
Impact NOI-2: Generation of excessive groundborne vibration or groundborne noise levels?	LTS	NI Less Than	LTS Similar	LTS Similar
Impact 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?	LTS	NI Less Than	LTS Similar	LTS Similar
4.9: Transportation				

Table 5.A Comparison of Environmental Impacts of the Proposed Project to Impacts of the Alternatives

Impacts	Proposed Project	No Project Alternative	General Plan Compliant Alternative	Reduced Development Alternative
Impact TRA-1: Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	LTS	NI Less Than	LTS Similar	LTS Similar
Impact TRA-2: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	LTS	NI Less Than	LTS Greater Than	LTS Less Than
Impact TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	LTSM	NI Less Than	LTSM Similar	LTSM Similar
Impact TRA-4: Result in inadequate emergency access?	LTS	NI Less Than	LTS Similar	LTS Similar
4.10: Tribal Cultural Resources				
Impact TCR-1: 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: i) 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); ii) 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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	LTSM	NI Less Than	LTSM Similar	LTSM Similar

LTS : Less Than Significant Impact
NI : No Impact
LTSM : Less Than Significant Impact with Mitigation

A comparison of each alternative and its ability to meet the project objectives compared to the proposed project is summarized below in **Table 5.B**, and evaluated in more detail in the subsequent discussion.

Table 5.B: Summary of Ability of Alternatives to Address Project Objectives

Project Objective	Proposed Project	No Project Alternative	General Plan Compliant Alternative	Reduced Development Alternative
1. Provide a combination of residential units mix on a desirable site compatible with surrounding residential development.	Yes	No	Yes	Yes
2. Diversify the City's existing housing stock by providing various housing product types and densities to meet a range of housing needs for the City of Livermore residents.	Yes	No	Partially	Yes

Table 5.B: Summary of Ability of Alternatives to Address Project Objectives

Project Objective	Proposed Project	No Project Alternative	General Plan Compliant Alternative	Reduced Development Alternative
3. Provide more outdoor recreational opportunities in the City by providing new open spaces.	Yes	No	Yes	Yes
4. Design the structures and site improvements to be sensitive to the surrounding neighborhoods.	Yes	No	Yes	Yes
5. Better utilize an urban area in the City that is currently underutilized.	Yes	No	Yes	Yes

As outlined in Table 5.B above, the No Project Alternative would not meet any of the project objectives as it would not implement any housing and the project site would remain underutilized. The General Plan Compliant Alternative would meet all project objectives, as it would include both commercial and residential housing, however it would only partially meet project objective number 2 as it would only include approximately 40 units, which would be a lower mix of units; however, mixed uses would better utilize the project area as outlined in project objective 5, and as it was envisioned in the City's General Plan. The Reduced Development Alternative would also meet the project objectives as it would include similar number of units as the proposed project.

5.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Based on the above analysis, the No Project Alternative would have the least impact to the environment and would be the environmentally superior alternative. Under CEQA, if the No Project Alternative is the environmentally superior alternative, the EIR must identify an environmentally superior alternative from among the other alternatives (*State CEQA Guidelines* Section 15126.6(e)(2)). While the No Project Alternative would be environmentally superior in the technical sense in that contribution to the aforementioned impacts would not occur, it would also fail to achieve any of the project's objectives.

The General Plan Compliant Alternative and Reduced Development Alternative would both result in similar environmental impacts as shown in Table 5.A, with the General Plan Compliant Alternative having potentially greater impacts due to increased VMT and potential usage of natural gas. While these alternatives have the potential to reduce project-related environmental impacts, the proposed project itself does not have any significant and unavoidable impacts. The General Plan Compliant Alternative would achieve several, but not all, of the proposed project's objectives. It would provide housing on a desirable site and aid in diversifying the City's housing stock; however, it would deliver fewer units and could omit elements included in the proposed project, such as an open space component. Since the Reduced Development Alternative would have lower environmental impacts as the proposed project and would meet the project objectives, the Reduced Development Alternative is considered the environmentally superior alternative pursuant to *State CEQA Guidelines*.

6.0 CEQA-REQUIRED ASSESSMENT CONCLUSIONS

As required by the California Environmental Quality Act (CEQA), this chapter discusses the following types of impacts that could result from implementation of the proposed project: growth-inducing impacts, significant irreversible changes, effects found not to be significant, and significant unavoidable effects.

