# Harbor View Project

SCH# 2022080303

## Draft Environmental Impact Report

Prepared for
City of Pittsburg

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# Draft Environmental Impact Report

SCH# 2022080303

## Lead Agency

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# 1. Introduction

# 1. INTRODUCTION

## 1.1 TYPE AND PURPOSE OF THE EIR

The Harbor View Project (proposed project) Environmental Impact Report (EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970, Public Resources Code (PRC) Sections 21000-21178, as amended, and the Guidelines for Implementation of the California Environmental Quality Act, California Code of Regulations (CCR), Title 14, Sections 15000-15387 (CEQA Guidelines). The City of Pittsburg is the Lead Agency for the environmental review of the proposed project evaluated herein and has the principal responsibility for approving the project. As required by Section 15121 of the CEQA Guidelines, this EIR will (a) inform public agency decision-makers, and the public generally, of the environmental consequences of approving the proposed project, (b) identify possible ways to minimize the significant adverse environmental effects, and (c) describe reasonable and feasible project alternatives which reduce environmental effects. The public agency shall consider the information in the EIR along with other information that may be presented to the agency.

As provided in the CEQA Guidelines Section 15021, public agencies are charged with the duty to avoid or minimize environmental damage where feasible. The public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social issues. CEQA requires the preparation of an EIR prior to approving any project that may have a significant effect on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]). With respect to the proposed project, the City has determined that the proposed development is a "project" within the definition of CEQA, which has the potential for resulting in significant environmental effects.

The Lead Agency is required to consider the information in the EIR along with any other available information in deciding whether to approve the application. The basic requirements for an EIR include discussions of the environmental setting, environmental impacts, mitigation measures, alternatives, growth inducing impacts, and cumulative impacts.

The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a *project-level EIR* pursuant to CEQA Guidelines Section 15161, which is an analysis that examines the environmental impacts of a specific development project. A *project-level EIR* focuses primarily on the changes in the environment that would result from the development of the project, and examines all phases of the project including planning, construction, and operation.

### Background

The project site is currently vacant. However, the project site was previously occupied since the mid-1920s by a manufacturing plant that produced asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. Manufacturing of asbestos-containing materials ceased in 1980 and commercial-grade roofing materials were manufactured at the plant until 2003, when operations terminated. Several environmental investigations were conducted at

the former manufacturing site, beginning in 1986 and continuing through 2005, and areas of potential concern associated with asbestos-containing materials were identified.

The selected remedy for the environmental concerns at the project site was the removal of asbestos-containing materials and petroleum hydrocarbon-affected soil from the site and placement in engineered containment berms along the eastern boundary of the project site. All remedial actions have been completed and approved by the Department of Toxic Substances Control (DTSC); however, ongoing maintenance and monitoring is required as described in the Site Operation and Maintenance Plan until the DTSC authorizes its modification or discontinuation. Further information regarding the remediation of the project site is available in Chapter 3, Project Description, of this EIR.

A planning application for the proposed project was submitted to the City on October 19, 2021 and an Initial Study was prepared for the proposed project in August, 2022 which identified potentially significant impacts. Based on the conclusions of the Initial Study, an EIR is required.

## 1.2 PROJECT SUMMARY

The approximately 20.5-acre project site, identified by Assessor's Parcel Number 073-050-001, is located southwest of the intersection of East 3rd Street and Harbor Street, approximately one mile north of State Route (SR) 4 in the City of Pittsburg, California (see Figure 3-1 in Chapter 3, Project Description, of this EIR). Currently, the project site consists primarily of ruderal grasses and containment berms along the eastern portion of the site. The site is absent of structures. Existing land uses in the vicinity of the site include industrial uses to the east, across Harbor Street; single-family residences to the west and to the south, across East 8th Street; a portion of the 8th Street Greenbelt and a tot lot to the south; and undeveloped land to the north, across East 3rd Street, beyond which is the New York Slough (see Figure 3-2 in Chapter 3, Project Description, of this EIR). The project site is designated Downtown Commercial and Downtown Medium Density Residential by the General Plan land use map and the site contains approximately 1.62 acres zoned Pedestrian Commercial (CP) and approximately 18.88 acres zoned Downtown Medium Density Residential – Limited Overlay (RMD-O).

The proposed project would include subdivision of the project site and subsequent development of 227 residential units. The 20 northernmost units would be live/work duplexes with 420 square feet of ground floor commercial space and/or private work space. Landscaping and trees would be provided throughout the site, and a park is proposed at the Harbor Street entrance. A bioretention area and landscape features are proposed on the western edge of the berm. In addition, existing overhead utility lines along the project frontage on East 3rd Street would be removed and replaced underground. The project would require City approval of a Rezone, Vesting Tentative Map, Design Review, and Master Sign Program.

A full description of the proposed project is included in Chapter 3, Project Description, of this EIR.

## 1.3 EIR PROCESS

The EIR process begins with the decision by the Lead Agency to prepare an EIR, either during a preliminary review of a project or at the conclusion of an Initial Study. Once the decision is made to prepare an EIR, the Lead Agency sends a Notice of Preparation (NOP) to appropriate government agencies and, when required, to the State Clearinghouse (SCH) in the Office of Planning and Research (OPR), which will ensure that responsible and trustee State agencies reply within the required time. The SCH assigns an identification number to the project, which

then becomes the identification number for all subsequent environmental documents on the project. Commenting agencies have 30 days to respond to the NOP and provide information regarding alternatives and mitigation measures they wish to have explored in the Draft EIR and to provide notification regarding whether the agency will be a responsible agency or a trustee agency for the project.

Upon completion of the Draft EIR and prior to circulation to State and local agencies and interested members of the public, a Notice of Completion (NOC) is filed with the SCH and a public Notice of Availability (NOA) is published to inform interested parties that a Draft EIR is available for agency and public review. In addition, the notice provides information regarding the location where copies of the Draft EIR are available for public review and any public meetings or hearings that are scheduled. The Draft EIR is circulated for a minimum period of 45 days, during which time reviewers may submit comments on the document to the Lead Agency. The Lead Agency must respond to comments in writing. If significant new information, as defined in CEQA Guidelines Section 15088.5, is added to an EIR after public Notice of Availability is given, but before certification of the EIR, the revised EIR or affected chapters must be recirculated for an additional public review period with related comments and responses.

A Final EIR will be prepared, containing public comments on the Draft EIR and written responses to those comments, as well as a list of changes to the Draft EIR text necessitated by public comments, as warranted. Before approving a project, the Lead Agency shall certify that the EIR (consisting of the Draft EIR and Final EIR) has been completed in compliance with CEQA, and that the EIR has been presented to the decision-making body of the Lead Agency, which has reviewed and considered the EIR. The Lead Agency shall also certify that the EIR reflects the Lead Agency's independent judgment and analysis.

The findings prepared by the Lead Agency must be based on substantial evidence in the administrative record and must include an explanation that bridges the gap between evidence in the record and the conclusions required by CEQA. If the decision-making body elects to proceed with a project that would have unavoidable significant impacts, then a Statement of Overriding Considerations explaining the decision to balance the benefits of the project against unavoidable environmental impacts must be prepared.

## 1.4 SCOPE OF THE EIR

This EIR constitutes a project-level analysis for the proposed project and, pursuant to CEQA Guidelines Section 15161, covers "all phases of the project including planning, construction, and operation." State CEQA Guidelines Section 15126.2(a) states, in pertinent part:

> An EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced.

The following environmental issue areas are addressed in the EIR:

- Air Quality and Greenhouse Gas Emissions;
- Cultural and Tribal Cultural Resources;
- Geology and Soils;

- Hydrology and Water Quality; and
- Transportation.

In addition to the foregoing resource areas, an Initial Study was prepared and attached to the NOP for the proposed project to present information regarding resource areas that the proposed project has been found not to have the potential to affect (see Appendix A). A summary of each environmental issue addressed in the Initial Study is provided in Chapter 4.0, Introduction to the Analysis, of this EIR.

The evaluation of effects is presented on a resource-by-resource basis in Chapters 4.1 through 4.5 of this EIR. Each chapter is divided into the following four sections: Introduction, Existing Environmental Setting, Regulatory Context, and Impacts and Mitigation Measures. Impacts that are determined to be significant in Chapters 4.1 through 4.5, and for which feasible mitigation measures are not available to reduce those impacts to a less-than-significant level, are identified as *significant and unavoidable*. Alternatives to the proposed project are discussed in Chapter 5 of the EIR. Chapter 6 of the EIR presents a discussion of growth-inducing impacts, summary of cumulative impacts, and significant irreversible environmental changes associated with the project.

## 1.5 SIGNIFICANCE CRITERIA

The CEQA Guidelines define 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, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance." In addition, the Guidelines state, "An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant." (CEQA Guidelines Section 15382).

The level of significance of an impact prior to mitigation is included at the end of each impact discussion throughout the technical chapters of this EIR. The following levels of significance prior to mitigation are used in this EIR:

- No Impact: Impacts that are not considered adverse.
- Less than Significant: Impacts that may be considered adverse, but that do not exceed the specified thresholds of significance;
- Significant: Impacts that exceed the defined standards of significance and require mitigation;
- Less than Cumulatively Considerable: Where cumulative impacts have been identified, but the project's incremental contribution towards the cumulative impacts would not be considered significant; and
- Cumulatively Considerable: Where cumulative impacts have been identified and the project's incremental contribution towards the cumulative impacts would be considered significant.

If an impact is determined to be significant or cumulatively considerable, mitigation is included in order to reduce the specific impact to the maximum extent feasible. A statement of the level of significance of an impact after mitigation is also included in each impact discussion throughout the technical chapters of this EIR. The following levels of significance after implementation of mitigation are used in the EIR:

- Less than Significant: Impacts that exceed the defined standards of significance but can be eliminated or reduced to a less-than-significant level through the implementation of feasible mitigation measures;
- Less than Cumulatively Considerable: Where the project's incremental contribution towards cumulative impacts would be eliminated or reduced to a less than cumulatively considerable level through the implementation of feasible mitigation measures; and
- Significant and Unavoidable: An impact (project-level or cumulative) that cannot be eliminated or reduced to a less-than-significant or less than cumulatively considerable level through the implementation of feasible mitigation measures.

Each environmental area of analysis uses a distinct set of significance criteria. Where measurable and explicit quantification of significance is identified, such as exceedance of a vehicle miles traveled (VMT) standard, this measurement is used to assess the level of significance of a particular impact in this EIR. If criteria for determining significance relative to a specific environmental resource impact are not identified in the CEQA Guidelines, criteria were developed for this EIR.

The significance criteria are identified at the beginning of the Impacts and Mitigation Measures section in each of the technical chapters of this EIR. Although significance criteria are necessarily different for each resource considered, the provided significance levels ensure consistent evaluation of impacts for all resource areas evaluated.

## 1.6 NOTICE OF PREPARATION AND SCOPING

In accordance with CEQA Guidelines Section 15082, an NOP was circulated to the public, local, State and federal agencies, and other known interested parties for a 30-day public and agency review period from August 12, 2022 to September 12, 2022 (see Appendix A). The purpose of the NOP was to provide notification that an EIR for the proposed project was being prepared and to solicit public input on the scope and content of the document.

In addition, pursuant to CEQA Guidelines Section 15082, the City held an NOP scoping meeting online using Zoom during the public review period on August 23, 2022 at 9:00 AM, for the purpose of receiving comments on the scope of the environmental analysis to be prepared for the proposed project. Agencies and members of the public were invited to attend and provide input on the scope of the EIR. Four written letters were submitted during the NOP public review period. The comment letters are provided as Appendix B to this EIR. All comments were taken into consideration during the preparation of this EIR, and a summary of the NOP comments received is provided in Section 1.7 below.

## 1.7 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

During the NOP scoping meeting and public review period, the City received four written comment letters. A copy of each letter is provided in Appendix B of this EIR. The comment letters received during the NOP public review period were authored by the following representatives of public agencies and environmental groups:

**Public Agencies**

- Mt. Diablo Unified School District – Dr. Lisa Gonzales;
- Pacific Gas and Electric Company – Plan Review Team; and
- Native American Heritage Commission – Cody Campagne.

### Groups and General Public

- Earthjustice – Matt Vespa and Rebecca Barker.

The following list, categorized by issue, summarizes the concerns brought forth in the comments received on the scope of the EIR:

| | |
|---|---|
| **Introduction to Analysis (and Initial Study)** *(Chapter 4.0 [and Appendix A to this EIR])* | Concerns related to:<br>• Local school district capacity.<br>• Compliance with tribal consultation requirements pursuant to Assembly Bill 52. |
| **Air Quality and GHG Emissions** *(Chapter 4.1)* | Concerns related to:<br>• The feasibility of building electrification.<br>• Greenhouse gas emissions associated with the combustion of natural gas. |

All of these issues are addressed in this EIR, in the relevant sections identified in the first column, as well as in the Initial Study, attached to the NOP, and included in Appendix A.

## 1.8 DRAFT EIR AND PUBLIC REVIEW

This Draft EIR is being circulated for public review and comment for a period of 45 days. During this period, the general public, organizations, and agencies can submit comments to the Lead Agency on the Draft EIR's accuracy and completeness. Release of the Draft EIR marks the beginning of a 45-day public review period pursuant to CEQA Guidelines Section 15105. The public can review the Draft EIR online at:

https://www.pittsburgca.gov/services/community-development/planning/public-reviews

In addition, the Draft EIR is available at the following address during normal business hours:

City of Pittsburg Community and Economic Development Department
65 Civic Avenue
Pittsburg, CA 94565

All comments or questions regarding the Draft EIR should be addressed to:

Kelsey Gunter, Associate Planner
City of Pittsburg Community and Economic Development Department
65 Civic Avenue
Pittsburg, CA 94565
(925) 252-4824
kgunter@pittsburgca.gov

## 1.9 ORGANIZATION OF THE DRAFT EIR

The EIR is organized into the following sections:

### Chapter 1 – Introduction

The Introduction chapter of the EIR provides an introduction and overview describing the intended use of the EIR and the review and certification process, as well as summaries of the chapters

included in the EIR and summaries of the issues and concerns received from the public and public agencies during the NOP review period.

### Chapter 2 – Executive Summary

The Executive Summary chapter of the EIR summarizes the elements of the project and the environmental impacts that would result from implementation of the proposed project, describes proposed mitigation measures, and indicates the level of significance of impacts after mitigation. In addition, the Executive Summary includes a summary of the project alternatives and areas of known controversy.

### Chapter 3 – Project Description

The Project Description chapter of the EIR provides a detailed description of the proposed project, including the project's location, background information, objectives, and technical characteristics.

### Chapter 4.0 – Introduction to the Analysis

The Introduction to the Analysis chapter of the EIR provides a list of issues addressed in the EIR and presents the format of each technical chapter. Additionally, the chapter summarizes the environmental issues that were addressed in the Initial Study and, therefore, will not be discussed further in the EIR.

### Chapter 4.1 – Air Quality and Greenhouse Gas Emissions

The Air Quality and Greenhouse Gas Emissions chapter of the EIR describes the potential impacts of construction and operation of the proposed project related to air quality and global climate change. The chapter is primarily based on information and guidance from the Bay Area Air Quality Management District's (BAAQMD's) California Environmental Quality Act Air Quality Guidelines and adopted CEQA Thresholds for Evaluating the Significance of Climate Change Impacts From Land Use Projects and Plans, as well as the City of Pittsburg General Plan and associated EIR. In addition, emissions modeling was prepared using the California Emissions Estimator Model (CalEEMod) software version 2020.4.0.

### Chapter 4.2 – Cultural and Tribal Cultural Resources

The Cultural and Tribal Cultural Resources chapter of the EIR evaluates archaeological, historical, and tribal cultural resources known to be located within the project area. The chapter summarizes the existing setting with respect to the aforementioned resources, identifies thresholds of significance and project impacts to such resources, and sets forth mitigation measures that would be necessary to reduce impacts to the maximum extent feasible. In addition, the chapter discusses the results of Assembly Bill (AB) 52 consultation with local Native American tribes.

### Chapter 4.3 – Geology and Soils

The Geology and Soils chapter of the EIR describes the geologic and soil characteristics of the project site and evaluates the extent to which implementation of the proposed project could be affected by seismic hazards such as ground shaking, liquefaction, and expansive/unstable soils. In addition, the chapter identifies any known paleontological resources or unique geologic features within the project area and evaluates any potential adverse effects of the proposed project on such resources.

### Chapter 4.4 – Hydrology and Water Quality

The Hydrology and Water Quality chapter of the EIR describes existing drainage and stormwater conditions for the project site, as well as current stormwater flows and stormwater infrastructure,

and potential for flooding. The chapter evaluates potential impacts of the proposed project with respect to increases in impervious surface area and associated stormwater flows, degradation of water quality, groundwater recharge, and on- and off-site flooding.

### Chapter 4.5 – Transportation

The Transportation chapter of the EIR discusses the existing transportation network and evaluates the proposed project's potential impacts to alternative modes of transportation, such as pedestrian, bicycle and transit facilities. In addition, the chapter discusses the project's potential to conflict with applicable programs, policies, and ordinances addressing the circulation system and evaluates vehicle safety hazards and emergency access. VMT is the metric for assessing transportation impacts under CEQA. Accordingly, the chapter presents project generated VMT and compares it to the Contra Costa Transportation Authority's current guidance for determining the significance of VMT impacts.

### Chapter 5 – Alternatives Analysis

The Alternatives Analysis chapter of the EIR describes and evaluates the alternatives to the proposed project. It should be noted that the alternatives are analyzed at a level of detail less than that of the proposed project; however, the analyses include sufficient detail to allow for a meaningful comparison of impacts.

### Chapter 6 – Statutorily Required Sections

The Statutorily Required Sections chapter of the EIR provides discussions required by CEQA regarding impacts that would result from the proposed project, including a summary of cumulative impacts, potential growth-inducing impacts, significant and unavoidable impacts, and significant irreversible changes to the environment.

### Chapter 7 – References

The References chapter of the EIR provides bibliographic information for all references and resources cited.

### Chapter 8 – EIR Authors and Persons Consulted

The EIR Authors and Persons Consulted chapter of the EIR lists EIR and technical report authors who provided technical assistance in the preparation and review of the EIR.

### Appendices

The Appendices include the NOP with the Initial Study attached, comments received during the NOP comment period, and technical reports prepared for the proposed project.

## 1.10 FINAL EIR AND EIR CERTIFICATION

Upon completion of the public review period, a Final EIR will be prepared that will include written comments on the Draft EIR received during the public review period and responses to those comments. The Final EIR will also include the Mitigation Monitoring and Reporting Plan (MMRP) prepared in accordance with PRC Section 21081.6. The Final EIR will include any revisions to the Draft EIR made in response to public comments. The Draft EIR and Final EIR together will comprise the EIR for the proposed project. Before the City can consider approval of the project, it must first certify that the EIR has been completed in compliance with CEQA, that the City Council has reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the City. The City will also be required to adopt Findings of Fact, and, for any impacts determined to be significant and unavoidable, adopt a Statement of Overriding Considerations.

# 2. Executive Summary

# 2. EXECUTIVE SUMMARY

## 2.1 INTRODUCTION

The Executive Summary chapter of the EIR provides an overview of the proposed project (see Chapter 3, Project Description, for further details) and provides a table summary of the conclusions of the environmental analysis provided in Chapters 4.1 through 4.5. This chapter also summarizes the alternatives to the proposed project that are described in Chapter 5, Alternatives Analysis, and identifies the Environmentally Superior Alternative. Table 2-1 provides a summary of the environmental impacts associated with the proposed project, and incudes the mitigation measures described throughout this EIR that would reduce the associated impacts.

## 2.2 SUMMARY DESCRIPTION OF THE PROPOSED PROJECT

The project site consists of approximately 20.5 acres and is located at 420 East 3rd Street, southwest of the intersection of East 3rd Street and Harbor Street, approximately one mile north of State Route (SR) 4 in the City of Pittsburg, California. The project site is generally bound by East 3rd Street to the north, Harbor Street to the east, and the 8th Street Greenbelt to the south. Currently, the project site consists primarily of ruderal grasses and is absent of structures. A 3.46-acre berm area runs north-to-south along the eastern boundary of the project site. Scattered trees are located along the west and south boundaries of the project site.

The proposed project would include the subdivision of the project site and subsequent construction of 227 residential units, as well as associated internal roadways, bioretention facilities, and open space/landscaping. The 20 northernmost lots, which generally front East 3rd Street, would be developed with mixed-use live/work duplexes. The ground floor of each unit would provide approximately 420 square feet (sf) of commercial space and/or private work space, ultimately up to the discretion of the property owner. Immediately south of the proposed live/work units would be 101 generally 36-foot by 55-foot single-family lots, south of which would be 106 generally 42-foot by 55-foot single-family lots.