6.1 GROWTH-INDUCING IMPACTS

This section summarizes the project's potential growth-inducing impacts on the surrounding community. A project is typically considered growth inducing if it would foster economic or population growth or the construction of additional housing, if it would remove obstacles to population growth or tax community services to the extent that the construction of new facilities would be necessary, or if it would encourage or facilitate other activities that cause significant environmental effects.[1] Examples of projects likely to have significant growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or industrial parks in areas that are currently only sparsely developed or are undeveloped.

As described in this Draft Environmental Impact Report (EIR), the proposed project would result in the demolition of the existing commercial buildings on the project site, the construction of 15 residential buildings totaling 115 units, pool area and associated pool equipment, and clubhouse buildings totaling approximately 1,577 square feet, landscaping, paseos, guest parking, and an interior park. The proposed project would also include new frontage improvements such as curb, sidewalk, gutter, and streetlights. Development of the proposed project is expected to result in an estimated population of 330 residents. However, as mentioned in Section 3.14, Population and Housing, of the Initial Study prepared for the proposed project, Livermore is expected to add 12,439 residents by 2040. Therefore, the proposed project would only represent 2.65 percent of Livermore's anticipated growth. Therefore, the proposed project would not directly or indirectly induce substantial population growth on the site or in the surrounding area through the increase in employment on the project site.

Additionally, the proposed project would consist of redevelopment of an existing urbanized site and would not require the extension of utilities or roads into undeveloped areas. Circulation improvements would be designed to City of Livermore (City) standards and would facilitate movement to and through the site, including access improvements to adjacent roadways and sidewalks. Due to the location of the project site and the presence of existing uses on and in the vicinity of the project site, construction of the proposed project would not induce unplanned growth in the area. Therefore, the growth that would take place as a result of the proposed project would not be substantial or adverse.

[1] *State CEQA Guidelines*. 2025. Section 15126.2(d).

6.2 SIGNIFICANT IRREVERSIBLE CHANGES

An EIR must identify any significant irreversible environmental changes that could result from implementation of a proposed project. These may include current or future uses of non-renewable resources, and secondary growth-inducing impacts that commit future generations to similar uses. CEQA suggests that irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. Each of these three categories is further detailed below.

6.2.1 Changes in Land Use that Commit Future Generations

The approximately 6.54-acre project site consists of a total of 4 parcels and is currently developed with a commercial shopping center, much of which is currently underutilized. There are currently 9 operating businesses out of 17 spaces, including a bakery, a dog training business, a massage business, a hair salon, a pet shop, a nails and hair salon, a liquor store, a bingo business, and a bar. The project site is zoned as Neighborhood Mixed Low Density (NML) under the City's General Plan, which allows for both commercial and residential uses to be developed. However, the proposed project would use "Builder's Remedy" rights pursuant to the Housing Accountability Act (Government Code Section 65589.5) to develop eligible housing without a commercial component that does not comply with the zoning and/or land use designation. In July 2023, prior to the City having a certified Housing Element, the Project Applicant submitted a full application to develop the project site with 115 residential townhomes. As discussed in Chapter 4.7 Land Use, although inconsistent with the project site's existing general plan land use designation and zoning, the proposed project is otherwise generally consistent with the General Plan, and is allowed under the Housing Accountability Act.

The developed project site and immediate area are surrounded by a mix of industrial, commercial, and residential development, and the site is designated as Neighborhood Mixed Low Density (NML), which is intended to help improve the pedestrian orientation of Livermore's neighborhoods by providing neighborhood commercial services within walking distance of existing residents and integrating housing with commercial development on a single site. Because the proposed project would be on an infill site in which a variety of land uses may be considered under the General Plan and Municipal Code, and because in the future, the project site could be rezoned and repurposed, in which case at the end of the useful life of the project the use could change, it would not commit future generations to a significant change in land use.

6.2.2 Irreversible Damage from Environmental Accidents

The project site was occupied by various commercial tenants, and a gasoline station which operated at the project site from approximately 1963 to 1988. Three underground storage tanks (two 10,000-gallon gasoline tanks and one 500-gallon waste oil tank) were removed from the project site by the early 1990s. The site underwent remediation, including soil excavations, and quarterly monitoring, and was granted a case closure in November 1994.[2] In addition, the project site is listed on the State Water Resources Control Board's GeoTracker database as a Cleanup Program Site related to a previous dry cleaner use that operated from approximately 1966 to 2010. The site is currently undergoing remediation in coordination with the State Water Board, which is described further in

[2] AEI Consultants. 2012. Project No. 305144 Pages 17-18.

section 4.6, Hazards and Hazardous Materials, of this EIR. However, the project site is not included on the lists of hazardous material release sites compiled pursuant to Government Code Section 65962.5.[3]

As discussed in Section 4.6, Hazards and Hazardous Materials, the proposed project would be required to comply with identified City conditions of approval prior to the City's issuance of any building and safety permit (demolition or construction). Compliance with City conditions of approval and the regulations described in Section 4.6.2 of the Hazards and Hazardous Materials section, including OSHA and Cal/OSHA regulations, the California Fire Code, the California Health and Safety Code Division 20, Chapter 6.5, CCR, DOT, RCRA, and other federal, State, regional, and local regulations, are mandatory and would ensure that the proposed project would not create a significant hazard to the public or the environment associated with the routine transport, use, or disposal of hazardous materials by ensuring that these materials are properly handled during construction and operation of the proposed project. Compliance with City conditions of approval and the regulations described in Section 4.6.2 of the Hazards and Hazardous Materials section would also ensure that potential impacts related to spills, leaks, or improper disposal of hazardous materials that would be routinely handled during construction and operation of the project would be less than significant.

In addition, two mitigation measures, **Mitigation Measure HAZ-1** and **Mitigation Measure HAZ-2**, were identified to ensure potential impacts related to hazardous materials or contamination would be less than significant. To control the risk of releasing hazardous materials into the environment during demolition or renovation activities, Mitigation Measure HAZ-1 has been prescribed, which requires the hazardous building materials survey that is required by existing regulations and City conditions of approval prior to renovation or demolition activities include sampling and analysis for polychlorinated biphenyls. To reduce the potential impact and control the risk of releasing hazardous materials into the soils at the project site, a soil and groundwater management plan would be required prior to redevelopment of the project site to ensure that construction workers, the public, future occupants, and the environment would not be exposed to hazardous materials that may be present in the subsurface of the project site.

Overall, Section 4.6, Hazards and Hazardous Materials, concluded that impacts associated with hazards or hazardous materials would be less than significant with implementation of prescribed mitigation measures and compliance with identified conditions of approval. Therefore, implementation of the proposal project would not result in irreversible damage from environmental accidents.

6.2.3 Consumption of Non-Renewable Resources

Consumption of non-renewable resources includes increased energy consumption, conversion of agricultural lands, and lost access to mining reserves. As discussed in Section 3.2 of the Initial Study, Agricultural Resources, the State Department of Conservation designates the project site as "Urban and Built-Up Land", and the project site is in an urbanized area of Livermore. Therefore, no existing

[3] California Environmental Protection Agency (CalEPA). 2024. Cortese List Data Resources. Website: https://calepa.ca.gov/sitecleanup/corteselist/ (accessed March 3, 2025).

agricultural lands would be converted to non-agricultural uses. In addition, as discussed in Section 3.12 of the Initial Study, Mineral Resources, the project site does not contain known mineral resources and does not serve as a mining reserve; thus, development of the proposed project would not result in the loss of access to mining reserves.

Construction of the proposed project would require the use of energy, including energy produced from nonrenewable resources. As discussed in Section 4.4, Energy, development envisioned under the proposed project would consume approximately 65,041 gallons of diesel fuel and approximately 20,738 gallons of gasoline during construction. Based on fuel consumption obtained from EMFAC2021, vehicle trips in Alameda County in 2026 will consume approximately 536 million gallons of gasoline and approximately 156 million gallons of diesel. Therefore, construction of future development as envisioned under the proposed project would increase the annual construction -generated fuel use in Alameda County by approximately less than 0.1 percent for both diesel and gasoline fuel usage. As such, project construction would have a negligible effect on local and regional energy supplies. Furthermore, potential environmental impacts related to energy use during construction would be temporary and relatively small in comparison to Alameda County's overall use of the State's available energy resources. No unusual project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the State. In addition, construction activities are not anticipated to result in inefficient use of energy, as gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on construction of the project. The proposed project would not cause or result in the need for additional energy facilities or an additional or expanded delivery system. For these reasons, fuel consumption during construction would not be inefficient, wasteful, or unnecessary and this impact would be less than significant.