Site access would be provided by one new 27-foot driveway located off of East 3rd Street from the north, and one new 26-foot driveway located off of Harbor Street from the east. A stormwater detention basin is proposed west of the driveway entrance from Harbor Street, with two additional detention basins proposed to the north and south of the driveway entrance. The northern basin would extend from East 3rd Street along the berm area to the driveway entrance, while the southern basin would extend south along the berm area from the driveway entrance to the southernmost residential unit.

Implementation of the proposed project would require the following discretionary actions by the City of Pittsburg:

- Certification of the Environmental Impact Report;
- Rezone of the project site to modify the existing Limited Overlay;
- Vesting Tentative Map;

- Design Review; and
- Master Sign Program.

Please refer to Chapter 3, Project Description, of this EIR for a detailed description of the proposed project and entitlements, as well as a full list of the project objectives.

## 2.3 ENVIRONMENTAL IMPACTS AND PROPOSED AND RECOMMENDED MITIGATION

Under CEQA, a significant effect on the environment is defined 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, mineral, flora, fauna, ambient noise, and objects of historic or aesthetic significance. Mitigation measures must be implemented as part of the proposed project to reduce potential adverse impacts to a less-than-significant level. Such mitigation measures are noted in this EIR and are found in the following technical chapters: Air Quality and Greenhouse Gas Emissions; Cultural and Tribal Cultural Resources, Geology and Soils, Hydrology and Water Quality, and Transportation. The mitigation measures presented in the EIR will form the basis of the Mitigation Monitoring and Reporting Program. Any impact that remains significant after implementation of mitigation measures is considered a significant and unavoidable impact.

A summary of the identified impacts in the technical chapters of the EIR is presented in Table 2-1, included at the end of this chapter.

## 2.4 SUMMARY OF PROJECT ALTERNATIVES

The following section presents a summary of the alternatives evaluated in this EIR for the proposed project, which include the following:

A. No Project Alternative; and
B. Increased Commercial Alternative.

For a more thorough discussion of project alternatives that were evaluated in this EIR, including alternatives considered but dismissed, please refer to Chapter 5, Alternatives Analysis.

### A. No Project Alternative

Under the No Project Alternative, development of commercial and residential uses on the site would not occur. The project site would remain as is: undeveloped and occupied by scattered trees and ruderal grasses, as well as a 3.46-acre berm area that extends north-to-south along the eastern boundary of the project site. However, the alternative's nullification of the proposed project would not implement any of the project objectives. The No Project Alternative would result in fewer impacts related to all environmental impact areas as compared to the proposed project.

### B. Increased Commercial Alternative

The Increased Commercial Alternative would involve buildout of the project site similarly to the proposed project, with the exception of the development of the northernmost portion of the project site with purely commercial uses. Rather than construct the 20 proposed live/work duplexes, the site's frontage along East 3rd Street would be developed with local-serving commercial uses to the maximum allowed 1.0 floor area ratio (FAR) for non-residential uses under the existing Downtown Commercial land use designation. The remainder of the project site would be developed with a reduced number of residential units as compared to the proposed project.

Access routes and the internal roadway would remain as proposed under the Increased Commercial Alternative. The Increased Commercial Alternative would result in fewer impacts related to air quality and greenhouse gas (GHG) emissions and transportation, and similar impacts to all other environmental impact areas.

### Environmentally Superior Alternative

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. Section 15126(e)(2) of the CEQA Guidelines requires that an environmentally superior alternative be designated and states, "If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." Although the No Project Alternative would result in fewer impacts related to all environmental impact areas, the Alternative would not meet any of the project objectives. The Increased Commercial Alternative would result in fewer impacts related to air quality and GHG emissions and transportation, and similar impacts to all other environmental impact areas. Because the Alternative would include residential development, more of the project objectives would be generally fulfilled, but to a lesser extent than the proposed project.

As discussed in further detail in Chapter 5, Alternative Analysis, of this EIR, because the No Project Alternative cannot be selected as the environmentally superior alternative pursuant to Section 15126(e)(2) of the CEQA Guidelines, the Increased Commercial Alternative would be considered the environmentally superior alternative to the proposed project.

## 2.5 AREAS OF KNOWN CONTROVERSY

Areas of controversy that were identified in NOP comment letters, and are otherwise known for the project area, include the following:

- Concerns related to the impacts to the local school district related to student capacity;
- GHG and air quality impacts associated with connections to the natural gas system; and
- Concerns related to feasibility of building electrification.

## 2.6 SUMMARY OF IMPACTS AND MITIGATION MEASURES

A summary of the identified impacts in the Initial Study and in the technical chapters of the EIR is presented in Table 2-1. In Table 2-1, the proposed project impacts are identified for each technical chapter of the EIR, as well as for impact areas which were determined to require mitigation in the Initial Study. In addition, Table 2-1 includes the level of significance of each impact, any mitigation measures required for each impact, and the resulting level of significance after implementation of mitigation measures for each impact.

**Table 2-1**
**Summary of Impacts and Mitigation Measures**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| ***4.1 Air Quality and Greenhouse Gas Emissions*** | | | |
| **4.1-1 Conflict with or obstruct implementation of the applicable air quality plan during project construction.** | LS | *None required.* | N/A |
| **4.1-2 Conflict with or obstruct implementation of the applicable air quality plan during project operation.** | LS | *None required.* | N/A |
| **4.1-3 Expose sensitive receptors to substantial pollutant concentrations.** | S | *4.1-3 Prior to grading permit approval, the project applicant shall show on the plans via notation that the contractor shall ensure that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction project, including owned, leased, and subcontractor vehicles, shall not generate average annual $PM_{2.5}$ emissions in excess of 0.023 tons $PM_{2.5}$ per year. The $PM_{2.5}$ reduction shall be achieved by requiring a combination of engine Tier 3 or Tier 4 off-road construction equipment or the use of hybrid, electric, or alternatively fueled equipment.*<br><br>*In addition, all off-road equipment working at the construction site must be maintained in proper working condition according to manufacturer's specifications. Idling shall be limited to five minutes or less in accordance with the Off-Road Diesel Fueled Fleet Regulation as required by CARB. Portable equipment over 50 horsepower must have either a valid District Permit to Operate (PTO) or a valid statewide Portable Equipment Registration* | LS |

N/A = *Not Applicable*; N = *No Impact;* LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

**Table 2-1**
**Summary of Impacts and Mitigation Measures**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | *Program (PERP) placard and sticker issued by CARB.*<br><br>*The aforementioned requirements shall be noted on Grading Plans and submitted for review and approval by the City of Pittsburg Planning Division.* | |
| **4.1-4 Result in other emissions (such as those leading to odors) affecting a substantial number of people.** | LS | *None required.* | N/A |
| **4.1-5 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).** | LCC | *None required.* | N/A |
| **4.1-6 Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.** | CC, S | *4.1-6(a)* *Prior to the approval of project improvement plans, the applicant shall implement the following measure:*<br><br>• *Consistent with the BAAQMD's Buildings standard a., natural gas shall be prohibited in proposed structures.*<br><br>*Compliance with the foregoing measure shall be ensured by the City of Pittsburg Planning Division.* | CC, SU |

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**Table 2-1**
**Summary of Impacts and Mitigation Measures**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | *4.1-6(b)* *Implement Mitigation Measure 4.5-3.* | |
| ***4.2 Cultural and Tribal Cultural Resources*** | | | |
| **4.2-1 Cause a substantial adverse change in the significance of a historical resource or a unique archeological resource pursuant to CEQA Guidelines, Section 15064.5 or disturb human remains, including those interred outside of dedicated cemeteries.** | S | *4.2-1(a)* *Prior to approval of Improvement Plans, plans shall be reviewed by the Pittsburg Community and Economic Development Department, Planning Division, to ensure the following note is included:*<br><br>*If any prehistoric or historic artifacts, or other indications of cultural deposits are found once ground disturbing activities are underway, all work within the vicinity of the find(s) shall cease, the Community and Economic Development Department, Planning Division, shall be notified, and the find(s) shall be immediately evaluated by a qualified archaeologist. If the find is determined to be a historical or unique paleontological or archaeological resource, contingency funding and a time allotment to allow for implementation of avoidance measures or appropriate mitigation shall be made available (CEQA Guidelines Section 15064.5). Work may continue on other parts of the project site while historical or unique archaeological resource mitigation takes place (PRC Sections 21083 and 21087).*<br><br>*4.2-1(b)* *Prior to approval of Improvement Plans, plans shall be reviewed by the Pittsburg Community and Economic Development Department, Planning Division, to ensure the following note is included:* | LS |

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**Table 2-1**
**Summary of Impacts and Mitigation Measures**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | *In the event of the accidental discovery or recognition of any human remains, further excavation or disturbance of the find or any nearby area reasonably suspected to overlie adjacent human remains shall not occur until compliance with the provisions of CEQA Guidelines Section 15064.5(e)(1) and (2) has occurred. The Guidelines specify that in the event of the discovery of human remains other than in a dedicated cemetery, no further excavation at the site or any nearby area suspected to contain human remains shall occur until the County Coroner has been notified to determine if an investigation into the cause of death is required. If the coroner determines that the remains are Native American, then, within 24 hours, the Coroner must notify the Native American Heritage Commission, which in turn will notify the most likely descendants who may recommend treatment of the remains and any grave goods. If the Native American Heritage Commission is unable to identify a most likely descendant or most likely descendant fails to make a recommendation within 48 hours after notification by the Native American Heritage Commission, or the landowner or his authorized agent rejects the recommendation by the most likely descendant and mediation by the Native American Heritage Commission fails to provide a measure acceptable to the landowner, then the landowner or his authorized representative shall rebury the human remains and grave goods with* | |

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**Table 2-1**
**Summary of Impacts and Mitigation Measures**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | *appropriate dignity at a location on the property not subject to further disturbances. Should human remains be encountered, a copy of the resulting County Coroner report noting any written consultation with the Native American Heritage Commission shall be submitted as proof of compliance to the City's Community and Economic Development Department, Planning Division.* | |
| **4.2-2 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k); or a resource determined by the Lead Agency, in its discretion and supported by substantial** | S | *4.2-2 Implement Mitigation Measures 4.2-1(a) and 4.2-1(b).* | LS |

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**Table 2-1**
**Summary of Impacts and Mitigation Measures**

| | Impact | Level of Significance Prior to Mitigation | | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|---|---|
| | **evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1.** | | | | |
| **4.2-3** | **Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.** | S | *4.2-3* | *Implement Mitigation Measure 4.2-1(a).* | LS |
| **4.2-4** | **Cause a cumulative loss of cultural resources.** | LS | *None required.* | | N/A |
| | ***4.3 Geology and Soils*** | | | | |
| **4.3-1** | **Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, or strong seismic ground shaking.** | LS | *None required.* | | N/A |
| **4.3-2** | **Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction, or landslides; be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site** | S | *4.3-2* | *Prior to Grading Permit issuance, the applicant shall submit a final design-level geotechnical report of the project site that addresses soil stability including liquefaction, lateral spreading, subsidence, and soil expansion. The report shall identify any on-site geotechnical hazards and provide design recommendations for such conditions. The design-level geotechnical report shall be reviewed and approved by the Director of Public Works/City Engineer. A qualified Geotechnical Engineer shall ensure that all geotechnical recommendations specified in the design-level geotechnical report are* | LS |

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**Table 2-1**
**Summary of Impacts and Mitigation Measures**

| | Impact | Level of Significance Prior to Mitigation | | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|---|---|
| | **landslide, lateral spreading, subsidence, liquefaction, or collapse; or be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code creating substantial direct or indirect risks to life or property.** | | | *properly incorporated in the project design.* | |
| **4.3-3** | **Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater.** | N | *None required.* | | N/A |
| **4.3-4** | **Cumulative increase in the potential for geological related impacts and hazards.** | LS | *None required.* | | N/A |
| | ***4.4 Hydrology and Water Quality*** | | | | |
| **4.4-1** | **Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during project construction or operation.** | S | *4.4-1(a)* | *Prior to issuance of grading permits, the applicant shall prepare a Storm Water Pollution Prevention Plan (SWPPP). The developer shall file the Notice of Intent (NOI) and associated fee to the SWRCB. The SWPPP shall serve as the framework for identification, assignment, and implementation of BMPs. The SWPPP shall be submitted to the Director of Public Works/City Engineer for review and approval and shall remain on the project site during all phases of construction. Following implementation of the SWPPP, the contractor shall subsequently demonstrate the SWPPP's* | LS |

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**Table 2-1**
**Summary of Impacts and Mitigation Measures**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | *effectiveness and provide for necessary and appropriate revisions, modifications, and improvements to reduce pollutants in stormwater discharges to the maximum extent practicable. The contractor shall implement BMPs to reduce pollutants in stormwater discharges to the maximum extent practicable.*<br><br>*4.4-1(b)* *In addition to a SWPPP, prior to issuance of grading permits, the project applicant shall create an interim and final erosion and sediment control plan which shall include a delineation and brief description of the measures to be undertaken to retain sediment on the site, including but not limited to, the design and specifications of berms and sediment detention basins and a schedule for maintenance. The plan shall also contain a delineation and brief description of the surface runoff and erosion control measures, including but not limited to, types and method of applying mulches, and designs and specifications for diverters, dikes, and drains. The plan shall be reviewed and approved by the City Community and Economic Development Department.*<br><br>*4.4-1(c)* *The project applicant shall submit a complete Stormwater Control Plan and Report compliant with the requirements set forth in the City's most current NPDES permit. The C.3 treatment facilities shall be adequately sized to treat the stormwater runoff from the associated drainage management areas. The* | |

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**Table 2-1**
**Summary of Impacts and Mitigation Measures**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | *grading and/or building plans shall include drawings and specifications necessary to implement all measures in the approved Stormwater Control Plan. Design features shall incorporate low impact development design standards as outlined in the most current edition of the Contra Costa Clean Water Program's C.3 Guidebook. All plans shall be reviewed and approved by the City Community and Economic Development Department.* | |
| **4.4-2 Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin or conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.** | LS | *None required.* | N/A |
| **4.4-3 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: substantially increase the rate or amount of surface** | S | *4.4-3 Implement Mitigation Measures 4.4-1(a) through (c).* | LS |

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**Table 2-1**
**Summary of Impacts and Mitigation Measures**

| | Impact | Level of Significance Prior to Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|---|
| | **runoff in a manner which would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; or create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.** | | | |
| **4.4-4** | **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows.** | LS | *None required.* | N/A |
| **4.4-5** | **In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.** | LS | *None required.* | N/A |
| **4.4-6** | **Cumulative impacts related to the violation of water quality standards or waste discharge** | LS | *None required.* | N/A |

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**Table 2-1**
**Summary of Impacts and Mitigation Measures**

| | Impact | Level of Significance Prior to Mitigation | | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|---|---|
| | **requirements, groundwater quality, management, and recharge, and impacts resulting from the alteration of existing drainage patterns.** | | | | |
| | ***4.5 Transportation*** | | | | |
| **4.5-1** | **Conflict with a program, plan, ordinance, or policy addressing the circulation system during construction activities.** | S | *4.5-1* | *Prior to grading permit issuance, the project applicant shall prepare a Construction Traffic Plan for review and approval by the City Engineer. As part of the plan, the applicant shall ensure the following:*<br>• *Truck drivers shall be notified of and required to use the most direct route between the site and SR 4, as determined by the City Engineer;*<br>• *All ingress and egress shall occur only at the main driveways to the project site and construction activities shall include installation of temporary (or ultimate) traffic signals as determined by the City Engineer;*<br>• *As part of preparation of the Construction Traffic Plan, the applicant shall determine if access to the Route 387 bus stop on the project site's frontage would be disrupted by construction activities. If the Route 387 bus stop would not be disrupted, then further mitigation is not required. If disruption to the Route 387 bus stop would occur, the bus stop shall be temporarily relocated in such a way that transit services shall not be* | LS |

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**Table 2-1**
**Summary of Impacts and Mitigation Measures**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | *disrupted, in coordination with Tri Delta Transit and the City Engineer;*<br>• *Designated travel routes for large vehicles shall be monitored and controlled by flaggers for large construction vehicle ingress and egress;*<br>• *Warning signs indicating frequent truck entry and exit shall be posted on East 3rd Street and Harbor Street; and*<br>• *Any debris and mud on nearby streets caused by trucks shall be monitored daily and shall include a street cleaning program.*<br><br>*The plan shall indicate how parking for construction workers will be provided during construction. If the project is built in phases, each phase shall be subject to a Traffic Control Plan and oversight by the City Engineer.* | |
| **4.5-2 Conflict with a program, plan, ordinance or policy addressing the circulation system during operations.** | LS | *None required.* | N/A |
| **4.5-3 Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).** | S | *4.5-3* *Prior to the issuance of residential building permits, the project applicant shall develop a Travel Demand Management Plan (TDM Plan) for the proposed project, including any anticipated phasing, and shall submit the TDM Plan to the City Planning Division for review and approval. The TDM Plan shall identify trip reduction strategies, as well as mechanisms for funding and overseeing the delivery of trip reduction* | SU |

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**Table 2-1**
**Summary of Impacts and Mitigation Measures**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | *programs and strategies. Trip reduction strategies applicable to the proposed project may include, but are not limited to:*<br><br>• *Increase transit accessibility;*<br>• *Provide traffic calming measures;*<br>• *Provide carpooling programs;*<br>• *Implement a car-sharing program;*<br>• *Provide a transit riders guide;*<br>• *Provide an online TDM information center;*<br>• *Increase bicycle and pedestrian facilities/amenities;*<br>• *Free trial rides on transit services; and*<br>• *Implement a subsidized or discounted transit program.* | |
| **4.5-4 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) or result in inadequate emergency access.** | LS | *None required.* | N/A |
| **4.5-5 Result in cumulative conflicts or inconsistencies with CEQA Guidelines Section 15064.3, subdivision (b).** | CC, S | *4.5-5 Implement Mitigation Measure 4.5-3.* | CC, SU |

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# 3. Project Description

# 3. PROJECT DESCRIPTION

## 3.1 INTRODUCTION

Section 15125 of CEQA Guidelines requires an Environmental Impact Report (EIR) to include a description of the physical environmental conditions of the project site and the site vicinity, as they exist at the time the Notice of Preparation (NOP) is published, from a local and regional perspective. Knowledge of the existing environmental setting is critical to the assessment of environmental impacts. Per CEQA Guidelines Section 15125, the description of the environmental setting shall not be longer than necessary to understand the potential significant effects of the project. Please note that detailed discussions of the existing setting in compliance with CEQA Guidelines Section 15125, specific to each environmental resource area, are included in each corresponding technical chapter of this EIR.

The Project Description chapter of the EIR provides a comprehensive description of the proposed Harbor View Project (proposed project). A detailed description of the background, the project location, the project objectives, the project components, and required public approvals is presented below.

## 3.2 PROJECT BACKGROUND

Historically, the project site was occupied since the mid-1920s by a manufacturing plant that produced asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. Manufacture of asbestos-containing materials ceased in 1980 and commercial-grade roofing materials were manufactured at the plant until 2003, when operations terminated. Several environmental investigations were conducted at the former manufacturing site, beginning in 1986 and continuing through 2005, and areas of potential concern associated with asbestos-containing materials were identified.

The selected remedy for the environmental concerns at the project site was the removal of asbestos-containing materials and petroleum hydrocarbon-affected soil from the site and placement in engineered containment berms along the eastern boundary of the project site. Asbestos-impacted material and debris were placed into a trench excavated to 10 feet below ground surface (bgs) along the eastern boundary of the site, which was then capped by hydrocarbon-impacted soil. An engineered textile and two feet of clean, low-permeability soil was then added to the top of the materials to create the capped, vegetated berms. An automated irrigation system exists to maintain the vegetation. The berms consist of two distinct segments referred to below as the "northern" and "southern" berms. Drainage swales were installed adjacent to the berm and graded such that stormwater runs off toward catch basins on the eastern site boundary. All remedial actions have been completed and approved by the Department of Toxic Substances Control (DTSC);[1] however, ongoing maintenance and monitoring is required. The remediation system is required to be operated and maintained as described in the Site Operation and Maintenance Plan[2] until the DTSC authorizes its modification or discontinuation. The remediation system is also evaluated every five years to determine if human health and the environment are being adequately protected.

[1] GSI Environmental Inc. *Site Investigation Report: 420 E. 3rd Street, Pittsburg, California.* June 2021.
[2] *Ibid.*

## 3.3 PROJECT LOCATION AND SETTING

The following section includes a description of the project's location and existing setting, as well as the existing land use designations in the project vicinity.