Energy consumption would also take place during the operational period of the proposed project. As discussed in Section 4.4, Energy, the estimated potential increase in electricity demand associated with future development envisioned under the proposed project is 520,219 kWh per year. Total electricity consumption in Alameda County in 2022 was 10,395 GWh (10,395,384,395 kWh). Therefore, operation of the proposed project would increase the annual electricity consumption in Alameda County by less than 0.1 percent.

Electricity demand associated with future operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Furthermore, the proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. All future development would be required to adhere to all federal, State, and local requirements for energy efficiency, including the latest Title 24 and California Green Building Standards Code standards. Title 24 building energy efficiency standards establish minimum efficiency standards related to various building features, including appliances, water, and space heating and cooling equipment, building insulation and roofing, and lighting, which would reduce energy usage.

The increase in fuel use associated with the vehicle trips generated by the proposed project is estimated at 12,225 gallons of gasoline and 1,665 gallons of diesel fuel per year. Based on fuel consumption obtained EMFAC2021, vehicle trips in Alameda County in 2024 consumed approximately 536 million gallons of gasoline and approximately 156 million gallons of diesel.

Therefore, vehicle trips associated with the proposed project would increase the annual fuel use in Alameda County by less than 0.1 percent for gasoline and diesel fuel usage.

Additionally, as discussed in Section 4.9, Transportation, the proposed project would not result in any significant impacts associated with vehicle miles traveled. Public transit facilities serve the project area, and bicycle and pedestrian facilities would be required to conform to City standards, which would also help to reduce the demand for travel by single -occupancy vehicles. As such, fuel consumption associated with vehicle trips generated by project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region and this impact would be less than significant.

Further, the proposed project would not require the construction of major new pipelines to deliver energy or natural gas, as these services are already provided in the area. Therefore, the proposed project would not result in a significant impact associated with the consumption of nonrenewable resources.

6.3 EFFECTS FOUND NOT TO BE SIGNIFICANT

The environmental topics analyzed in Chapter 4.0, Setting, Impacts, and Mitigation Measures, represent those topics that generated the greatest potential controversy and expectation of adverse impacts associated with development of the proposed project. As part of the Initial Study **(Appendix J)** process, certain environmental topics were scoped out of the EIR because they would either have no impact or have a less than significant impact with or without the implementation of applicable mitigation measures. The following topics were scoped out of this EIR: Aesthetics, Agriculture and Forestry Resources, Geology and Soils, Hydrology and Water Quality, Mineral Resources, Population and Housing, Public Services, Recreation, Utilities and Service Systems, and Wildfire. A summary of the conclusions provided in the Initial Study analysis for each of the topics scoped out of the EIR is provided below.

6.3.1 Aesthetics

As discussed in Section 3.1 of the Initial Study, the proposed project would result in less than significant impacts relating to scenic vistas and scenic resources within a State designated scenic highway. In addition, the proposed project would not conflict with applicable zoning or other regulations governing scenic quality or substantially degrade the existing visual character of the project site or its surrounding area and would not create a new source of substantial light or glare that is inconsistent with the allowed use of the project site or uses in the immediate vicinity of the project site. Therefore, project-related impacts with respect to aesthetics would be **less than significant** and are not evaluated further in this Draft EIR.

6.3.2 Agriculture and Forestry Resources

As discussed in Section 3.2 of the Initial Study, the project site is classified as “Urban and Built-Up Land” by the California Department of Conservation Farmland Mapping and Monitoring Program. The project site does not contain any agricultural or forestry resources and is not under a Williamson Act contract. Therefore, the proposed project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to another use. In addition, the proposed

project would not conflict with zoning designations for agricultural use or a Williamson Act contract. Additionally, the project site does not contain any forestland or timberland resources. The proposed project would not result in environmental changes that could result in the conversion of farmland to non-agricultural use or the conversion of forest land to non-forest uses. Therefore, project-related impacts with respect to agricultural and forestry resources would be **less than significant** and are not evaluated further in this Draft EIR.

6.3.3 Geology and Soils

As discussed in Section 3.7 of the Initial Study, the San Francisco Bay Area, where the project is located, is prone to seismic activity. However, the City requires projects to comply with the 2022 California Building Code (CBC) (Title 24, California Code of Regulations)[4], which provides for stringent construction requirements on projects in areas of high seismic risk based on numerous interrelated factors. Compliance with the 2022CBC, which is required by both the City and the State, would ensure that the potential impacts associated with seismic hazards, including ground shaking, would be less than significant.