The project site is located at 420 East 3rd Street, southwest of the intersection of East 3rd Street and Harbor Street, approximately one mile north of State Route (SR) 4 in the City of Pittsburg, California (see Figure 3-1). The 20.5-acre site is identified by Assessor's Parcel Number (APN) 073-050-001. A portion of the 8th Street Greenbelt, a ten-block linear park, and a tot lot are located directly south of the project site (see Figure 3-2). Single-family residences are located further south, across East 8th Street, and immediately west of the project site. The Railroad Avenue commercial corridor is located further west, approximately 1,200 feet from the project site. Undeveloped land is located north of the project site, across East 3rd Street, and the New York Slough is located further north. Industrial uses, including a glass shop, auto body shop, and the Los Medanos Energy Center are located east of the project site, across Harbor Street.

Currently, the project site consists primarily of ruderal grasses and is absent of structures. A 3.46-acre berm area runs north-to-south along the eastern boundary of the project site. Scattered trees are located along the west and south boundaries of the project site.

The project site is designated Downtown Commercial and Downtown Medium Density Residential by the General Plan land use map and the site contains approximately 1.62 acres zoned Pedestrian Commercial (CP) and approximately 18.88 acres zoned Downtown Medium Density Residential – Limited Overlay (RMD-O).

## 3.4 PROJECT OBJECTIVES

The following project objectives have been developed by the project applicant:

1. Implement the City's General Plan and Zoning designations by developing the site with a medium-density residential development with live/work units provided along the street frontage that will have the benefit of directing growth to an area that is already developed with existing access to commercial uses, public utilities and services, schools, and transportation systems;
2. Support the City in meeting its Regional Housing Needs Allocation (RHNA) target assigned by the Association of Bay Area Governments (ABAG);
3. Provide high quality residential units that include a mix of lot sizes to accommodate a diverse range of future City residents, including housing that is more affordable;
4. Provide a residential population to support commercial uses within the Old Town area;
5. Create a pedestrian-friendly residential development that maximizes density with accessibility to alternate transportation modes, and integrates pedestrian, bicycle, transit, and outdoor uses to encourage active centers; and
6. Situate a residential development on land located adjacent to existing residential and commercial uses and public utilities and services.

## 3.5 PROJECT COMPONENTS

The proposed project would include the subdivision of the project site and subsequent construction of 227 residential units, as well as associated internal roadways, bioretention facilities, and open space/landscaping (see Figure 3-3).

**Figure 3-1**
**Regional Project Location**

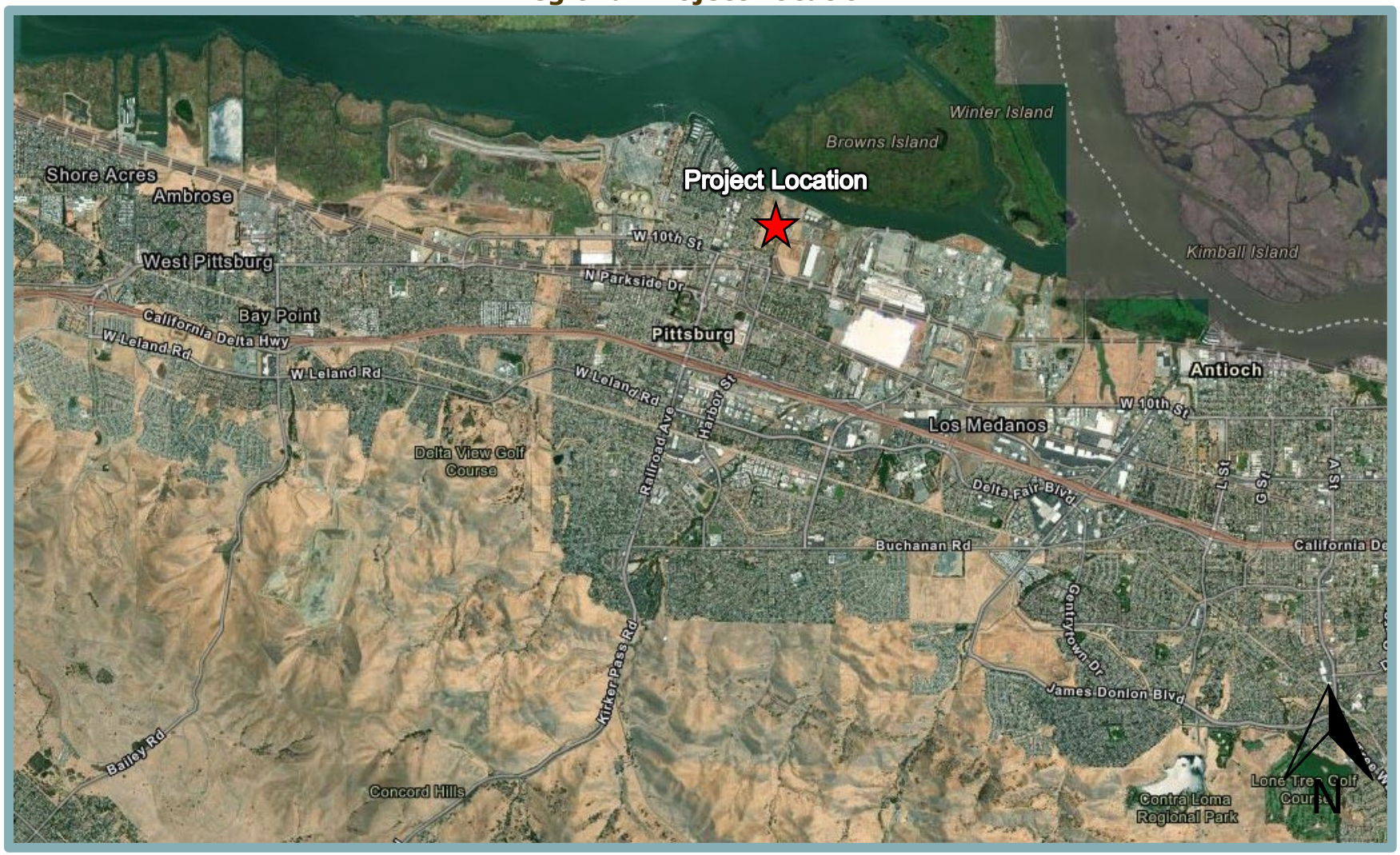
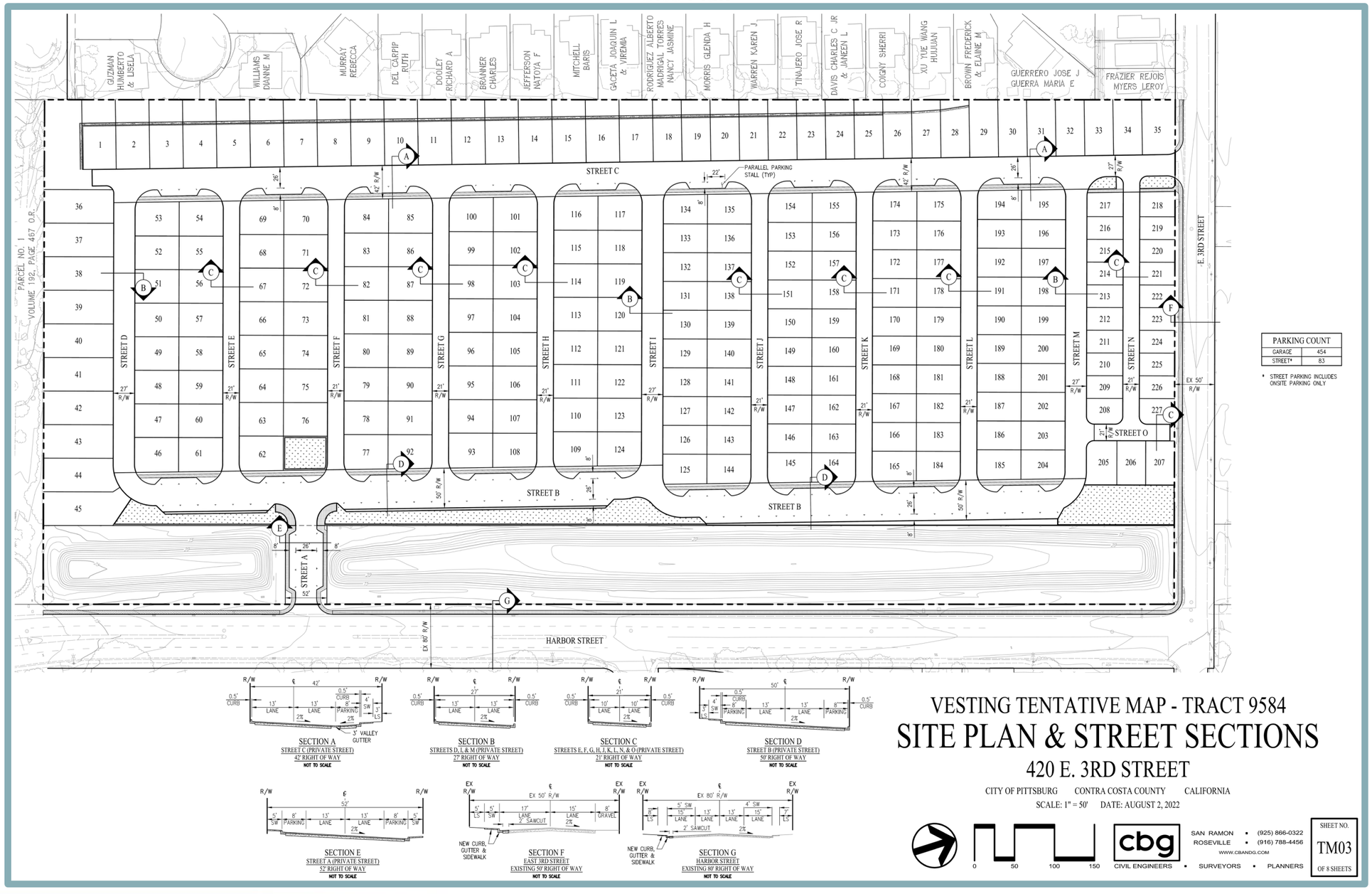


**Figure 3-2**
**Project Site Boundaries**


***Project Site boundaries are approximate.***

## Figure 3-3
## Site Plan



The project would require approval of a Rezone, Vesting Tentative Map, Design Review, and Master Sign Program. The aforementioned project components are discussed in further detail below.

## Rezone

The RMD-O District is intended to provide opportunities for residential development with increased land coverages for attached or detached single-family residences and multifamily residences such as townhouses, apartment complexes with 16 or more units, and condominiums. The RMD-O District allows for a maximum density of a 2,500-square-foot (sf) lot area per unit. The proposed project would include a Rezone of the project site to modify the existing Limited Overlay of the project site's RMD-O zoning designation. The proposed Rezone would modify the existing Limited Overlay, which currently applies only to the RMD-O portion of the site, to apply to the entirety of the project site. In addition, the Rezone would modify the existing Limited Overlay to reduce the minimum residential lot size within the Limited Overlay area from 2,200 sf to 1,980 sf but require that the average lot size be no less than 2,200 sf. Modifications to the existing Limited Overlay would also consist of a reduction in all setbacks required by the City's Municipal Code, as well as an increase in the total allowable lot coverage and total allowable density.

## Vesting Tentative Map

The Vesting Tentative Map would subdivide the project site into 227 residential lots, an internal circulation network, bioretention facilities, and open space/landscaping (see Figure 3-3).

The 20 northernmost lots, which generally front East 3rd Street, would be developed with mixed-use live/work duplexes. The ground floor of each unit would provide approximately 420 sf of commercial space and/or private work space, ultimately up to the discretion of the property owner. Immediately south of the proposed live/work units would be 101 generally 36-foot by 55-foot single-family lots. The residential units would be designed with three bedrooms and three or 3.5 bathrooms. The southern half of the project site would consist of 106 approximately 42-foot by 55-foot single-family lots. The units would be designed with three or four bedrooms and 3.5 bathrooms. The net development density of all on-site residential units would be 13.05 dwelling units per acre (du/ac).

A stormwater detention basin is proposed west of the driveway entrance from Harbor Street, with two additional detention basins proposed to the north and south of the driveway entrance. The northern basin would extend from East 3rd Street along the berm area to the driveway entrance, while the southern basin would extend south along the berm area from the driveway entrance to the southernmost residential unit.

### Access and Circulation

Site access would be provided by one new 27-foot driveway located off of East 3rd Street from the north, and one new 26-foot driveway located off of Harbor Street from the east. All internal lanes and drive aisles would meet the minimum width that can accommodate an emergency vehicle. The project site would include 83 on-street parking spaces, and each home would include a two-car garage. As a whole, the project site would accommodate 454 parking spaces. Development of the proposed project would also include new curb, gutter, sidewalk, and landscaping along Harbor Street and East 3rd Street.

### Landscaping

As part of the proposed project, each residence, with the exception of the 20 live/work duplexes, would include a private yard space. Trees would be planted along each internal roadway, as well as along the eastern site border along Harbor Street, and landscape pockets would line the internal loop road. As noted previously, a protected 3.46-acre berm extends along the eastern boundary of the project site, which will be managed and maintained as required by previously approved permits.

Bioretention areas and landscape features are proposed west of the driveway entrance form Harbor Street and along the eastern boundary of the project site between the site and the berm.

### Utilities

Water supply for the proposed project would be provided by the City of Pittsburg through the Contra Costa Water District (CCWD). The City operates a water treatment plant and associated infrastructure facilities, which primarily serve customers within the City limits. The proposed project would include construction of new on-site water lines, which would connect to the existing 16-inch water lines located within Harbor Street and East 3rd Street.

Sewer service for the proposed project would be provided by Delta Diablo, the City's wastewater provider. A new network of sanitary sewer lines would be constructed on-site and would convey approximately 65 percent of the wastewater generated from the site to the existing 18-inch sewer line in East 3rd Street and approximately 35 percent of the wastewater generated from the site to the existing 16-inch sewer line in Harbor Street.

An existing 48-inch storm drain line is located in Harbor Street with two existing 24-inch stubs to the site. A new storm drain system would be constructed on-site and would collect stormwater from the residential lots, streets, and open space areas and convey the stormwater to the proposed bioretention area west of the driveway entrance form Harbor Street and the bioretention areas located between the residential lots and the berm area. The stormwater would be treated at the on-site bioretention areas prior to being discharged into the existing stormwater system in Harbor Street.

Solid waste pickup and disposal for the City is provided by Mt. Diablo Resource Recovery (MDRR). Residential and commercial solid waste is disposed of at Potrero Hills Landfill, located east of Suisun City. Solid waste may also be disposed of at Keller Landfill, located southwest of the City of Pittsburg.

The proposed project would connect to the electricity, natural gas, and telecommunication infrastructure that exists in the project vicinity. Existing overhead utility lines along East 3rd Street would be removed and replaced underground as part of the project.

## Design Review

Section 18.36.110 of the City's Municipal Code requires that a project that would subdivide more than five lots is subject to Design Review by the City. As such, the proposed project would be subject to Design Review, the standards of which are delineated in Section 18.36.220 of the City's Municipal Code. Such review is intended to ensure that new development within the City generally contributes to the character and image of the City, conforms with the nature of the neighborhood, and is in harmony with existing developments in the general area.

### Master Sign Program

Section 19.08.040 of the City's Municipal Code states that a Master Sign Program, as defined in Section 19.04.040(16) of the City's Municipal Code, is required when signs are requested for a building which contains four or more business or office uses. As such, the 20 northernmost lots of the proposed project, which would be developed with mixed-use live/work duplexes, require the preparation of a Master Sign Program. The Master Sign Program would include details of the size, type, placement, colors, and design of all signs which would be placed in the vicinity of the mixed-use live/work duplexes in order to ensure compatibility of all such signs.

## 3.6 REQUIRED DISCRETIONARY APPROVALS

Implementation of the proposed project would require the following discretionary actions by the City of Pittsburg:

- Certification of the Environmental Impact Report;
- Rezone of the project site to modify the existing Limited Overlay;
- Vesting Tentative Map;
- Design Review; and
- Master Sign Program.

# 4.0 Introduction to Analysis

# 4.0 INTRODUCTION TO THE ANALYSIS

## 4.0.1 INTRODUCTION

The technical chapters of this EIR analyze the potential impacts of the proposed project on a range of environmental issue areas. Chapters 4.1 through 4.5 include the focus of the analysis, references and other data sources for the analysis, the environmental setting related to each specific issue area, project-specific impacts and mitigation measures, and the cumulative impacts of the project for each issue area. The format of each of the technical chapters is described at the end of this chapter.

## 4.0.2 DETERMINATION OF SIGNIFICANCE

Under CEQA, a significant effect is defined as a substantial or potentially substantial adverse change in the environment (Public Resources Code [PRC] Section 21068). The CEQA Guidelines require that the determination of significance be based on scientific and factual data. The specific criteria for determining the significance of a particular impact are identified within in each technical chapter, and are consistent with significance criteria set forth in the CEQA Guidelines or as based on the professional judgment of the Lead Agency with support of substantial evidence.

## 4.0.3 ENVIRONMENTAL ISSUES ADDRESSED IN THE INITIAL STUDY

The Initial Study prepared for the proposed project (Appendix A) includes a detailed environmental checklist addressing a range of technical environmental issues. For each technical environmental issue, the Initial Study identifies the level of impact for the proposed project. The Initial Study identifies the environmental effects as "no impact," "less than significant," "less than significant with mitigation incorporated," and "potentially significant." Environmental impact areas for which all CEQA impacts were identified as less than significant or no impact in the Initial Study are presented below. All remaining issues identified in the Initial Study as less than significant with mitigation or potentially significant are discussed in the subsequent technical chapters of this EIR.

- *Aesthetics (All Sections):* State Route (SR) 4 has been designated as Eligible to be classified as a Scenic Highway by Caltrans.[1] The City of Pittsburg General Plan states the most identifying features lending the City a sense of character are the rolling, grassy hills to the south of the City and Suisun Bay/Sacramento River Delta to the north. The project site is not visible from SR 4 and implementation of the project would not obstruct or change the existing views of the Suisun Bay/Delta from the area surrounding the site. Thus, the proposed project would result in a *less-than-significant* impact related to designated scenic vistas and scenic resources within a State scenic highway.

  The relevant CEQA threshold would be whether the proposed project would conflict with applicable zoning and other regulations governing scenic quality because the project site is located within an urbanized area. The project would require a Rezone; however, the

[1] California Department of Transportation. *California Scenic Highway Mapping System.* Available at: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed February 2022.

height, bulk, pattern, scale and character of the proposed project would not conflict with the visual character of the existing surrounding development. Additionally, the proposed project would be required to adhere to the City's Design Review Guidelines. Therefore, the project would not conflict with applicable zoning and other regulations governing scenic quality and a *less-than-significant* impact would occur.

Because the project would be required to conform to the City's lighting standards and, specifically, Municipal Code Sections 18.78.050(f) and 18.82.030, impacts related to lighting and glare during construction and operation of the proposed project would not occur. Thus, implementation of the project would result in a *less-than-significant* impact with respect to creating a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

- *Agriculture and Forest Resources (All Sections):* The project site is designated as "Urban and Built-Up Land" per the California Department of Conservation Farmland Mapping and Monitoring Program.[2] In addition, the project site is not used for agricultural purposes. Therefore, development of the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use, or otherwise result in the conversion of Farmland to non-agricultural use. Therefore, *no impact* would occur.

  The site is not under a Williamson Act contract[3] and is not zoned for agricultural uses. Therefore, buildout of the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and *no impact* would occur.

  The project area is not considered forest land (as defined in PRC Section 12220[g]), timberland (as defined by PRC Section 4526), and is not zoned Timberland Production (as defined by Government Code Section 51104[g]). Therefore, the proposed project would have *no impact* with regard to the conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

- *Biological Resources (All Sections)*: The project site is located within the boundaries of the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (ECCC HCP/NCCP) area.[4] Special-status plants are not expected to occur on site. However, the burrowing owl and other birds and raptors protected by the Migratory Bird Treaty Act (MBTA) have the potential to occur on-site. The project would be required to comply with all applicable ECCC HCP/NCCP requirements, including pre-construction surveys and Avoidance and Minimization Measures, which would reduce impacts to such species. Thus, the proposed project would not have an adverse effect, either directly or through habitat modifications, on species identified as special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or the U.S. Fish and Wildlife Service (USFWS), nor would the

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2 California Department of Conservation. *Contra Costa County Important Farmland 2016.* Available at: https://www.conservation.ca.gov/dlrp/fmmp/Pages/ContraCosta.aspx. Accessed December 2021.

3 California Department of Conservation. *Contra Costa County Agricultural Preserves Map 2016.* Available at: https://www.contracosta.ca.gov/DocumentCenter/View/882/Map-of-Properties-Under-Contract?bidId=. Accessed June 2022.

4 East Contra Costa County Conservancy. *Figure 9-1: Development Fee Zones*. Accessible at: https://www.cocohcp.org/DocumentCenter/View/955/High-Resolution-Development-Fee-Zone-Map-PDF. Accessed March 2023.

proposed project conflict with the provisions of the ECCC HCP/NCCP, and a *less-than-significant impact* would result.

Aquatic features, riparian vegetation, and protected wetlands do not exist on the project site. Thus, the proposed project would not have an adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or on State or federally protected wetlands, and a *less-than-significant* impact would occur.

The project site is located in an urbanized area and is bordered by existing roadways and residential developments and, therefore, the proposed project would not interfere with substantially with the movement of resident or migratory fish or wildlife species or with wildlife corridors or nursery sites. Thus, a *less-than-significant* impact would occur.

Any removal of trees as part of the proposed project would first require the preparation of an arborist report, and then be required to comply with all regulations established in Chapter 18.84 Article XIX of the City's Municipal Code. Thus, the proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation ordinance, and a *less-than-significant* impact would occur.

- *Energy (All Sections):* Energy resources would be consumed during construction and operation of the project. However, given the project's required compliance with applicable local and State requirements, the energy usage would not be considered a wasteful, inefficient, or unnecessary, and would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Thus, the proposed project would result in a *less-than-significant* impact related to energy.

- *Hazards and Hazardous Materials (All Sections):* Operations of the proposed project would not involve the routine transport, use, or disposal of hazardous materials. Potentially hazardous materials (i.e., petroleum, mechanical lubricant, etc.) may be used during construction. However, the proposed project would be required to adhere to all relevant guidelines and ordinances regulating the handling, storage, and transportation of hazardous materials, and an adverse impact would not occur. A Phase I Environmental Site Assessment (ESA) was prepared for the proposed project to identify any potentially hazardous existing conditions on the project site. The ESA determined that groundwater and soil vapor beneath the project site included volatile organic compounds (VOCs) and petroleum hydrocarbons; however, further analysis indicated that the magnitude and distribution of the VOC concentrations is not indicative of soil vapor conditions that warrant remediation or mitigation. In addition, VOC and total petroleum hydrocarbon (TPH) concentrations detected in groundwater samples are below the applicable screening levels. Based on the above, the project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment, and a *less-than-significant* impact would occur.

  The nearest school to the project site is the Pittsburg High School, located approximately 0.80 mile south of the site. Therefore, the proposed project would have *no impact* related to hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

The project site is included in the California Department of Toxic Substances Control's (DTSC's) EnviroStor Database.[5] However, all remedial actions have been completed and approved by the DTSC. Ongoing maintenance and monitoring are still required, and the remediation system is required to be operated and maintained as described in the Site Operation and Maintenance Plan until the DTSC authorizes its modification or discontinuation.[6] Given that the proposed project would comply with all requirements of the Site Operation and Maintenance Plan, a *less-than-significant* impact would occur related to being located on a site which is included on a list of hazardous materials sites that may create a significant hazard to the public.

The nearest airport to the site is the Buchanan Field airport, which is located approximately 12 miles southwest of the site. Therefore, *no impact* related to a safety hazard for people residing or working in the project area related to airports would occur.

The proposed project would not physically interfere with the City of Pittsburg Emergency Operations Plan, and therefore, the proposed project would not interfere with emergency response or evacuation and a *less-than-significant* impact would occur.

The project site is not located in a Very High Fire Hazard Severity Zone as defined by the California Department of Forestry and Fire Protection.[7] Thus, the proposed project would not expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, and a *less-than-significant* impact would occur.

- *Land Use and Planning (a):* Currently, the project site is vacant and located near existing residential development, industrial uses, and vacant land. Given that the project site is currently vacant, the proposed project would not displace any residents or physically divide an established community. As such, the proposed project would result in a *less-than-significant* impact.

- *Mineral Resources (All Sections):* Currently, the City does not contain any significant mineral deposits or active mining operations. In addition, mining is not an allowed use in the proposed Downtown Medium Density Residential – Limited Overlay (RMD-O) or Pedestrian Commercial (CP) District. Thus, the proposed project would not result in the loss of availability of a known mineral resource or a locally important mineral resource recovery site, and *no impact* would occur.

- *Noise (All Sections):* Given the project's compliance with the City's Municipal Code standards governing construction, and the temporary nature of construction activities, impacts related to noise levels during construction would be less than significant. The primary source of operational noise associated with the proposed project would be from traffic. All evaluated roadway segments were predicted to experience an increase in noise levels due to project-generated traffic below the threshold of significance applicable for each area. As such, the proposed project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of

5 GSI Environmental Inc. *Site Investigation Report: 420 E. 3rd Street, Pittsburg, California*. June 2021.
6 *Ibid.*
7 California Department of Forestry and Fire Protection. *Contra Costa County, Very High Fire Hazard Severity Zones in LRA*. January 7, 2009.

standards established in the local general plan or noise ordinance, and a *less-than-significant* impact would occur.

The proposed project would only cause elevated vibration levels during construction. Given that the sensitive receptors which could be impacted by construction related vibrations are located approximately 50 feet, or further, from typical construction, the vibrations would not exceed acceptable levels. Therefore, the proposed project would not result in generation of excessive groundborne vibration or groundborne noise levels and a *less-than-significant* impact would occur.

The project site is not located within two miles of any public airports or private airstrips and does not fall within an airport land use plan area. Therefore, the project would not expose people working or residing in the project area to excessive noise produced by an airport, and *no impact* would occur.

- *Population and Housing (All Sections):* The proposed project would accommodate an estimated 756 additional residents in the City. Considering that the total population of the City was estimated to be approximately 76,416 in April 2020, a potential increase of 756 residents would be considered negligible. Furthermore, under the existing land use designations, the project site could be built out with up to 341 residential units, which would accommodate approximately 1,138 residents. Therefore, even though the project includes a Rezone, the proposed project would not generate population growth in excess of what is currently allowed to occur on the project site. Therefore, the project would not induce substantial unplanned population growth in the project area, and a *less-than-significant* impact would occur.

  The project site is currently vacant and does not include existing housing. As such, implementation of the proposed project would not displace a substantial number of existing housing or people and would not necessitate the construction of replacement housing elsewhere. Therefore, *no impact* would occur.

- *Public Services (All Sections):* The proposed project would be serviced by the Contra Costa County Fire Protection District, the Pittsburg Police Department, the Pittsburg Unified School District, and the Contra Costa County Library. The project would be required to pay all applicable development impact fees related to public services. In addition, buildout of the site with residential uses has already been planned by the City and accounted for in public service planning efforts. The proposed project's impact on park and recreation services is discussed further below. Overall, a *less-than-significant* impact related to public services would occur.

- *Recreation (All Sections):* The General Plan establishes a standard of five acres of community or neighborhood recreational or park facility per 1,000 residents to ensure adequate recreational open space for the enjoyment of the community. As such, the proposed project would be required to provide at least 3.4 acres of park land (756 residents x [1000/5]). Because the proposed project would not include the development of park space sufficient to meet the requirement, the project would be subject to fees in lieu of land dedication, consistent with the requirements set forth in Section 17.32.020 of the Municipal Code. Park impact fees imposed by the City would generate revenue to acquire necessary land to develop new parks or rehabilitate existing neighborhood parks

and recreation facilities reasonably related to serve the subdivision. Based on the above, a *less-than-significant* impact would occur with regard to recreational resources.

It is noted that, at the time when the Initial Study was drafted, the iteration of the proposed project included a small on-site park. The project design has since been revised, and the proposed project would not include the development of any park space. Nevertheless, the conclusion presented within the Initial Study and summarized above remains accurate.

- *Utilities and Service Systems (All Sections):* Water supply for the project site would be provided by the Contra Costa Water District (CCWD). Per CCWD's Urban Water Management Plan (UWMP), sufficient water supplies would be available to accommodate buildout of the City under normal year, single year, and multiple-dry year demand scenarios.[8] Given the project's consistency with the General Plan land use designation, buildout of the project site with residential uses was generally considered in the UWMP projections. Therefore, the proposed project would not require or result in the relocation of new water infrastructure, or result in insufficient water supplies to serve the project or future development.

  Sewer service for the project site would be provided by Delta Diablo. The Delta Diablo Wastewater Treatment Plant (WWTP) has the capacity to treat approximately 19.5 million gallons of wastewater per day. The addition of influent associated with the proposed project to the WWTP would not exceed the permitted capacity of the WWTP. Thus, the proposed project would not require or result in the relocation or construction of new wastewater treatment infrastructure, and the wastewater treatment provider for the site would have adequate capacity to serve the proposed project.

  The proposed stormwater conveyance network and bioretention areas would be adequate to capture and treat the on-site runoff generated by the proposed project, and the project would not require or result in the relocation or construction of new or expanded storm water drainage facilities, the construction or relocation of which could cause significant environmental effects. The proposed project would connect to existing electrical, natural gas, and telecommunication infrastructure, and the existing utility infrastructure would meet increased demand associated with the proposed project. Therefore, the proposed project would result in a *less-than-significant* impact related to the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

  Solid waste from the City is ultimately disposed of at the Potrero Hills Landfill, located in Solano County. Due to the substantial amount of available capacity remaining at Potrero Hills Landfill (13,872,000 cubic yards), sufficient capacity would be available to accommodate the project's solid waste disposal needs. Solid waste may also be disposed of at Keller Landfill, located southwest of the City of Pittsburg. Therefore, a *less-than-significant* impact related to solid waste would occur.

- *Wildfire (All Sections):* According to the California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program, the project site is not

[8] Contra Costa Water District. *2020 Urban Water Management Plan*. June 2021.

located within or near a Very High Fire Hazard Severity Zone.[9] Additionally, the predominantly urbanized nature of the surrounding area and proximity to the New York Slough would preclude the uncontrolled spread of wildfire. Therefore, the proposed project would not be subject to significant risks related to wildfires, and a *less-than-significant* impact would occur.

## 4.0.4 ENVIRONMENTAL ISSUES ADDRESSED IN THIS EIR

The EIR provides the analysis necessary to address the environmental impacts of the proposed project. The following environmental issues are addressed in separate technical chapters of this EIR:

- Air Quality and Greenhouse Gas Emissions;
- Cultural and Tribal Cultural Resources;
- Geology and Soils;
- Hydrology and Water Quality; and
- Transportation.

Chapter 6 of the EIR presents a discussion of any growth-inducing impacts, significant irreversible environmental changes, significant and unavoidable impacts identified in Chapters 4.1 through 4.5, as applicable, as well as additional information on the scope of the cumulative impact analysis.

## 4.0.5 TECHNICAL CHAPTER FORMAT

Each technical chapter addressing a specific environmental issue begins with an introduction describing the purpose of the chapter. The introduction is followed by a description of the project's existing environmental setting pertaining to that particular environmental issue. The setting description is followed by the regulatory context and the impacts and mitigation measures discussion. The discussion contains the standards of significance, followed by the method of analysis. The standards of significance section includes references to the specific Initial Study checklist questions consistent with Appendix G of the CEQA Guidelines. The impacts and mitigation measures discussion includes impact statements prefaced by a number in bold-faced type. An explanation of each impact and an analysis of the impact's significance follow each impact statement, followed by all mitigation measures pertinent to each individual impact. The degree of relief provided by identified mitigation measures is also evaluated. An example of the format is shown below:

### Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance.

### 4.X-1 Statement of Project-Specific Impact

Discussion of impact for the proposed project in paragraph format.

[9] California Department of Forestry and Fire Protection. *Contra Costa County, Very High Fire Hazard Severity Zones in LRA*. January 7, 2009.

Statement of ***level of significance*** of impact prior to mitigation is included at the end of each impact discussion. The following levels of significance are used in the EIR: less than significant, significant, or significant and unavoidable.

### Mitigation Measure(s)

If an impact is determined to be significant, mitigation will be included in order to reduce the specific impact to the maximum extent feasible. Impacts that cannot be reduced to a less-than-significant level with implementation of all feasible mitigation would be considered to remain significant and unavoidable.

Statement of *level of significance* after the mitigation is included immediately preceding mitigation measures.

*4.X-1(a)* *Required mitigation measure(s) presented in italics and numbered in consecutive order.*

*4.X-1(b)* *Required additional mitigation measure, if necessary.*

## Cumulative Impacts and Mitigation Measures

The following discussion of cumulative impacts is based on implementation of the proposed project in combination with cumulative development within the applicable area or region.

## 4.X-2 Statement of Cumulative Impact

Discussion of cumulative impacts for the proposed project in paragraph format.

As discussed in detail in Chapter 6, Statutorily Required Sections, of the EIR, the cumulative setting for the proposed project is generally considered to be development anticipated to occur upon buildout of the City of Pittsburg General Plan.

Statement of ***level of significance*** of cumulative impact prior to mitigation is included at the end of each impact discussion. The following levels of significance are used in the EIR for cumulative impacts: less than significant, less than cumulatively considerable, cumulatively considerable, or significant and unavoidable.

### Mitigation Measure(s)

If an impact is determined to be cumulatively considerable, mitigation will be included in order to reduce the specific impact to the maximum extent feasible. Impacts that cannot be reduced to a less than cumulatively considerable level with the implementation of all feasible mitigation would be considered to remain significant and unavoidable.

Statement of *level of significance* after the mitigation is included immediately preceding mitigation measures.

*4.X-2(a)* *Required mitigation measure(s) presented in italics and listed in consecutive order.*

*4.X-2(b) Required additional mitigation measure, if necessary.*

# 4.1 Air Quality and Greenhouse Gas Emissions

# 4.1 AIR QUALITY AND GREENHOUSE GAS EMISSIONS

## 4.1.1 INTRODUCTION

The Air Quality and Greenhouse Gas Emissions chapter of the EIR describes the potential impacts of the proposed project on local and regional air quality emissions, and potential impacts related to greenhouse gas (GHG) emissions and climate change. The chapter includes a discussion of the existing air quality and GHG setting, construction-related air quality impacts resulting from grading and equipment emissions, direct and indirect emissions associated with operations of the project, the impacts of these emissions on both the local and regional scale, and mitigation measures warranted to reduce or eliminate any identified significant impacts. The chapter is primarily based on information and guidance within the Bay Area Air Quality Management District's (BAAQMD's) California Environmental Quality Act Air Quality Guidelines (Air Quality Guidelines),[1] as well as the City of Pittsburg General Plan[2] and associated EIR.[3] In addition, the results of the air quality modeling prepared for this analysis are included as Appendix C.

## 4.1.2 EXISTING ENVIRONMENTAL SETTING

The following information provides an overview of the existing environmental setting in relation to air quality within the proposed project area. Air basin characteristics, ambient air quality standards (AAQS), attainment status and regional air quality plans, local air quality monitoring, odors, sensitive receptors, and GHGs are discussed.

### Air Basin Characteristics

The project site is located in the eastern portion of the nine-county San Francisco Bay Area Air Basin (SFBAAB), and is within the jurisdictional boundaries of the BAAQMD. The SFBAAB consists of coastal mountain ranges, inland valleys, and bays. The proposed project is located on the south side of the San Joaquin River delta, east of the Carquinez Strait, and would be considered to be within the Carquinez Strait region of the SFBAAB. Being located between the greater Bay Area and the Central Valley has great influence on the climate and air quality of the area. During the summer and fall months, marine air is drawn eastward through the Carquinez Strait, with common wind speeds of 15 to 20 miles per hour throughout the region. The general west-to-east flow of the winds in the straits tends to move pollutants east. Thus, the winds dilute pollutants and transport them away from the area, so that emissions released in the project area have more influence on air quality in the Sacramento and San Joaquin Valleys than locally. However, stationary sources located in upwind cities could influence the local air quality.

Average daily maximum temperatures (in degrees Fahrenheit) are in the mid to high 50s in the winter and the high 80s in the summer. Average minimum temperatures are in the high 30s to low

1 Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines.* May 2017.
2 City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century*. Adopted November 16, 2001.
3 City of Pittsburg. *City of Pittsburg General Plan Environmental Impact Report (SCH No. 1999072109)*. January 2001.

40s in the winter and the mid-50s in the summer. Rainfall amounts in the region vary from 13 inches annually in Antioch to 22 inches annually in Fairfield.

## Ambient Air Quality Standards

Both the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. The federal standards are divided into primary standards, which are designed to protect the public health, and secondary standards, which are designed to protect the public welfare. The ambient air quality standards for each contaminant represent safe levels that avoid specific adverse health effects. Pollutants for which air quality standards have been established are called "criteria" pollutants. Table 4.1-1 identifies the major pollutants, characteristics, health effects and typical sources. The federal and California ambient air quality standards (NAAQS and CAAQS, respectively) are summarized in Table 4.1-2. The NAAQS and CAAQS were developed independently with differing purposes and methods. As a result, the federal and State standards differ in some cases. In general, the State of California standards are more stringent than the federal standards, particularly for ozone and particulate matter (PM).

A description of each criteria pollutant and its potential health effects is provided in the following section.

## Ozone

Ozone is a reactive gas consisting of three oxygen atoms. In the troposphere, ozone is a product of the photochemical process involving the sun's energy, and is a secondary pollutant formed as a result of a complex chemical reaction between reactive organic gases (ROG) and oxides of nitrogen ($NO_X$) emissions in the presence of sunlight. As such, unlike other pollutants, ozone is not released directly into the atmosphere from any sources. In the stratosphere, ozone exists naturally and shields Earth from harmful incoming ultraviolet radiation. The primary source of ozone precursors is mobile sources, including cars, trucks, buses, construction equipment, and agricultural equipment.

Ground-level ozone reaches the highest level during the afternoon and early evening hours. High levels occur most often during the summer months. Ground-level ozone is a strong irritant that could cause constriction of the airways, forcing the respiratory system to work harder in order to provide oxygen. Ozone at the Earth's surface causes numerous adverse health effects and is a major component of smog. High concentrations of ground level ozone can adversely affect the human respiratory system and aggravate cardiovascular disease and many respiratory ailments.

### Reactive Organic Gas

ROG refers to several reactive chemical gases composed of hydrocarbon compounds typically found in paints and solvents that contribute to the formation of smog and ozone by involvement in atmospheric chemical reactions. A separate health standard does not exist for ROG. However, some compounds that make up ROG are toxic, such as the carcinogen benzene.

### Oxides of Nitrogen

$NO_X$ are a family of gaseous nitrogen compounds and are precursors to the formation of ozone and particulate matter. The major component of $NO_X$, nitrogen dioxide ($NO_2$), is a reddish-brown gas that discolors the air and is toxic at high concentrations.