The project site is not located within an Alquist-Priolo Earthquake Fault Zone. In addition, proper engineering design and construction in conformance with CBC standards and project-specific geotechnical recommendations, as outlined in **Mitigation Measure GEO-1** in the Initial Study, would ensure that potential impacts associated with strong seismic ground shaking, seismic ground failure, expansive soils, and geologic hazard from landslide, lateral spreading, subsidence, liquefaction or collapse, would be reduced to a less than significant level. Compliance with the requirements of the Construction General Permit including the preparation of a Stormwater Pollution Prevention Plan would ensure that the proposed project would result in less than significant impacts related to soil erosion or the loss of topsoil and would not result in impacts related to soil capability to support the use of septic tanks, as the use of septic tanks is not proposed at the project site. Lastly, although no paleontological resources or unique geological features are known to exist within or near the project site, implementation of **Mitigation Measure GEO-2** as laid out in the Initial Study would reduce potential impacts to paleontological resources to a less than significant level. Therefore, project-related impacts with respect to geology and soils would be **less than significant with mitigation incorporated** and are not evaluated further in this Draft EIR.

6.3.4 Hydrology and Water Quality

As discussed in Section 3.10 of the Initial Study, because the proposed project would be required to comply with existing regulations including the Construction General Permit, the Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit, and City of Livermore Municipal Code requirements, including those established under the Alameda County Clean Water Program, the proposed project would not violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater quality. Implementation of the proposed project would not substantially decrease groundwater supplies, interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management

[4] City of Livermore. 2024. 2024 Tri-Valley Local Hazard Mitigation Plan - Volume 1 Planning Area-Wide Elements. Website: https://www.livermoreca.gov/home/showpublisheddocument/11608/638544852506600000 (accessed December 2024).

of the basin, or conflict with or obstruct implementation of a sustainable groundwater management plan. In addition, Mitigation Measures HYD-1 and HYD-2 outlined in the Initial Study would further ensure that development of the project would not result in substantial erosion or siltation either on or off site.

The project site is in a developed area and would not alter the course of a stream or river, and compliance with construction- and operation-phase stormwater requirements (**Mitigation Measures HYD-1 and HYD-2**) would further ensure that development of the project would not result in substantial erosion or siltation either on or off site. The project site is not within a 100-year flood hazard zone as mapped by the Federal Emergency Management Agency and is not within a mapped dam failure inundation area.[5] The project site is not in an area mapped by the California Emergency Management Agency as being potentially inundated by a tsunami and the project site would not be inundated in the event of a seiche. Therefore, the proposed project would not risk release of pollutants in the event of inundation due to flood hazard, tsunamis, or seiches. All project-related impacts with respect to hydrology and water quality would be **less than significant with mitigation incorporated** and are not evaluated further in this Draft EIR.

6.3.5 Mineral Resources

As discussed in Section 3.12 of the Initial Study, the project site is not currently used or designated for mineral extraction and has no history of mineral extraction use. The project site is within an urban area on a previously developed site, and there are no known mineral resources within the vicinity of the project site. Therefore, the proposed project is not anticipated to result in impacts related to the loss of availability of a known mineral resource that would be of value to the region and residents of the State, and project-related impacts with respect to mineral resources would be **less than significant** and are not evaluated further in this Draft EIR.

6.3.6 Population and Housing

The proposed project would develop 115 residential units on the project site. While this use is inconsistent with the project site's NML designation, the Project Applicant submitted a preliminary application pursuant to Senate Bill (SB) 330 to the City to redevelop the project site with residential townhomes exclusively. This application established the Project Applicant's "Builder's Remedy" rights pursuant to the Housing Accountability Act (Government Code Section 65589.5). If a local jurisdiction has not adopted a housing element in substantial compliance with State law, project applicants may propose eligible housing development projects that do not comply with either the zoning or general plan. Pursuant to the Housing Accountability Act, a local jurisdiction may be required to approve an eligible housing development project because it cannot make any of the five required findings contained in Government Code Section 65589.5. In July 2023, prior to the City having a certified Housing Element, the Project Applicant submitted a full application to develop the project site with 115 residential townhomes; as such, although inconsistent with the project site's existing General Plan land use designation and zoning, the proposed project is allowed under the Housing Accountability Act. The project would increase the number of affordable housing units in Livermore, which is a goal of the City of Livermore's Housing Element. Further, development of the

[5] Federal Emergency Management Agency (FEMA). 2009. FEMA Flood Map Service Center (map). Website: https://msc.fema.gov/portal/search?AddressQuery#searchresultsanchor (accessed March 2025).

proposed project would provide housing within an infill site serviced by existing infrastructure, consistent with goals of the City's Housing Element. As such, the proposed project would not induce substantial unplanned population growth in Livermore. Furthermore, as the project site is currently used for commercial uses and does not contain any housing units, the proposed project would not involve the displacement of substantial numbers of existing housing or people and would not require the construction of replacement housing elsewhere. Therefore, project-related impacts with respect to population and housing would be **less than significant** and are not evaluated further in this Draft EIR.