**Table 4.1-1**
**Summary of Criteria Pollutants**

| Pollutant | Characteristics | Health Effects | Major Sources |
|---|---|---|---|
| Ozone | A highly reactive gas produced by the photochemical process involving a chemical reaction between the sun's energy and other pollutant emissions. Often called photochemical smog. | • Eye irritation<br>• Wheezing, chest pain, dry throat, headache, or nausea<br>• Aggravated respiratory disease such as emphysema, bronchitis, and asthma | Combustion sources such as factories, automobiles, and evaporation of solvents and fuels. |
| Carbon Monoxide | An odorless, colorless, highly toxic gas that is formed by the incomplete combustion of fuels. | • Impairment of oxygen transport in the bloodstream<br>• Impaired vision, reduced alertness, chest pain, and headaches<br>• Can be fatal in the case of very high concentrations | Automobile exhaust, combustion of fuels, and combustion of wood in woodstoves and fireplaces. |
| Nitrogen Dioxide | A reddish-brown gas that discolors the air and is formed during combustion of fossil fuels under high temperature and pressure. | • Lung irrigation and damage<br>• Increased risk of acute and chronic respiratory disease | Automobile and diesel truck exhaust, industrial processes, and fossil-fueled power plants. |
| Sulfur Dioxide | A colorless, irritating gas with a rotten egg odor formed by combustion of sulfur-containing fossil fuels. | • Aggravation of chronic obstruction lung disease<br>• Increased risk of acute and chronic respiratory disease | Diesel vehicle exhaust, oil-powered power plants, and industrial processes. |
| Particulate Matter ($PM_{10}$ and $PM_{2.5}$) | A complex mixture of extremely small particles and liquid droplets that can easily pass through the throat and nose and enter the lungs. | • Aggravation of chronic respiratory disease<br>• Heart and lung disease<br>• Coughing<br>• Bronchitis<br>• Chronic respiratory disease in children<br>• Irregular heartbeat<br>• Nonfatal heart attacks | Combustion sources such as automobiles, power generation, industrial processes, and wood burning. Also from unpaved roads, farming activities, and fugitive windblown dust. |
| Lead | A metal found naturally in the environment as well as in manufactured products. | • Loss of appetite, weakness, apathy, and miscarriage<br>• Lesions of the neuromuscular system, circulatory system, brain, and gastrointestinal tract | Industrial sources and combustion of leaded aviation gasoline. |

***Sources:***

- ***California Air Resources Board. California Ambient Air Quality Standards (CAAQS). Available at: https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards. Accessed December 2022.***
- ***Sacramento Metropolitan, El Dorado, Feather River, Placer, and Yolo-Solano Air Districts, Spare the Air website. Air Quality Information for the Sacramento Region. Available at: sparetheair.com. Accessed December 2022.***
- ***California Air Resources Board. Glossary of Air Pollution Terms. Available at: https://ww2.arb.ca.gov/glossary. Accessed December 2022.***

**Table 4.1-2**
**Ambient Air Quality Standards**

| Pollutant | Averaging Time | CAAQS | NAAQS | |
|---|---|---|---|---|
| | | | Primary | Secondary |
| **Ozone** | 1 Hour | 0.09 ppm | - | Same as primary |
| | 8 Hour | 0.070 ppm | 0.070 ppm | |
| **Carbon Monoxide** | 8 Hour | 9 ppm | 9 ppm | - |
| | 1 Hour | 20 ppm | 35 ppm | |
| **Nitrogen Dioxide** | Annual Mean | 0.030 ppm | 53 ppb | Same as primary |
| | 1 Hour | 0.18 ppm | 100 ppb | - |
| **Sulfur Dioxide** | 24 Hour | 0.04 ppm | - | - |
| | 3 Hour | - | - | 0.5 ppm |
| | 1 Hour | 0.25 ppm | 75 ppb | - |
| **Respirable Particulate Matter ($PM_{10}$)** | Annual Mean | 20 ug/$m^3$ | - | Same as primary |
| | 24 Hour | 50 ug/$m^3$ | 150 ug/$m^3$ | |
| **Fine Particulate Matter ($PM_{2.5}$)** | Annual Mean | 12 ug/$m^3$ | 12 ug/$m^3$ | 15 ug/$m^3$ |
| | 24 Hour | - | 35 ug/$m^3$ | Same as primary |
| **Lead** | 30 Day Average | 1.5 ug/$m^3$ | - | - |
| | Calendar Quarter | - | 1.5 ug/$m^3$ | Same as primary |
| **Sulfates** | 24 Hour | 25 ug/$m^3$ | - | - |
| **Hydrogen Sulfide** | 1 Hour | 0.03 ppm | - | - |
| **Vinyl Chloride** | 24 Hour | 0.010 ppm | - | - |
| **Visibility Reducing Particles** | 8 Hour | see note below | - | - |

ppm = parts per million
ppb = parts per billion
µg/$m^3$ = micrograms per cubic meter

Note: Statewide Visibility Reducing Particle Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

***Source: California Air Resources Board. Ambient Air Quality Standards. May 4, 2016. Available at: https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf. Accessed December 2022.***

$NO_X$ results primarily from the combustion of fossil fuels under high temperature and pressure. On-road and off-road motor vehicles and fuel combustion are the major sources of $NO_X$. $NO_X$ reacts with ROG to form smog, which could result in adverse impacts to human health, damage the environment, and cause poor visibility. Additionally, $NO_X$ emissions are a major component of acid rain. Health effects related to $NO_X$ include lung irritation and lung damage and can cause increased risk of acute and chronic respiratory disease.

## Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless, poisonous gas produced by incomplete burning of carbon-based fuels such as gasoline, oil, and wood. When CO enters the body, the CO combines with chemicals in the body, which prevents blood from carrying oxygen to cells, tissues, and organs. Symptoms of exposure to CO can include problems with vision, reduced alertness, and general reduction in mental and physical functions. Exposure to CO can result in chest pain, headaches, reduced mental alertness, and death at high concentrations.

## Sulfur Dioxide

Sulfur Dioxide ($SO_2$) is a colorless, irritating gas with a rotten egg odor formed primarily by the combustion of sulfur-containing fossil fuels from mobile sources, such as locomotives, ships, and off-road diesel equipment. $SO_2$ is also emitted from several industrial processes, such as petroleum refining and metal processing. Similar to airborne $NO_X$, suspended sulfur oxide particles contribute to poor visibility. The sulfur oxide particles are also a component of $PM_{10}$.

## Particulate Matter

Particulate matter, also known as particle pollution or PM, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health impacts. The USEPA is concerned about particles that are 10 micrometers in diameter or smaller ($PM_{10}$) because those are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, the particles could affect the heart and lungs and cause serious health effects.[4] USEPA groups particle pollution into three categories based on their size and where they are deposited:

- "Inhalable coarse particles ($PM_{2.5-10}$)," which are found near roadways and dusty industries, are between 2.5 and 10 micrometers in diameter. $PM_{2.5-10}$ is deposited in the thoracic region of the lungs.
- "Fine particles ($PM_{2.5}$)," which are found in smoke and haze, are 2.5 micrometers in diameter and smaller. $PM_{2.5}$ particles could be directly emitted from sources such as forest fires, or could form when gases emitted from power plants, industries, and automobiles react in the air. They penetrate deeply into the thoracic and alveolar regions of the lungs.
- “Ultrafine particles (UFP),” are very, very small particles (less than 0.1 micrometers in diameter) largely resulting from the combustion of fossil fuels, meat, wood, and other hydrocarbons. While UFP mass is a small portion of $PM_{2.5}$, their high surface area, deep lung penetration, and transfer into the bloodstream could result in disproportionate health impacts relative to their mass. UFP is not currently regulated separately, but is analyzed as part of $PM_{2.5}$.

$PM_{10}$, $PM_{2.5}$, and UFP include primary pollutants, which are emitted directly to the atmosphere and secondary pollutants, which are formed in the atmosphere by chemical reactions among precursors. Generally speaking, $PM_{2.5}$ and UFP are emitted by combustion sources like vehicles, power generation, industrial processes, and wood burning, while $PM_{10}$ sources include the same sources plus roads and farming activities. Fugitive windblown dust and other area sources also represent a source of airborne dust. Long-term PM pollution, especially fine particles, could result in significant health problems including, but not limited to, the following: increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing; decreased lung function; aggravated asthma; development of chronic respiratory disease in children; development of chronic bronchitis or obstructive lung disease; irregular heartbeat; heart attacks; and increased blood pressure.

## Lead

Lead is a relatively soft and chemically resistant metal that is a natural constituent of air, water, and the biosphere. Lead forms compounds with both organic and inorganic substances. As an air

[4] U.S. Environmental Protection Agency. *Particulate Matter (PM) Basics*. Available at: https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#PM. Accessed March 2023.

pollutant, lead is present in small particles. Sources of lead emissions in California include a variety of industrial activities. Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels. The use of leaded fuel has been mostly phased out, with the result that ambient concentrations of lead have dropped dramatically. However, because lead was emitted in large amounts from vehicles when leaded gasoline was used, lead is present in many soils (especially urban soils) as a result of airborne dispersion and could become re-suspended into the air.

Because lead is only slowly excreted by the human body, exposures to small amounts of lead from a variety of sources could accumulate to harmful levels. Effects from inhalation of lead above the level of the ambient air quality standard may include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms could include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children. Lead also causes cancer.

## Sulfates

Sulfates are the fully oxidized ionic form of sulfur and are colorless gases. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. The sulfur is oxidized to $SO_2$ during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of $SO_2$ to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features.

The sulfates standard established by CARB is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, because they are usually acidic, can harm ecosystems and damage materials and property.

## Hydrogen Sulfide

Hydrogen Sulfide ($H_2S$) is associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal feeding operations. Hydrogen sulfide is extremely hazardous in high concentrations, especially in enclosed spaces (800 ppm can cause death).

## Vinyl Chloride

Vinyl Chloride ($C_2H_3Cl$, also known as VCM) is a colorless gas that does not occur naturally, but is formed when other substances such as trichloroethane, trichloroethylene, and tetrachloro-ethylene are broken down. Vinyl chloride is used to make polyvinyl chloride (PVC) which is used to make a variety of plastic products, including pipes, wire and cable coatings, and packaging materials.

## Visibility Reducing Particles

Visibility Reducing Particles are a mixture of suspended particulate matter consisting of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. The standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

## Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are also a category of environmental concern. TACs are present in many types of emissions with varying degrees of toxicity. Public exposure to TACs can result from emissions from normal operations, as well as accidental releases. Common stationary sources of TACs include gasoline stations, dry cleaners, and diesel backup generators, which are subject to BAAQMD stationary source permit requirements. The other, often more significant, common source type is on-road motor vehicles, such as cars and trucks, on freeways and roads, and off-road sources such as construction equipment, ships, and trains.

Fossil fueled combustion engines, including those used in cars, trucks, and some pieces of off-road/construction equipment, release at least 40 different TACs. In terms of health risks, the most volatile contaminants are diesel particulate matter (DPM), benzene, formaldehyde, 1,3-butadiene, toluene, xylenes, and acetaldehyde. Gasoline vapors contain several TACs, including benzene, toluene, and xylenes. Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust, DPM, is composed of carbon particles and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of such chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. Diesel exhaust also contains gaseous pollutants, including volatile organic compounds and $NO_X$. Due to the published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects, the CARB has identified DPM from diesel-fueled engines as a TAC. Although a variety of TACs are emitted by fossil fueled combustion engines, the cancer risk due to DPM exposure represents a more significant risk than the other TACs discussed above.[5]

More than 90 percent of DPM is less than one micrometer in diameter and, thus, DPM is a subset of $PM_{2.5}$. As a California statewide average, DPM comprises about eight percent of $PM_{2.5}$ in outdoor air, although DPM levels vary regionally due to the non-uniform distribution of sources throughout the State. Most major sources of diesel emissions, such as ships, trains, and trucks, operate in and around ports, rail yards, and heavily-traveled roadways. Such areas are often located near highly populated areas. Thus, elevated DPM levels are mainly an urban problem, with large numbers of people exposed to higher DPM concentrations, resulting in greater health consequences compared to rural areas.

Due to the high levels of diesel activity, high volume freeways, stationary diesel engines, rail yards and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Reclamation activities also have the potential to generate concentrations of DPM from the use of haul trucks and off-road equipment exhaust emissions.

Health risks from TACs are a function of both the concentration of emissions and the duration of exposure, which typically are associated with long-term exposure and the associated risk of contracting cancer. Health effects of exposure to TACs other than cancer include birth defects, neurological damage, and death. Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level. The identification, regulation, and monitoring of TACs is relatively new compared to criteria air pollutants that have established AAQS. TACs are regulated or evaluated on the basis of risk to human health rather than comparison to an AAQS or emission-based threshold.

[5] California Air Resources Board. *Reducing Toxic Air Pollutants in California's Communities*. February 6, 2002.

### Naturally Occurring Asbestos

Another concern related to air quality is naturally occurring asbestos (NOA). Asbestos is a term used for several types of naturally-occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. When rock containing asbestos is broken or crushed, asbestos fibers may be released and become airborne. Exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest and abdominal cavity), and asbestosis (a non-cancerous lung disease which causes scarring of the lungs). Because asbestos is a known carcinogen, NOA is considered a TAC. Sources of asbestos emissions include: unpaved roads or driveways surfaced with ultramafic rock; construction activities in ultramafic rock deposits; or rock quarrying activities where ultramafic rock is present.

NOA is typically associated with fault zones, areas containing serpentinite rock, or contacts between serpentinite and other types of rocks. According to mapping prepared by the California Geological Survey, the project site is not in an area likely to contain serpentinite or other ultramafic rocks.[6] Consequently, NOA is not expected to be present at the project site.

However, the project site was historically occupied by a manufacturing plant that produced asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. The site has undergone extensive remediation to address the asbestos-containing materials located on-site. The remediation activities included removal of asbestos-containing materials and petroleum hydrocarbon-affected soil from the site and placement in engineered containment berms along the eastern boundary of the project site. Asbestos-impacted material and debris were placed into a trench excavated to 10 feet below the ground surface along the eastern boundary of the site, which was then capped by hydrocarbon-impacted soil. An engineered textile and two feet of clean, low-permeability soil was then added to the top of the materials to create the capped, vegetated berms. All remedial actions have been completed and approved by the California Department of Toxic Substances Control (DTSC),[7] and the site regularly undergoes maintenance and monitoring as required by a Site Operation and Maintenance Plan prepared for the project site. The remediation system is also evaluated every five years to determine if human health and the environment are being adequately protected.

## Attainment Status and Regional Air Quality Plans

The Federal Clean Air Act (FCAA) and the California Clean Air Act (CCAA) require all areas of California to be classified as attainment, nonattainment, or unclassified as to their status with regard to the NAAQS and/or CAAQS. Areas not meeting the NAAQS presented in Table 4.1-2 above are designated by the USEPA as nonattainment. Further classifications of nonattainment areas are based on the severity of the nonattainment problem, with marginal, moderate, serious, severe, and extreme nonattainment classifications for ozone. Nonattainment classifications for PM range from marginal to serious. Because of the differences between the national and State standards, the designation of nonattainment areas is different under the federal and State legislation. The FCAA requires areas violating the NAAQS to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The SIP contains the strategies and control measures for states to use to attain the NAAQS. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, rules, and regulations of air basins as reported by the agencies with jurisdiction over them. The USEPA reviews SIPs to determine if they conform

[6] California Department of Conservation, Division of Mines and Geology. *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos*. August 2000.

[7] GSI Environmental Inc. *Site Investigation Report: 420 E. 3rd Street, Pittsburg, California.* June 2021.

to the mandates of the FCAA amendments and would achieve air quality goals when implemented. The CCAA requires local air pollution control districts with air quality that is in violation of CAAQS to prepare air quality attainment plans that demonstrate district-wide emission reductions of five percent per year averaged over consecutive three-year periods, unless an approved alternative measure of progress is developed.

Table 4.1-3 presents the current attainment status of the SFBAAB, including Contra Costa County. As shown in the table, the area is currently designated as a nonattainment area for the State and federal ozone, State and federal $PM_{2.5}$, and State $PM_{10}$ standards. The SFBAAB is designated attainment or unclassified for all other AAQS.

**Table 4.1-3**
**Contra Costa County Attainment Status Designations**

| Pollutant | Averaging Time | California Standards | Federal Standards |
|---|---|---|---|
| **Ozone** | 1 Hour | **Nonattainment** | Revoked in 2005 |
| | 8 Hour | **Nonattainment** | **Nonattainment** |
| **Carbon Monoxide** | 8 Hour | Attainment | Attainment |
| | 1 Hour | Attainment | Attainment |
| **Nitrogen Dioxide** | Annual Mean | - | Attainment |
| | 1 Hour | Attainment | Unclassified |
| **Sulfur Dioxide** | Annual Mean | Attainment | Attainment |
| | 24 Hour | Attainment | Attainment |
| | 3 Hour | - | Unclassified |
| | 1 Hour | Attainment | Attainment |
| **Respirable Particulate Matter ($PM_{10}$)** | Annual Mean | **Nonattainment** | - |
| | 24 Hour | **Nonattainment** | Unclassified |
| **Fine Particulate Matter ($PM_{2.5}$)** | Annual Mean | **Nonattainment** | Attainment |
| | 24 Hour | - | **Nonattainment** |
| **Lead** | 30 Day Average | - | - |
| | Calendar Quarter | - | Attainment |
| | Rolling 3-Month Average | - | Attainment |
| **Sulfates** | 24 Hour | Attainment | - |
| **Hydrogen Sulfide** | 1 Hour | Unclassified | - |
| **Visibility Reducing Particles** | 8 Hour | Unclassified | - |

***Source: Bay Area Air Quality Management District. Air Quality Standards and Attainment Status. Available at: http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status. Accessed May 2022.***

In compliance with the FCAA and CCAA, the BAAQMD periodically prepares and updates air quality plans that provide emission reduction strategies to achieve attainment of the AAQS, including control strategies to reduce air pollutant emissions through regulations, incentive programs, public education, and partnerships with other agencies. The current air quality plans were prepared in cooperation with the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG).

The most recent federal ozone plan is the 2001 Ozone Attainment Plan, which is a proposed revision to the Bay Area part of the SIP to achieve the federal ozone standard.[8] The plan was adopted on October 24, 2001 and approved by the CARB on November 1, 2001.

The most recent State ozone plan is the 2017 Clean Air Plan, adopted on April 19, 2017.[9] The 2017 Clean Air Plan was developed as a multi-pollutant plan that provides an integrated control strategy to reduce ozone, PM, TACs, and GHGs. The control strategies included in the 2017 Clean Air Plan serve as the backbone of the 2017 Clean Air Plan, and build upon existing regional, state, and national programs for emissions reductions. The 2017 Clean Air Plan includes 85 control measures, which provide an integrative approach to reducing ozone, PM, TAC, and GHG emissions. Although a plan for achieving the State $PM_{10}$ standard is not required, the BAAQMD has prioritized measures to reduce PM in developing the control measures for the 2017 Clean Air Plan.

The aforementioned air quality plans contain mobile source controls, stationary source controls, and transportation control measures to be implemented in the region to attain the State and federal AAQS within the SFBAAB. The plans are based on population and employment projections provided by local governments, usually developed as part of the General Plan update process.

## Local Air Quality Monitoring

Air quality is monitored by CARB at various locations to determine which air quality standards are being violated, and to direct emission reduction efforts, such as developing attainment plans and rules, incentive programs, etc. The nearest local air quality monitoring station to the project site is the Concord-2975 Treat Blvd station, located at 2975 Treat Boulevard in the City of Concord, approximately 10 miles southwest of the project site. Based on the data available for the Concord-2975 Treat Blvd monitoring station, Table 4.1-4, on the following page, presents the number of days that the State and federal AAQS were exceeded for the three-year period from 2019 to 2021. It should be noted that because the nearest monitoring station is over ten miles away from the project site, air quality data can be reasonably inferred but not precisely gauged from such measurements.

## Odors

While offensive odors rarely cause physical harm, they can be unpleasant, leading to considerable annoyance and distress among the public and can generate citizen complaints to local governments and air districts. Adverse effects of odors on residential areas and other sensitive receptors warrant the closest scrutiny; but consideration should also be given to other land use types where people congregate, such as recreational facilities, worksites, and commercial areas. The potential for an odor impact is dependent on a number of variables including the nature of the odor source, distance between a receptor and an odor source, and local meteorological conditions.

One of the most important factors influencing the potential for an odor impact to occur is the distance between the odor source and receptors, also referred to as a buffer zone or setback. The greater the distance between an odor source and receptor, the less concentrated the odor emission would be when reaching the receptor.

[8] Bay Area Air Quality Management District. *Air Quality Plans*. Available at: http://www.baaqmd.gov/Divisions/Planning-and-Research/Plans.aspx. Accessed March 2022.
[9] *Ibid.*

**Table 4.1-4**
**Air Quality Data Summary for the Concord-2975 Treat Blvd Station**

| Pollutant | Standard | Days Standard Was Exceeded | | |
|---|---|---|---|---|
| | | 2019 | 2020 | 2021 |
| 1-Hour Ozone | State | 0 | 2 | 1 |
| | Federal | 0 | 0 | 0 |
| 8-Hour Ozone | State | 2 | 3 | 1 |
| | Federal | 2 | 3 | 1 |
| 24-Hour $PM_{2.5}$ | Federal | 0 | 16.2 | 2.0 |
| 24-Hour $PM_{10}$ | State | * | * | 0 |
| | Federal | 0 | 11.5 | 1 |
| 1-Hour Nitrogen Dioxide | State | 0 | 0 | 0 |
| | Federal | 0 | 0 | 0 |

* indicates that insufficient data was available to determine the value.

***Source: California Air Resources Board. Aerometric Data Analysis and Management (iADAM) System. Available at http://www.arb.ca.gov/adam/welcome.html. Accessed January 2023.***

Meteorological conditions also affect the dispersion of odor emissions, which determines the exposure concentration of odiferous compounds at receptors. The predominant wind direction in an area influences which receptors are exposed to the odiferous compounds generated by a nearby source. Receptors located upwind from a large odor source may not be affected due to the produced odiferous compounds being dispersed away from the receptors. Wind speed also influences the degree to which odor emissions are dispersed away from any area. The prevailing wind direction in the City of Pittsburg is from the west.[10]

Odiferous compounds could be generated from a variety of source types including both construction and operational activities. Examples of common land use types that typically generate significant odor impacts include, but are not limited to, wastewater treatment plants; composting/green waste facilities; recycling facilities; petroleum refineries; chemical manufacturing plants; painting/coating operations; rendering plants; and food packaging plants. Although less common, diesel fumes associated with substantial diesel-fueled equipment and heavy-duty trucks, such as from construction activities, freeway traffic, or distribution centers, can be found to be objectionable.

## Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, day care centers, playgrounds, and medical facilities. In the vicinity of the project site, the nearest existing sensitive land uses include the single-family residences to the west of the project site, with the closest located approximately 50 feet away.

[10] WeatherSpark. *Climate and Average Weather Year Round in Pittsburg California, United States*. Available at: https://weatherspark.com/y/1150/Average-Weather-in-Pittsburg-California-United-States-Year-Round. Accessed January 2023.

## Greenhouse Gas Emissions

GHGs are gases that absorb and emit radiation within the thermal infrared range, trapping heat in the earth's atmosphere. Some GHGs occur naturally and are emitted into the atmosphere through both natural processes and human activities. Other GHGs are created and emitted solely through human activities. The principal GHGs that enter the atmosphere due to human activities are carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), and fluorinated carbons. Other common GHGs include water vapor, ozone, and aerosols. Since the beginning of the Industrial Revolution, global atmospheric concentrations of GHGs have increased due to human activities such as the burning of fossil fuels, clearing of forests and other activities. The increase in atmospheric concentrations of GHG due to human activities has resulted in more heat being held within the atmosphere, which is the accepted explanation for global climate change.[11]

The primary GHG emitted by human activities is $CO_2$, with the next largest components being $CH_4$ and $N_2O$. A wide variety of human activities result in the emission of $CO_2$. Some of the largest sources of $CO_2$ include the burning of fossil fuels for transportation and electricity, industrial processes including fertilizer production, agricultural processing, and cement production. The primary sources of $CH_4$ emissions include domestic livestock sources, decomposition of wastes in landfills, releases from natural gas systems, coal mine seepage, and manure management. The main human activities producing $N_2O$ are agricultural soil management, fuel combustion in motor vehicles, nitric acid production, manure management, and stationary fuel combustion. Emissions of GHG by economic sector indicate that energy-related activities account for the majority of U.S. emissions. Transportation is the largest single-source of GHG emissions, and energy generation is the second largest source, followed by industrial activities. The agricultural, commercial, and residential sectors account for the remainder of GHG emission sources.[12]

Emissions of GHG are partially offset by uptake of carbon and sequestration in trees, agricultural soils, landfilled yard trimmings and food scraps, and absorption of $CO_2$ by the Earth's oceans. Additional emission reduction measures for GHG could include, but are not limited to, compliance with local, State, or federal plans or strategies for GHG reductions, on-site and off-site mitigation, and project design features. Attainment concentration standards for GHGs have not been established by the federal or State government.

## Global Warming Potential

Global warming potential (GWP) is one type of simplified index (based upon radiative properties) that can be used to estimate the potential future impacts of emissions of various gases. According to the USEPA, the GWP of a gas, or aerosol, to trap heat in the atmosphere is the "cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas." The reference gas for comparison is $CO_2$. GWP is based on a number of factors, including the heat-absorbing ability of each gas relative to that of $CO_2$, as well as the decay rate of each gas relative to that of $CO_2$. The GWP of each gas is determined by comparing the radiative forcing associated with emissions of that gas versus the radiative forcing associated with emissions of the same mass of $CO_2$, for which the GWP is set at one. Methane gas, for example, is estimated by the USEPA to have a comparative global warming potential 25 times greater than that of $CO_2$, as shown in Table 4.1-5.

[11] U.S. Environmental Protection Agency. *Climate Change Indicators: Atmospheric Concentrations of Greenhouse Gases*. Available at: https://www.epa.gov/climate-indicators/climate-change-indicators-atmospheric-concentrations-greenhouse-gases. Accessed March 2022.

[12] U.S. Environmental Protection Agency. *Sources of Greenhouse Gas Emissions*. Available at: https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions. Accessed August 2022.

**Table 4.1-5**
**GWPs and Atmospheric Lifetimes of Select GHGs**

| Gas | Atmospheric Lifetime (years) | GWP (100 year time horizon) |
|---|---|---|
| Carbon Dioxide ($CO_2$) | 50-200[1] | 1 |
| Methane ($CH_4$) | 12 | 25 |
| Nitrous Oxide ($N_2O$) | 114 | 298 |
| Hydrofluorocarbon (HFC)-23 | 270 | 14,800 |
| HFC-134a | 14 | 1,430 |
| HFC-152a | 1.4 | 124 |
| PFC: Tetrafluoromethane ($CF_4$) | 50,000 | 7,390 |
| PFC: Hexafluoroethane ($C_2F_6$) | 10,000 | 12,200 |
| Sulfur Hexafluoride ($SF_6$) | 3,200 | 22,800 |

1. For a given amount of $CO_2$ emitted, some fraction of the atmospheric increase in concentration is quickly absorbed by the oceans and terrestrial vegetation, some fraction of the atmospheric increase will only slowly decrease over a number of years, and a small portion of the increase will remain for many centuries or more.

***Source: U.S. Environmental Protection Agency. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019 [Table 1-2]. April 14, 2021***

As shown in the table, at the extreme end of the scale, sulfur hexafluoride is estimated to have a comparative GWP 22,800 times that of $CO_2$. The atmospheric lifetimes of such GHGs are estimated by the USEPA to vary from 50 to 200 years for $CO_2$, to 50,000 years for $CF_4$. Longer atmospheric lifetimes allow GHG to buildup in the atmosphere; therefore, longer lifetimes correlate with the GWP of a gas. The common indicator for GHG is expressed in terms of metric tons of $CO_2$ equivalents ($MTCO_2e$), which is calculated based on the GWP for each pollutant.

## Effects of Global Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The Intergovernmental Panel on Climate Change's (IPCC) Climate Change 2021: The Physical Science Basis report indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia.[13] Signs that global climate change has occurred include:

- Warming of the atmosphere and ocean;
- Diminished amounts of snow and ice;
- Rising sea levels; and
- Ocean acidification.

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The Office of Environmental Health Hazard Assessment (OEHHA) identified various indicators of climate change in California, which are scientifically based measurements that track trends in various aspects of climate change. Many indicators reveal discernable evidence that climate change is occurring in California and is having significant, measurable impacts in the State. Changes in the State's climate have been observed, including:

13 Intergovernmental Panel on Climate Change. *Climate Change 2021: The Physical Science Basis Summary for Policymakers*. Available at: https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf. Accessed August 2022.

- An increase in annual average air temperature with record warmth occurring in recent years;
- More frequent extreme heat events;
- More extreme drought;
- A decline in winter chill; and
- An increase in variability of statewide precipitation.

Warming temperatures and changing precipitation patterns have altered California's physical systems—the ocean, lakes, rivers, and snowpack—upon which the State depends. Winter snowpack and spring snowmelt runoff from the Sierra Nevada and southern Cascade Mountains provide approximately one-third of the State's annual water supply. Impacts of climate on physical systems have been observed, such as high variability of snow-water content (i.e., amount of water stored in snowpack), decrease in snowmelt runoff, glacier change (loss in area), rise in sea levels, increase in average lake water temperature and coastal ocean temperature, and a decrease in dissolved oxygen in coastal waters. Impacts of climate change on biological systems, including humans, wildlife, and vegetation, have also been observed, including climate change impacts on terrestrial, marine, and freshwater ecosystems.

In the City of Pittsburg, specifically, the number of extreme heat days (defined as days where temperatures exceed 100.2 F) could reach an average of 34 days per year, as compared to the four days per year that occur now. While California could not see the average annual precipitation changing significantly in the next 50 to 75 years, precipitation could likely be delivered in more intense storms and within a shorter wet season. For example, the 30-year average length of dry spell in the City is 117 days. By the end of the century, the average dry spell could be up to 132 days.[14] Additionally, as the San Francisco Bay is getting larger due to sea level rise, flood protection strategies are expected to be required for developments within the City. The National Oceanic and Atmospheric Administration models predict that sea level rise will increase by 0.3 to 2.5 meters (12 to 98 inches) by 2100, depending on the future GHG emissions levels. According to Cal-Adapt, under a 0.5-meter sea level rise scenario, parts of the northwestern portions of Pittsburg (i.e. in industrial and residential areas) would be flooded during a 100-year flood event.[15] Based on the elevation of the project site, the project site is not expected to be inundated by sea level rise during any of the scenarios evaluated in the City of Pittsburg Existing Conditions Report.[16]

## Existing Project-Area GHGs

As noted previously, the project site is located in the eastern portion of the SFBAAB, and is within the jurisdictional boundaries of the BAAQMD. The SFBAAB consists of coastal mountain ranges, inland valleys, and bays.

According to the City of Pittsburg GHG Emissions Inventory, the primary source of GHG emissions in the City is from energy usage, which makes up approximately 48 percent of all GHG emissions in the City, followed by on-road transportation at 36 percent, off-road equipment at 11 percent, solid waste at five percent, and water and wastewater, marine transport, and rail transport which each account for one percent of the City's total GHG emissions. Overall, the City

[14] Cal-Adapt. *Local Climate Change Snapshot for Pittsburg, California*. Available at: https://cal-adapt.org/tools/local-climate-change-snapshot/. Accessed August 2022.
[15] City of Pittsburg. *Existing Conditions Report* [Chapter 6: Climate Change]. November 2019.
[16] City of Pittsburg. *Existing Conditions Report* [Figures 6.2-1 and 6.2-2]. November 2019.

of Pittsburg emits approximately 428,563 $MTCO_2e$ annually.[17] The project site is currently vacant, and, therefore, does not contribute to the City's annual GHG emissions.

## 4.1.3 REGULATORY CONTEXT

Air quality and GHG emissions are monitored and regulated through the efforts of various international, federal, State, and local government agencies. Agencies work jointly and individually to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for regulating and improving the air quality within the project area and monitoring or reducing GHG emissions are discussed below.

### Federal Regulations Related to Air Quality

The following discussion provides a summary of the federal regulations relevant to air quality, organized by pollutant type.

### Criteria Pollutants

The FCAA, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The USEPA is responsible for implementing most aspects of the FCAA, including setting NAAQS for major air pollutants; setting hazardous air pollutant standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric ozone protection measures, and enforcement provisions. Under the FCAA, NAAQS are established for the following criteria pollutants: ozone, CO, $NO_2$, $SO_2$, $PM_{10}$, $PM_{2.5}$, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for ozone, $NO_2$, $SO_2$, $PM_{10}$, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for ozone, $NO_2$, $SO_2$, $PM_{10}$, $PM_{2.5}$ are based on statistical calculations over one- to three-year periods, depending on the pollutant. The FCAA requires the USEPA to reassess the NAAQS at least every five years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a state implementation plan that demonstrates how those areas will attain the standards within mandated time frames.

### Hazardous Air Pollutants/Toxic Air Contaminants

The 1977 FCAA amendments required the USEPA to identify national emission standards for hazardous air pollutants to protect public health and welfare. Hazardous air pollutants include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 FCAA Amendments, which expanded the control program for hazardous air pollutants, 189 substances and chemical families were identified as hazardous air pollutants.

### Federal Regulations Related to GHG Emissions

The following are the federal regulations relevant to GHG emissions.

[17] City of Pittsburg, Environmental Services Department. *City of Pittsburg Greenhouse Gas Emissions Inventories, Updated 2005 and 2016*. September 2019.

## Federal Vehicle Standards

In 2010, President Obama issued a memorandum directing the Department of Transportation, Department of Energy, USEPA, and National Highway Traffic Safety Administration (NHTSA) to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017 through 2025 light-duty vehicles. The proposed standards were projected to achieve emission rates as low as 163 grams of $CO_2$ per mile by model year 2025 on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if the foregoing emissions level was achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017 through 2021 (77 FR 62624–63200), and NHTSA intended to set standards for model years 2022 through 2025 in future rulemaking.

In August 2016, the USEPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program would have applied to vehicles with model years 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types of sizes of buses and work trucks. The final standards were expected to lower $CO_2$ emissions by approximately 1.1 billion MT, and reduce oil consumption by up to two billion barrels over the lifetime of the vehicles sold under the program.

In August 2018, the USEPA and NHTSA proposed to amend certain fuel economy and GHG standards for passenger cars and light trucks and establish new, less-stringent standards for model years 2021 through 2026. Compared to maintaining the post-2020 standards that were previously in place, the 2018 proposal would increase U.S. fuel consumption by approximately 0.5 million barrels per day, and would impact the global climate by 3/1000$^{th}$ of 1°C by 2100. California and other states stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures, and committed to cooperating with other countries to implement global climate change initiatives.

On September 27, 2019, the USEPA and NHTSA published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program (84 FR 51,310), which became effective November 26, 2019. The Part One Rule revokes California's authority to set its own GHG emissions standards and set zero-emission-vehicle mandates in California. On March 31, 2020, the USEPA and NHTSA issued the Part Two Rule, which sets $CO_2$ emissions standards and corporate average fuel economy standards for passenger vehicles and light-duty trucks for model years 2021 through 2026. On January 20, 2021, President Joe Biden issued an Executive Order (EO) on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, which includes review of the Part One Rule by April 2021 and review of the Part Two Rule by July 2021. In response to the Part One Rule, in December 2021, the U.S. Department of Transportation withdrew its portions of the "SAFE I" rule. As a result, states are now allowed to issue their own GHG emissions standards and zero-emissions vehicle mandates.[18] In addition, the Part Two Rule was adopted to revise the existing national GHG emission standards for passenger cars and light trucks through model year 2026. These standards are the strongest

[18] National Highway Traffic Safety Administration. *In Removing Major Roadblock to State Action on Emissions Standards, U.S. Department of Transportation Advances Biden-Harris Administration's Climate and Jobs Goals.* Available at: https://www.nhtsa.gov/press-releases/cafe-preemption-final-rule. Accessed March 2022.

vehicle emissions standards ever established for the light-duty vehicle sector and will result in avoiding more than three billion tons of GHG emissions through 2050.[19]

## State Regulations Related to Air Quality

The following discussion summarizes applicable State regulations related to air quality, organized by pollutant type. Only the most prominent and applicable California air quality-related legislation is included below; however, an exhaustive list and extensive details of California air quality legislation can be found at the CARB website (http://www.arb.ca.gov/html/lawsregs.htm).

### Criteria Air Pollutants

The FCAA delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the CCAA of 1988, responding to the FCAA, and regulating emissions from motor vehicles and consumer products.

CARB has established CAAQS, which are generally more restrictive than the NAAQS. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQS and do not violate the standards more than once each year. The CAAQS for ozone, CO, $SO_2$ (one-hour and 24-hour), $NO_2$, $PM_{10}$, $PM_{2.5}$, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. The NAAQS and CAAQS are presented in Table 4.1-2.

### Hazardous Air Pollutants/Toxic Air Contaminants

The State Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner), and involved definition of a list of TACs. The California TAC list identifies more than 700 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. The State list of TACs includes the federally-designated hazardous air pollutants. In 1987, the Legislature enacted the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) to address public concern over the release of TACs into the atmosphere. AB 2588 law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hot spots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over five years. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform a health risk assessment, and, if specific thresholds are exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings.

#### CARB Air Quality and Land Use Handbook

CARB's Air Quality and Land Use Handbook: A Community Health Perspective (CARB Handbook) addresses the importance of considering health risk issues when siting sensitive land

[19] U.S. Environmental Protection Agency. *Final Rule to Revise Existing National GHG Emissions Standards for Passenger Cars and Light Trucks Through Model Year 2026*. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-revise-existing-national-ghg-emissions. Accessed March 2022.

uses, including residential development, in the vicinity of intensive air pollutant emission sources including freeways or high-traffic roads, distribution centers, ports, petroleum refineries, chrome plating operations, dry cleaners, and gasoline dispensing facilities.[20] The CARB Handbook draws upon studies evaluating the health effects of traffic traveling on major interstate highways in metropolitan California centers within Los Angeles (Interstate-405 and Interstate-710), the San Francisco Bay, and San Diego areas. The recommendations identified by CARB, including siting residential uses a minimum distance of 500 feet from freeways or other high-traffic roadways, are consistent with those adopted by the State of California for location of new schools. Specifically, the CARB Handbook recommends, "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".[21]

Importantly, the Introduction chapter of the CARB Handbook clarifies that the guidelines are strictly advisory, recognizing that: "[l]and use decisions are a local government responsibility. The Air Resources Board Handbook is advisory and these recommendations do not establish regulatory standards of any kind." CARB recognizes that there may be land use objectives as well as meteorological and other site-specific conditions that need to be considered by a governmental jurisdiction relative to the general recommended setbacks, specifically stating, "[t]hese recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues".[22]

### Diesel Particulate Matter

In 2000, CARB approved a comprehensive diesel risk reduction plan to reduce diesel emissions, including DPM, from new and existing diesel-fueled vehicles and engines. The regulation was anticipated to result in an 80 percent decrease in statewide diesel health risk by 2020 compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment program.[23] The aforementioned regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. Several Airborne Toxic Control Measures (ATCMs) exist that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 California Code of Regulations [CCR] 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

### Heavy-Duty Diesel Truck and Bus Regulation

CARB adopted the final Heavy-Duty Truck and Bus Regulation, Title 13, Division 3, Chapter 1, Section 2025, on December 31, 2014, to reduce DPM and $NO_X$ emissions from heavy-duty diesel vehicles. The rule requires nearly all diesel trucks and buses to be compliant with the 2010 model year engine requirement by January 1, 2023. CARB also adopted an ATCM to limit idling of diesel-fueled commercial vehicles on December 12, 2013. The rule requires diesel-fueled vehicles with gross vehicle weights greater than 10,000 pounds to idle no more than five minutes at any location (13 CCR 2485).

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20 California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.
21 *Ibid.*
22 *Ibid.*
23 California Code of Regulations, Title 13, Article 4.8, Chapter 9, Section 2449.

## California Health and Safety Code Section 41700

Section 41700 of the Health and Safety Code states that a person must not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. Section 41700 also applies to sources of objectionable odors.

## Heavy-Duty Vehicle Idling Emission Reduction Program

On October 20, 2005, CARB approved a regulatory measure to reduce emissions of toxics and criteria pollutants by limiting idling of new and in-use sleeper berth equipped diesel trucks.[24] The regulation established new engine and in-use truck requirements and emission performance requirements for technologies used as alternatives to idling the truck's main engine. For example, the regulation requires 2008 and newer model year heavy-duty diesel engines to be equipped with a non-programmable engine shutdown system that automatically shuts down the engine after five minutes of idling, or optionally meet a stringent $NO_X$ emission standard. The regulation also requires operators of both in-state and out-of-state registered sleeper berth equipped trucks to manually shut down their engine when idling more than five minutes at any location within California. Emission producing alternative technologies such as diesel-fueled auxiliary power systems and fuel-fired heaters are also required to meet emission performance requirements that ensure emissions are not exceeding the emissions of a truck engine operating at idle.

## In-Use Off-Road Diesel Vehicle Regulation

On July 26, 2007, CARB adopted a regulation to reduce DPM and $NO_X$ emissions from in-use (existing), off-road, heavy-duty diesel vehicles in California.[25] Such vehicles are used in construction, mining, and industrial operations. The regulation is designed to reduce harmful emissions from vehicles by subjecting fleet owners to retrofit or accelerated replacement/repower requirements, imposing idling limitations on owners, operators, renters, or lessees of off-road diesel vehicles. The idling limits require operators of applicable off-road vehicles (self-propelled diesel-fueled vehicles 25 horsepower and up that were not designed to be driven on-road) to limit idling to less than five minutes. The idling requirements are specified in Title 13 of the CCR.

# State Regulations Related to GHG Emissions

The statewide GHG emissions regulatory framework is summarized below. The following text describes EOs, legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues. The following discussion does not include an exhaustive list of applicable regulations; rather, only the most prominent and applicable California legislation related to GHG emissions and climate change is included below.

## State Climate Change Targets

California has taken a number of actions to address climate change, including EOs, legislation, and CARB plans and requirements, which are summarized below.

[24] California Air Resources Board. *Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling*. October 24, 2013. Available at: http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm. Accessed December 2022.

[25] California Air Resources Board. *In-Use Off-Road Diesel Vehicle Regulation*. December 10, 2014. Available at: http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm. Accessed December 2022.

## EO S-3-05

EO S-3-05 (June 2005) established California's GHG emissions reduction targets and laid out responsibilities among the State agencies for implementing the EO and for reporting on progress toward the targets. The EO established the following targets:

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

EO S-3-05 also directed the California Environmental Protection Agency (CalEPA) to report biannually on progress made toward meeting the GHG targets and the impacts to California due to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry. The Climate Action Team was formed, which subsequently issued reports from 2006 to 2010.

## AB 32

In furtherance of the goals established in EO S-3-05, the Legislature enacted AB 32 (Núñez and Pavley). The bill is referred to as the California Global Warming Solutions Act of 2006 (September 27, 2006). AB 32 provided initial direction on creating a comprehensive, multi-year program to limit California's GHG emissions at 1990 levels by 2020 and initiate the transformations required to achieve the State's long-range climate objectives. AB 32 also required that the CARB prepare a "scoping plan" for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020. The CARB's Scoping Plan is described in further detail below.