6.3.7 Public Services

As discussed in Section 3.15 of the Initial Study, the Livermore Fire Department and the Livermore Police Department would continue to provide services to the project site and are not expected to require additional staff to serve the project site. The construction of new police or fire facilities would not be required to serve the project site.

Planned growth under the General Plan would increase calls for school services in Livermore. The proposed project is consistent with the project site's General Plan designation and does not represent unplanned growth. Additionally, the Project Applicant would be required to pay appropriate school developer fees at the time the building permits are obtained to address potential impacts. Therefore, construction and operation of the proposed project would have a less-than-significant impact on school services and facilities**.** Planned growth under the General Plan would increase the demand for park facilities in Livermore. The proposed project would include the construction of an 8,865-square-foot community park that would offset the demand for public parks in the project vicinity. Furthermore, the Project Applicant would be required to pay any required park development fees. Therefore, the proposed project would not result in a substantial adverse impact associated with the provision of additional park facilities, and impacts to parks would represent a less-than-significant impact.

Development of the proposed project would incrementally increase demand for other public services. However, the increased demand on public facilities resulting from the proposed project is not expected to require the construction of new or an expansion of existing public facilities in the city. Additionally, the Project Applicant would be required to pay all applicable impact fees. Therefore, the proposed project would not result in a substantial adverse impact associated with the provision of additional public facilities, and the impact would be less than significant. Therefore, project-related impacts with respect to public services would be **less than significant** and are not evaluated further in this Draft EIR.

6.3.8 Recreation

As discussed in Section 3.16 of the Initial Study, the proposed project would include the construction of a 8,865-square-foot community park that would offset the use of public parks in the project vicinity. Furthermore, the Project Applicant would be required to pay all applicable park development fees. Therefore, the proposed project would not increase the use of existing parks or other recreational facilities such that substantial physical deterioration would occur. In addition, as discussed throughout the Initial Study, development of the proposed project would consider all potential environmental impacts, including those that would occur with development of the on-site

open space. The proposed community park would be constructed per applicable park design standards for the city. Additionally, construction of the proposed park would implement applicable construction-phase mitigation measures included in the Initial Study that would reduce potential construction environmental impacts to a less than significant level. Therefore, project-related impacts with respect to recreation would be **less than significant** and are not evaluated further in this Draft EIR.

6.3.9 Utilities and Service Systems

As discussed in Section 3.19 in the Initial Study, the proposed project would connect to existing utility services, including water, wastewater, stormwater, electricity, gas, and telecommunication infrastructure, within or adjacent to the project site, and would comply with both the City's and Pacific Gas & Electric Company's specifications and requirements for the construction of utility infrastructure. Therefore, the proposed project would not require or result in the relocation or construction of new or expanded utility and service systems, the construction or relocation of which could cause significant environmental effects. In addition, the proposed project would have sufficient water supplies available and wastewater generated from the proposed project would not cause the City of Livermore Water Reclamation Plant to violate any wastewater treatment requirements. The proposed project would not generate solid waste in excess of State or local standards or otherwise impair the attainment of solid waste reduction goals, and would be served by a landfill with sufficient capacity to accommodate the project's waste disposal needs. Further, the proposed project would comply with all federal, State, and local management and reduction statutes and regulations related to solid waste. Therefore, project-related impacts with respect to utilities and service systems would be **less than significant** and are not evaluated further in this Draft EIR.

6.3.10 Wildfire

As discussed in Section 3.20 of the Initial Study, the project site and surrounding area are not within a Very High Fire Hazard Severity Zone or within a State Responsibility Area. The proposed project would not alter or block adjacent roadways, and implementation of the proposed project would not be expected to impair the function of nearby emergency evacuation routes. In addition, the proposed project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk, and would not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. Therefore, project-related impacts with respect to wildfire would be **less than significant** and are not evaluated further in this Draft EIR.

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