## EO B-30-15

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing GHG emissions to 40 percent below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80 percent below 1990 levels by 2050 as set forth in EO S-3-05. To facilitate achieving this goal, EO B-30-15 called for an update to the CARB's *Climate Change Scoping Plan: A Framework for Change* (Scoping Plan) to express the 2030 target in terms of million metric tons (MMT) $CO_2e$. The CARB's Scoping Plan is discussed in further detail below. The EO also called for State agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets.

## Senate Bill (SB) 32 and AB 197

SB 32 and AB 197 (enacted in 2016) are companion bills. SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, to provide ongoing oversight over implementation of the State's climate policies. AB 197 also added two members of the Legislature to the Board as non-voting members; requires CARB to make available and update (at least annually via the CARB's website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the Scoping Plan.

## CARB's Climate Change Scoping Plan

One specific requirement of AB 32 is for CARB to prepare a scoping plan for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (Health and Safety Code Section 38561[a]), and to update the Scoping Plan at least once every five years. In 2008, CARB approved the first Scoping Plan. The Scoping Plan included a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives. The key elements of the Scoping Plan include the following:

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
2. Achieving a statewide renewable energy mix of 33 percent;
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions;
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
5. Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard (LCFS) (17 CCR, Section 95480 et seq.); and
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

The Scoping Plan also identified local governments as essential partners in achieving California's goals to reduce GHG emissions because they have broad influence and, in some cases, exclusive authority over activities that contribute to significant direct and indirect GHG emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Specifically, the Scoping Plan encouraged local governments to adopt a reduction goal for municipal operations and for community emissions to reduce GHGs by approximately 15 percent from 2008 levels by 2020. Many local governments developed community-scale local GHG reduction plans based on this Scoping Plan recommendation.

In 2014, CARB approved the first update to the Scoping Plan. The *First Update to the Climate Change Scoping Plan: Building on the Framework* (First Update) defined the State's GHG emission reduction priorities for the next five years and laid the groundwork to start the transition to the post-2020 goals set forth in EO S-3-05 and EO B-16-2012. The First Update concluded that California is on track to meet the 2020 target but recommended a 2030 mid-term GHG reduction target be established to ensure a continuation of action to reduce emissions. The First Update recommended a mix of technologies in key economic sectors to reduce emissions through 2050, including energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies. As part of the First Update, CARB recalculated the State's 1990 emissions level using more recent GWPs identified by the IPCC, from 427 MMT $CO_2e$ to 431 MMT $CO_2e$.

In 2015, as directed by EO B-30-15, CARB began working on an update to the Scoping Plan to incorporate the 2030 target of 40 percent below 1990 levels by 2030 to keep California on a

trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80 percent below 1990 levels by 2050, as set forth in EO S-3-05. In summer 2016, the Legislature affirmed the importance of addressing climate change through passage of SB 32 (Pavley, Chapter 249, Statutes of 2016).

In December 2017, CARB adopted California's 2017 Climate Change Scoping Plan (2017 Scoping Plan) for public review and comment. The 2017 Scoping Plan builds on the successful framework established in the initial Scoping Plan and First Update while identifying new, technologically feasible and cost-effective strategies that will serve as the framework to achieve the 2030 GHG target as established by SB 32 and define the State's climate change priorities to 2030 and beyond. For local governments, the 2017 Scoping Plan replaced the initial Scoping Plan's 15 percent reduction goal with a recommendation to aim for a community-wide goal of no more than six $MTCO_2e$ per capita by 2030, and no more than two $MTCO_2e$ per capita by 2050, which are consistent with the State's long-term goals.

The 2022 Scoping Plan Update was adopted by the CARB in December 2022.[26] The 2022 Scoping Plan builds upon previous efforts to reduce GHG emissions and is designed to continue to shift the California economy away from dependence on fossil fuels. The 2022 Scoping Plan lays out a path to achieve targets for carbon neutrality and reduce GHG emissions by 85 percent below 1990 levels by 2045, as directed by AB 1279. The actions and outcomes in the plan will achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon.

### CARB's Regulations for the Mandatory Reporting of GHG Emissions

CARB's Regulation for the Mandatory Reporting of GHG Emissions (17 CCR 95100–95157) incorporated by reference certain requirements that the USEPA promulgated in its Final Rule on Mandatory Reporting of GHGs (40 Code of Federal Regulations Part 98). In general, entities subject to the Mandatory Reporting Regulation that emit more than 10,000 $MTCO_2e$ per year are required to report annual GHGs through the California Electronic GHG Reporting Tool. Certain sectors, such as refineries and cement plants, are required to report regardless of emission levels. Entities that emit more than the 25,000 $MTCO_2e$ per year threshold are required to have their GHG emission report verified by a CARB-accredited third party.

### SB 1383

SB 1383 establishes specific targets for the reduction of short-lived climate pollutants (SLCPs) (40 percent below 2013 levels by 2030 for $CH_4$ and HFCs, and 50 percent below 2013 levels by 2030 for anthropogenic black carbon), and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, CARB adopted its SLCP Reduction Strategy in March 2017. The SLCP Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, $CH_4$, and fluorinated gases.

### EO B-55-18

EO B-55-18 (September 2018) establishes a statewide policy for California to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net-negative

[26] California Air Resources Board. *2022 Scoping Plan Documents*. Available at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents. Accessed January 2023.

emissions thereafter. The goal is an addition to the existing statewide targets of reducing the State's GHG emissions. CARB intends to work with relevant State agencies to ensure that future scoping plan updates identify and recommend measures to achieve the carbon neutrality goal.

## Mobile Sources

The following regulations relate to the control of GHG emissions from mobile sources. Mobile sources include both on-road vehicles and off-road equipment.

### AB 1493

AB 1493 (Pavley) (July 2002) was enacted in response to the transportation sector accounting for more than half of California's $CO_2$ emissions. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the State board to be vehicles that are primarily used for non-commercial personal transportation in the State. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards would result in a reduction of approximately 22 percent of GHG emissions compared to the emissions from the 2002 fleet, and the mid-term (2013–2016) standards would result in a reduction of approximately 30 percent. In December 2021, the Part Two Rule was adopted to revise the existing national GHG emission standards for passenger cars and light trucks through model year 2026. The standards are the most stringent vehicle emissions standards ever established for the light-duty vehicle sector.[27]

### SB 375

SB 375 (Steinberg) (September 2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 requires CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035, and to update those targets every eight years. SB 375 requires the State's 18 regional metropolitan planning organizations to prepare a sustainable communities strategy as part of their Regional Transportation Plans that will achieve the GHG reduction targets set by CARB. If a metropolitan planning organization is unable to devise a sustainable communities strategy to achieve the GHG reduction target, the metropolitan planning organization must prepare an alternative planning strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to California Government Code Section 65080(b)(2)(K), a sustainable communities strategy does not (1) regulate the use of land, (2) supersede the land use authority of cities and counties, or (3) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with the sustainable community strategy. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the State-mandated housing element process.

[27] U.S. Environmental Protection Agency. *Final Rule to Revise Existing National GHG Emissions Standards for Passenger Cars and Light Trucks Through Model Year 2026*. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-revise-existing-national-ghg-emissions. Accessed March 2022.

## Advanced Clean Cars Program and Zero-Emissions Vehicle Program

The Advanced Clean Cars program (January 2012) is an emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars. To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. By 2025, implementation of the rule is anticipated to reduce emissions of smog-forming pollution from cars by 75 percent compared to the average new car sold in 2015. To reduce GHG emissions, CARB, in conjunction with the USEPA and NHTSA, adopted GHG standards for model year 2017 to 2025 vehicles; the standards were estimated to reduce GHG emissions by 34 percent by 2025. The zero-emissions vehicle program acts as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of zero-emissions vehicles and plug-in hybrid electric vehicles (EVs) in the 2018 to 2025 model years.

## EO B-16-12

EO B-16-12 (March 2012) required that State entities under the governor's direction and control support and facilitate the rapid commercialization of zero-emissions vehicles. The order directed CARB, California Energy Commission (CEC), California Public Utilities Commission (CPUC), and other relevant agencies to work with the Plug-In Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve goals by 2015, 2020, and 2025. On a statewide basis, EO B-16-12 established a target reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels by 2050. EO B-16-12 did not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare.

## AB 1236

AB 1236 (October 2015) (Chiu) required a city, county, or city and county to approve an application for the installation of electric-vehicle charging stations, as defined, through the issuance of specified permits unless the city or county makes specified written findings based on substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and a feasible method to satisfactorily mitigate or avoid the specific, adverse impact does not exist. The bill provided for appeal of that decision to the planning commission, as specified. AB 1236 required electric-vehicle charging stations to meet specified standards. The bill required a city, county, or city and county with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that created an expedited and streamlined permitting process for electric-vehicle charging stations. The bill also required a city, county, or city and county with a population of less than 200,000 residents to adopt the ordinance by September 30, 2017.

## EO N-79-20

EO N-79-20 (September 2020) establishes a Statewide goal that 100 percent of in-State vehicle sales of new passenger cars and trucks shall be zero-emission by the year 2035. The order directed the CARB to develop and propose passenger vehicle and truck regulations requiring increasing volumes of new zero-emission vehicles sold in the State in order to achieve the goal by 2035. In addition, the order required that a Zero-Emissions Vehicle Market Development Strategy be created and updated every three years to ensure coordinated and expeditious implementation of the EO.

## Water

The following regulations relate to the conservation of water, which reduces GHG emissions related to electricity demands from the treatment and transportation of water.

### EO B-29-15

In response to a drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25 percent relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives subsequently became permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the State. In response to EO B-29-15, the California Department of Water Resources modified and adopted a revised version of the Model Water Efficient Landscape Ordinance (MWELO) that, among other changes, significantly increases the requirements for landscape water use efficiency, and broadens the applicability of the ordinance to include new development projects with smaller landscape areas.

## Solid Waste

The following regulations relate to the generation of solid waste and means to reduce GHG emissions from solid waste produced within the State.

### AB 939 and AB 341

In 1989, AB 939, known as the Integrated Waste Management Act (Public Resources Code Sections 40000 et seq.), was passed because of the observed increase in waste stream and the decrease in landfill capacity.

AB 341 (Chapter 476, Statutes of 2011 [Chesbro]) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that the policy goal of the State is that not less than 75 percent of solid waste generated be source-reduced, recycled, or composted by 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery to develop strategies to achieve the State's policy goal.

## Other State Actions

The following State regulations are broadly related to GHG emissions.

### SB 97

SB 97 (Dutton) (August 2007) directed the Governor's Office of Planning and Research (OPR) to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, the Governor's OPR issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the Lead Agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities. The advisory further recommended that the Lead Agency determine the significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The California Natural Resource Agency (CNRA) adopted the CEQA Guidelines amendments in December 2009, and the amended CEQA Guidelines became effective in March 2010.

Under the amended CEQA Guidelines, a Lead Agency has the discretion to determine whether to use a quantitative or qualitative analysis, or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4[a]). The CEQA Guidelines require a Lead Agency to consider the extent to which the project complies with

regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]). The CEQA Guidelines also allow a Lead Agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures. The adopted amendments do not establish a GHG emission threshold, instead allowing a Lead Agency to develop, adopt, and apply the Lead Agency's own thresholds of significance or those developed by other agencies or experts. CNRA acknowledges that a Lead Agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions.

With respect to GHG emissions, the CEQA Guidelines state that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions (14 CCR 15064.4[a]). The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance based standards" (14 CCR 15064.4[a]). Section 15064.4(b) states that the Lead Agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the Lead Agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]).

### EO S-13-08

EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs State agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009, and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014. To assess the State's vulnerability, the report summarizes key climate change impacts to the State for the following areas: agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water. Issuance of the Safeguarding California: Implementation Action Plans followed in March 2016. In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that the State government should take to build climate change resiliency.

## Local Regulations

The following are the regulatory agencies and regulations pertinent to the proposed project on a local level.

### Plan Bay Area 2050

Plan Bay Area 2050 (The Plan) is a long-range transportation and land use/housing strategy through 2050 for the San Francisco Bay Area, designed to reduce GHG emissions from the mobile sector.[28] The Plan was approved by the MTC and the ABAG on October 21, 2021. The Plan also meets all State and federal requirements for a Regional Transportation Plan and Sustainable Communities Strategy.

[28] Association of Bay Area Governments and Metropolitan Transportation Commission. *Plan Bay Area 2050: Final.* October 2021.

Plan Bay Area 2050 provides an outline for growth in four focus areas: Priority Development Areas (PDA); Transit-Rich Areas; Priority Production Areas; and High-Resource Areas. The project site is not located within a PDA. According to the Plan Bay Area 2050 Forecasting and Modeling Appendix, housing in Contra Costa County is projected to increase by 169,000 households, or 44 percent, and jobs are projected to increase by 130,000, or 32 percent.[29]

Local jurisdictions seeking to implement development projects consistent with The Plan are eligible for funding for PDA planning and transportation projects. In addition, jurisdictions have the option to streamline the development process for projects consistent with The Plan and meet the other criteria included in SB 375.

## Bay Area Air Quality Management District

The BAAQMD is the public agency entrusted with regulating air pollution in the nine counties that surround San Francisco Bay: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, southwestern Solano, and southern Sonoma counties.

The BAAQMD has prepared CEQA Air Quality Guidelines (May 2017), which is intended to be used for assistance with CEQA review. The BAAQMD CEQA Air Quality Guidelines include thresholds of significance and project screening levels for criteria air pollutants (ROG, $NO_X$, $PM_{10}$, and $PM_{2.5}$), GHGs, TACs, CO, and odors, as well as methods to assess and mitigate project-level and plan-level impacts. On April 20, 2022, the BAAQMD Board adopted new CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans.[30] An updated guidance document for applying such thresholds is currently being drafted, and has not yet been released. Although the updated guidance document has not been released, the GHG thresholds of significance adopted in 2022 supersede those presented in the 2017 BAAQMD CEQA Air Quality Guidelines. The updated GHG thresholds address more recent climate change legislation, including SB 32, and provide qualitative thresholds related to buildings and transportation.

### Regional Air Quality Plans

As discussed above, the 2001 Ozone Attainment Plan was prepared as a revision to the Bay Area part of the SIP to achieve the federal ozone standard. The plan was adopted on October 24, 2001, approved by the CARB on November 1, 2001, and was submitted to the USEPA on November 30, 2001 for review and approval as a revision to the SIP. In addition, in order to fulfill federal air quality planning requirements, the BAAQMD adopted a $PM_{2.5}$ emissions inventory for the year 2010, which was submitted to the USEPA on January 14, 2013 for inclusion in the SIP.

The most recent State ozone plan is the 2017 Clean Air Plan, adopted on April 19, 2017. The 2017 Clean Air Plan is an update of the most recent Bay Area ozone plan, the 2010 Clean Air Plan, and focuses on two primary goals: protecting public health, and protecting the climate. The 2017 Clean Air Plan includes feasible measures to reduce emissions of ozone precursors, including ROG and NOx. In addition, the 2017 Clean Air Plan builds upon and enhances the BAAQMD's efforts to reduce emissions of fine particulate matter and TACs.[31]

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29 Association of Bay Area Governments and Metropolitan Transportation Commission. *Forecasting and Modeling Report, Appendix 1: Growth Pattern*. October 2021.

30 Bay Area Air Quality Management District. *CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans*. Adopted April 20, 2022.

31 Bay Area Air Quality Management District. *Final 2017 Clean Air Plan: Spare the Air, Cool the Climate*. April 2017.

Although the CCAA does not require the region to submit a plan for achieving the State $PM_{10}$ standard, the BAAQMD has prioritized measures to reduce PM in developing the control strategy for the 2017 Clean Air Plan. It should be noted that on January 9, 2013, the USEPA issued a final rule to determine that the San Francisco Bay Area has attained the 24-hour $PM_{2.5}$ federal standard, which suspends federal SIP planning requirements for the Bay Area.

The aforementioned applicable air quality plans contain mobile source controls, stationary source controls, and transportation control measures to be implemented in the region to attain the State and federal standards within the SFBAAB. The plans are based on population and employment projections provided by local governments, usually developed as part of the General Plan update process.

## Rules and Regulations

All projects under the jurisdiction of the BAAQMD are required to comply with all applicable BAAQMD rules and regulations. Applicable BAAQMD's regulations and rules include, but are not limited to, the following:

- Regulation 2: Permits
  - Rule 5: New Source Review of Toxic Air Contaminates
- Regulation 6: Particulate Matter and Visible Emissions
  - Rule 2: Commercial Cooking Equipment
  - Rule 3: Wood-burning Devices
- Regulation 7: Odorous Substances
- Regulation 8: Organic Compounds
  - Rule 3: Architectural Coatings
- Regulation 11: Hazardous Pollutants
  - Rule 2: Asbestos Demolition, Renovation and Manufacturing

Additionally, all projects within BAAQMD jurisdiction are required to implement the Basic Construction Mitigation Measures (BCMMs), which include the following:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out 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.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. 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.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of the CCR). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified visible emissions evaluator.

8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

## City of Pittsburg General Plan

The following are applicable General Plan goals and policies related to air quality from the City of Pittsburg General Plan:

### Resource Conservation Element

Goal 9-G-9 Work toward improving air quality and meeting all Federal and State ambient air quality standards by reducing the generation of air pollutants from stationary and mobile sources.

Goal 9-G-10 Reduce the potential for human discomfort or illness due to local concentrations of toxic contaminants, odors and dust.

Goal 9-G-11 Reduce the number of motor vehicle trips and emissions accounted to Pittsburg residents and encourage land use and transportation strategies that promote use of alternatives to the automobile for transportation, including bicycling, bus transit, and carpooling.

Policy 9-P-29 Cooperate with the Bay Area Air Quality Management District to achieve emissions reductions for ozone and its precursor, $PM_{10}$.

Policy 9-P-30 Cooperate with Bay Area Air Quality Management District to ensure compliance with dust abatement measures during construction.

These measures would reduce particulate emissions from construction and grading activities.

Policy 9-P-33 Encourage new residential development and remodeled existing homes to install clean-burning fireplaces and wood stoves.

Residential woodburning is a growing source of localized air pollution. Woodsmoke released from fireplaces and wood stoves contains carbon monoxide, nitrogen dioxide, and $PM_{10}$. Pollution can be reduced by installing gas fireplaces or EPA certified wood heaters.

It should be noted that the City of Pittsburg is currently in the process of updating the General Plan; however, the General Plan Update has not yet been completed.

## City of Pittsburg GHG Inventory

The City of Pittsburg conducted an update to the City's 2005 GHG Inventory using data from 2016, released an updated GHG Inventory Report in September 2019, and prepared another

update in 2022.[32] The City of Pittsburg GHG Inventory Update allows the City to analyze emissions and gives the City the option of forecasting trends through 2050 with more accurate, recent activity data. The citywide inventory provides a transparent methodology that can be used in future inventories to allow for a consistent comparison of the City of Pittsburg's change in emissions over time.

The GHG Inventory looks at Pittsburg at three levels: total emissions including industrial emissions, regional transportation emissions, and the local community's emissions; local community emissions including transportation on local roads, residential and commercial energy use, and waste generated by the community; and municipal operations emissions including emissions from activities of the City of Pittsburg local government, including the fleet, building energy use, streetlight electricity, waste from City and public trash cans, and City staff commutes. The inventory report focuses mainly on what the City and community of Pittsburg can change, the local community emissions, and the municipal operations emissions.

The GHG Inventory is the first step in the City's process to meet energy, waste, and water use reduction regulations required by the State through adoption of a climate action plan (CAP). After the GHG Inventory, the process toward a CAP includes development of climate reduction measures, implementation of monitoring tools, and CEQA review. The City of Pittsburg is currently in the process of drafting a CAP.

## 4.1.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to air quality and GHG emissions. A discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

### Standards of Significance

Based on the recommendations of BAAQMD, City of Pittsburg standards, and consistent with Appendix G of the CEQA Guidelines, the proposed project would result in a significant impact related to GHG emissions if the project would result in any of the following:

- Conflict with or obstruct implementation of the applicable air quality plan;
- 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations (including localized CO concentrations and TAC emissions);
- Result in other emissions (such as those leading to odors) affecting a substantial number of people;
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

[32] City of Pittsburg, Public Works Department. *City of Pittsburg Greenhouse Gas Emissions Inventories, Updated 2005 and 2016*. July 2022.

Pursuant to CEQA Guidelines Section 15064.4(b)(2), the Lead Agency is charged with determining a threshold of significance that is applicable to the project. For the analysis within this EIR, the City has elected to use the BAAQMD's thresholds of significance. The air quality and GHG emissions analysis in this EIR uses the thresholds for criteria pollutants, localized CO, TAC emissions, and GHG emissions as discussed below.

## Criteria Pollutant Emissions

The air quality and GHG emissions analysis in this EIR uses the thresholds for criteria pollutants, localized CO, TAC emissions, and GHG emissions as discussed below.

The BAAQMD thresholds of significance for ozone precursor and PM emissions are presented in Table 4.1-6 and are expressed in pounds per day (lbs/day) for construction and operational average daily emissions and tons per year (tons/yr) for maximum annual operational emissions.

**Table 4.1-6**
**BAAQMD Thresholds of Significance**

| Pollutant | Construction | Operational | |
|---|---|---|---|
| | Average Daily Emissions (lbs/day) | Average Daily Emissions (lbs/day) | Maximum Annual Emissions (tons/yr) |
| ROG | 54 | 54 | 10 |
| $NO_X$ | 54 | 54 | 10 |
| $PM_{10}$ (exhaust) | 82 | 82 | 15 |
| $PM_{2.5}$ (exhaust) | 54 | 54 | 10 |

***Source: BAAQMD, CEQA Guidelines, May 2017.***

Emissions of particulate matter can be split into two categories: fugitive emissions and exhaust emissions. The BAAQMD thresholds of significance for exhaust PM emissions are presented above. The BAAQMD does not maintain quantitative thresholds for fugitive emissions of $PM_{10}$ or $PM_{2.5}$; rather, BAAQMD requires all projects within the district's jurisdiction to implement BCMMs related to dust suppression.

## Localized CO Emissions

If a project would cause localized CO emissions to exceed the 1-hour and 8-hour CAAQS of 20.0 parts per million (ppm) and 9.0 ppm, respectively, BAAQMD would consider the project to result in a significant impact to air quality. In order to provide a conservative indication of whether a project would result in localized CO emissions that would exceed the applicable threshold of significance, the BAAQMD has established screening criteria for localized CO emissions. According to BAAQMD, a project would result in a less-than-significant impact related to localized CO emission 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, regional transportation plan, and local congestion management agency plans;
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, underpass, etc.).

## TAC Emissions

According to BAAQMD, a significant impact related to TACs would occur if a project would cause any of the following:

- An increase in cancer risk levels of more than 10 persons in one million;
- A non-cancer (chronic or acute) hazard index greater than 1.0; or
- An annual average $PM_{2.5}$ concentration of 0.3 micrograms per cubic meter ($\mu g/m^3$) or greater.

An impact associated with TACs would also occur if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot radius from the fence line of a source, or from the location of a receptor, plus the contribution from the project, would exceed the following:

- An increase in cancer risk levels (from all local sources) of more than 100 persons in one million;
- A chronic non-cancer hazard index (from all local sources) greater than 10.0; or
- An annual average $PM_{2.5}$ concentration (from all local sources) of 0.8 $\mu g/m^3$ or greater.

## GHG Emissions

As noted previously, on April 20, 2022, the BAAQMD Board held a public meeting and adopted proposed CEQA Thresholds for Evaluating the Significance of Climate Change Impacts from Land Use Projects and Plans.[33] The updated thresholds are qualitative and include two distinct categories of criteria that must be met: Buildings and Transportation.

The BAAQMD's Buildings criteria require that a project must meet the following minimum project design elements:[34]

a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under Sections 21100(b)(3) and 15126.2(b) of the State CEQA Guidelines.

The BAAQMD's Transportation criteria require that a project must meet the following:

a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted SB 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
    i. Residential projects: 15 percent below the existing VMT per capita;
    ii. Office projects: 15 percent below the existing VMT per employee; or
    iii. Retail projects: no net increase in existing VMT.

[33] Bay Area Air Quality Management District. *CEQA Thresholds and Guidelines Update*. Available at: https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines. Accessed December 2022.

[34] Bay Area Air Quality Management District. *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans* [pg. 2]. April 2022.

b. Achieve compliance with off-street EV requirements in the most recently adopted version of CALGreen Tier 2.

Alternatively, a project is not required to implement the foregoing design elements if the project shows consistency with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b). In the case of the proposed project, the City of Pittsburg does not have an adopted GHG reduction strategy and, thus, the option to evaluate consistency with a local GHG reduction strategy is not applicable.

## Method of Analysis

A comparison of project-related emissions to the thresholds discussed above shall determine the significance of the potential impacts to air quality and climate change resulting from the proposed project. Emissions attributable to the proposed project which exceed the significance thresholds could have a significant effect on regional air quality and the attainment of the federal and State AAQS. Where potentially significant air quality impacts are identified, mitigation measures are described that would reduce or eliminate the impact.

### Construction and Operational Criteria Pollutant and GHG Emissions

The proposed project's construction and operational emissions were quantified using the California Emissions Estimator Model (CalEEMod) software version 2020.4.0 – a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including construction data, trip generation rates, vehicle mix, trip length, average speed, compliance with the CBSC, etc. Where project-specific information is available, such information should be applied in the model. Accordingly, the proposed project's modeling assumes the following project and/or site-specific information:

- Construction would occur over an approximately four-year period;
- The project would include export of 1,000 cubic yards (CY) of material during site preparation;
- Trip generation data was adjusted based on project-specific traffic information provided by Fehr & Peers;
- The project would include natural gas hearths; and
- The project would comply with all relevant provisions of the California Building Standards Code (CBSC) and the MWELO.

The results of construction and operational emissions estimations were compared to the standards of significance discussed above in order to determine the associated level of impact. All CalEEMod results are included in Appendix C to this EIR.

### Construction Health Risk Assessment

To analyze potential health risks to nearby receptors that could result from DPM emissions from off-road equipment at the project site, total DPM emissions from construction of the proposed project were estimated. DPM is considered a subset of $PM_{2.5}$; thus, the CalEEMod estimated $PM_{2.5}$ emissions from exhaust during construction was conservatively assumed to represent all DPM emitted on-site. The CalEEMod estimated $PM_{2.5}$ exhaust emissions were then used to calculate the concentration of DPM at the maximally exposed sensitive receptor near the project site.

DPM concentrations resulting from project implementation were estimated using the American Meteorological Society/Environmental Protection Agency (AMS/EPA) Regulatory Model (AERMOD). The associated cancer risk and non-cancer hazard index were calculated using the CARB's Hotspot Analysis Reporting Program Version 2 (HARP 2) Risk Assessment Standalone Tool (RAST), which calculates the cancer and non-cancer health impacts using the risk assessment guidelines of the 2015 OEHHA Guidance Manual for Preparation of Health Risk Assessments.[35] The modeling was performed in accordance with the USEPA's User's Guide for the AERMOD[36] and the 2015 OEHHA Guidance Manual.

Although pollutant concentrations at all nearby receptors were estimated, for the purpose of determining potential health risks, only the highest estimated pollutant concentrations were used in calculating cancer risk and hazard indices. The receptor experiencing the highest estimated pollutant concentrations was considered to be the maximally exposed receptor, and would experience the highest potential health risks. Health risks to all other receptors would be lower than the health risks to the maximally exposed receptor, because all other receptors would be exposed to lower concentrations of construction-related pollutants as compared to the maximally exposed receptor.

Additionally, considering that both schools and residences exist in proximity to the area of disturbance, the estimation of health risks conservatively assumed that nearby receptors would be continuously exposed to pollutants from construction at the maximum estimated concentrations. This assumption would represent a scenario whereby a resident living nearby also attends one of the nearby schools and is therefore exposed to pollutants both at home and at school. In practice, concentrations of pollutants at nearby schools would be much less than the concentration of pollutants at the maximally exposed receptor location. Due to the difference in pollutant concentrations at the maximally exposed receptor location and nearby schools, a single receptor would not be anticipated to be continuously exposed to the maximum level of pollutant concentrations both at home and at school. Nevertheless, by using the maximum estimated concentrations and assuming continuous exposure to pollutants, the estimated health risks presented below are considered a worst-case estimate of potential health risks, and actual health risks to receptors in the project area would be lower than the levels presented within this analysis.

## Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison with the standards of significance identified above. It should be noted that GHG emissions are inherently cumulative; thus, the discussion of GHG impacts is included under the Cumulative Impacts and Mitigation Measures section below.

### 4.1-1 Conflict with or obstruct implementation of the applicable air quality plan during project construction. Based on the analysis below, the impact is *less than significant*.

During construction of the project, various types of equipment and vehicles would temporarily operate on the project site. Construction-related emissions would be

[35] Office of Environmental Health Hazard Assessment. *Air Toxics Hot Spots Program Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments* [pg. 8-18]. February 2015.

[36] U.S. Environmental Protection Agency. *User's Guide for the AMS/EPA Regulatory Model (AERMOD)*. December 2016.

generated from construction equipment, vegetation clearing and earth movement activities, construction workers' commute, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Project construction activities also represent sources of fugitive dust, which includes $PM_{2.5}$ emissions. As construction of the proposed project would generate emissions of criteria air pollutants, including ROG, $NO_X$, $PM_{10}$, and $PM_{2.5}$ intermittently within the site and in the vicinity of the site, until all construction has been completed, construction is a potential concern, as the proposed project is located in a nonattainment area for ozone and PM.

The proposed project is required to comply with all BAAQMD rules and regulations including Regulation 8, Rule 3 related to architectural coatings. In addition, all projects under the jurisdiction of the BAAQMD are recommended to implement all of the BCMMs provided in the BAAQMD CEQA Guidelines. Although BAAQMD recommends that all construction activity within the SFBAAB implement the BCMMs, the proposed project was modeled without the inclusion of such measures to provide a conservative, worst-case emissions scenario. Even under the conservative assumptions used for this analysis, emissions of $PM_{2.5}$ and $PM_{10}$ would remain below the BAAQMD's thresholds of significance.

According to the CalEEMod results, the proposed project would result in maximum unmitigated construction criteria air pollutant emissions as shown in Table 4.1-7.

**Table 4.1-7**
**Maximum Unmitigated Construction Emissions (lbs/day)**

| Pollutant | Project Emissions | Threshold of Significance | Exceeds Threshold? |
|---|---|---|---|
| ROG | 8.65 | 54 | **NO** |
| $NO_X$ | 34.55 | 54 | **NO** |
| $PM_{10}$* | 1.42 | 82 | **NO** |
| $PM_{2.5}$* | 1.31 | 54 | **NO** |

* Emissions from exhaust only. BAAQMD has not yet adopted thresholds for fugitive PM emissions.

***Source: CalEEMod, June 2022.***

As shown in the table, the proposed project's construction emissions would be below the applicable thresholds of significance for all criteria pollutants.

Based on the above, construction of the proposed project would result in emissions of criteria pollutants below the BAAQMD's thresholds of significance. Consequently, the proposed project would not conflict with air quality plans during project construction, and the impact would be ***less than significant***.

## Mitigation Measure(s)

*None required.*

### 4.1-2 Conflict with or obstruct implementation of the applicable air quality plan during project operation. Based on the analysis below, the impact is *less than significant*.

Operational emissions of ROG, $NO_X$, $PM_{10}$, and $PM_{2.5}$ would be generated by the proposed project from both mobile and stationary sources. The use of fireplaces/hearths would make up the majority of project-related emissions under unmitigated operations of the proposed project. Emissions would also occur from area sources such as landscape maintenance equipment exhaust and consumer products (e.g., deodorants, cleaning products, spray paint, etc.).

According to the CalEEMod results, the proposed project would result in maximum unmitigated operational criteria air pollutant emissions as shown in Table 4.1-8.

**Table 4.1-8**
**Maximum Unmitigated Operational Emissions**

| Pollutant | Project Emissions | | Threshold of Significance | | Exceeds Threshold? |
|---|---|---|---|---|---|
| | lbs/day | tons/yr | lbs/day | tons/yr | |
| ROG | 15.92 | 2.7 | 54 | 10 | **NO** |
| $NO_X$ | 9.42 | 1.15 | 54 | 10 | **NO** |
| $PM_{10}$* | 0.51 | 0.04 | 82 | 15 | **NO** |
| $PM_{2.5}$* | 0.51 | 0.04 | 54 | 10 | **NO** |

* Emissions from exhaust only. BAAQMD has not yet adopted thresholds for fugitive PM emissions.

***Source: CalEEMod, June 2022.***

As shown in the table, operational emissions of ROG, $NO_X$, $PM_{10}$, and $PM_{2.5}$ would be below the BAAQMD's thresholds of significance. Thus, implementation of the proposed project would not generate long-term operational criteria air pollutant emissions in excess of thresholds, and the project would not contribute to the region's nonattainment status of ozone and/or violate an air quality standard. Accordingly, the project would not be considered to conflict with or obstruct implementation of regional air quality plans during project operation, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
*None required.*

### 4.1-3 Expose sensitive receptors to substantial pollutant concentrations. Based on the analysis below, with the implementation of mitigation, the impact is *less than significant*.

The major pollutant concentrations of concern are localized CO emissions, TAC emissions, and criteria pollutant emissions, which are addressed in further detail below.

## Localized CO Emissions

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. Concentrations of CO approaching the AAQS are only expected where background levels are high, and traffic volumes and congestion levels are high. Implementation of the proposed project would increase traffic volumes on streets near the project site; therefore, the project would be expected to increase local CO concentrations.

The statewide CO Protocol document identifies signalized intersections operating at level of service (LOS) E or F, or projects that would result in the worsening of signalized intersections to LOS E or F, as having the potential to result in localized CO concentrations in excess of AAQS, as a result of large numbers of cars idling at stop lights.[37] In order to provide a conservative indication of whether a project would result in localized CO emissions that would exceed the applicable threshold of significance, the BAAQMD has established screening criteria for determining whether the effect that a project would have on any given intersection would cause a potential CO hotspot. According to BAAQMD, a project would result in a less-than-significant impact related to localized CO emission concentrations if all of the following conditions are true for the project:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans;
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, underpass, etc.).

While BAAQMD has established the foregoing screening criteria for potential impacts, it should be noted that the SFBAAB has been in attainment of CAAQS and NAAQS for CO for more than 20 years.[38] Due to the continued attainment of CAAQS and NAAQS, and advances in vehicle emissions technologies, the likelihood that any single project would create a CO hotspot is minimal. The Contra Costa Transportation Authority (CCTA) is the applicable Congestion Management Agency for the proposed project. As discussed in Chapter 4.5, Transportation, implementation of the proposed project would not conflict with applicable CCTA guidance.

Based on data provided in the Traffic Impact Analysis prepared for the proposed project,[39] the maximum traffic volume anticipated at any affected intersection would not reach 44,000 vehicles per hour. In addition, development of the proposed project would not result in the increase of traffic volumes beyond 24,000 vehicles per hour at any intersections where vertical and/or horizontal mixing is substantially limited. Therefore, based on the BAAQMD's screening criteria for localized CO emissions, the

[37] University of California, Davis. *Transportation Project-Level Carbon Monoxide Protocol*. December 1997.
[38] Bay Area Air Quality Management District. *Air Quality Summary Reports*. Available at: http://www.baaqmd.gov/about-air-quality/air-quality-summaries. Accessed May 2022.
[39] Fehr & Peers. *Pittsburg Harbor View Transportation Impact Assessment.* June 2022.

project would not be expected to result in substantial levels of localized CO at surrounding intersections or generate localized concentrations of CO that would exceed standards or cause health hazards.

## TAC Emissions

Another category of environmental concern is TACs. Health risks from TACs are a function of both the concentration of emissions and the duration of exposure. The CARB has identified DPM from diesel-fueled engines as a TAC; thus, high-volume roadways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM.

The nearest existing sensitive land uses include the single-family residences to the west of the project site, with the closest located approximately 50 feet away. In addition, Riverside High School and Marina Vista Elementary School are located in the project vicinity and considered in this analysis.

Operation of residential developments does not typically involve substantial TAC emissions. However, the proposed project would include construction activity within the project site that would involve the use of off-road equipment, much of which would likely be diesel powered. TAC emissions associated with construction activity are evaluated in further detail below.

### *Construction Emissions*

Construction-related activities would result in the generation of TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. The potential for construction activity to generate DPM emissions is dependent on the number and types of equipment implemented for construction activity. Off-road heavy-duty diesel equipment used for site grading, paving, utility trenching and other construction activities result in the generation of DPM.

In order to determine if construction activities associated with the proposed project would not result in the exposure of any sensitive receptors to substantial pollutant concentrations, the concentration of $PM_{2.5}$ at the maximally exposed sensitive receptor nearest to the site was estimated using AERMOD. The results of the dispersion modeling are included as Figure 4.1-1. As shown in the figure, the maximally exposed receptor, represented by a white X, is located south of the project site.

The cancer risk and non-cancer hazard indices were estimated for the maximally exposed receptor and are presented in Table 4.1-9. As shown in the table, DPM emissions related to construction of the proposed project would result in acute hazard and chronic hazard indices that are below the applicable thresholds of significance. However, the cancer risk associated with project construction was modeled to exceed the BAAQMD's cancer risk threshold of significance. Therefore, a potentially significant impact could occur.

**Figure 4.1-1**
**AERMOD Results**


***Source: AERMOD, January 2023.***

**Table 4.1-9**
**Maximum Unmitigated Cancer Risk and Hazard Index Associated with Construction DPM**

| | Cancer Risk (per million persons) | Acute Hazard Index | Chronic Hazard Index |
|---|---|---|---|
| Result at Maximally Exposed Receptor | 39.98 | 0.00 | 0.01861 |
| **Thresholds of Significance** | **10.00** | **1.00** | **1.00** |
| **Exceed Thresholds?** | **YES** | **NO** | **NO** |

***Sources: AERMOD and HARP 2 RAST, January 2023 (see Appendix C).***

## Criteria Pollutants

As discussed in the Existing Environmental Setting section and summarized in Table 4.1-1, criteria pollutant emissions can cause negative health effects. With regard to the proposed project, the principal criteria pollutants of concern are localized CO, ozone, and PM. As discussed above, the proposed project is not anticipated to result in impacts related to localized exposure of sensitive receptors to substantial concentrations of CO. Unlike CO and many TACs, due to atmospheric chemistry and dynamics, ozone and atmospheric PM typically act to impact public health on a cumulative and regional level, rather than a localized level. Due to the cumulative and regional nature of effects from criteria pollutants, the analysis of potential health effects of criteria pollutants is further discussed in Impact 4.1-5.

## Conclusion

As discussed above, the proposed project would not cause any substantial levels of localized CO concentrations, and operations of the project would not include any substantial sources of TACs. However, during construction, emissions of DPM from the use of off-road diesel-powered equipment could result in a cancer risk for nearby sensitive receptors which exceeds the BAAQMDs threshold of significance. Therefore, the proposed project could result in a ***significant*** impact associated with exposure of sensitive receptors to substantial levels of pollutant concentrations.

## Mitigation Measure(s)

The most effective way to reduce construction-related DPM emissions is by improving the engine tier/engine efficiency of construction equipment. Off-road diesel engines that are used in construction equipment fall into efficiency tiers, with the most efficient being the Tier 4 emission standards. Engine Tiers 3 through 1 are regressively less efficient. Based on modeling conducted, as demonstrated in Table 4.1-10, use of higher tier construction equipment for all construction activities would ensure that DPM emissions from construction equipment do not result in increased health risks to nearby receptors in excess of BAAQMD's standards. Consequently, implementation of the following mitigation measure would reduce impacts related to exposing nearby sensitive receptors to substantial pollutant concentrations to a *less-than-significant* level.

**Table 4.1-10**
**Maximum Mitigated Cancer Risk and Hazard Index Associated with Construction DPM**

| | Cancer Risk (per million persons) | Acute Hazard Index | Chronic Hazard Index |
|---|---|---|---|
| Result at Maximally Exposed Receptor | 9.98 | 0.00 | 0.0046 |
| **Thresholds of Significance** | **10.00** | **1.00** | **1.00** |
| **Exceed Thresholds?** | **NO** | **NO** | **NO** |

***Sources: AERMOD and HARP 2 RAST, January 2023 (see Appendix C).***

*4.1-3* *Prior to grading permit approval, the project applicant shall show on the plans via notation that the contractor shall ensure that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction project, including owned, leased, and subcontractor vehicles, shall not generate average annual $PM_{2.5}$ emissions in excess of 0.023 tons $PM_{2.5}$ per year. The $PM_{2.5}$ reduction shall be achieved by requiring a combination of engine Tier 3 or Tier 4 off-road construction equipment or the use of hybrid, electric, or alternatively fueled equipment.*

*In addition, all off-road equipment working at the construction site must be maintained in proper working condition according to manufacturer's specifications. Idling shall be limited to five minutes or less in accordance with the Off-Road Diesel Fueled Fleet Regulation as required by CARB. Portable equipment over 50 horsepower must have either a valid District Permit to Operate (PTO) or a valid statewide Portable Equipment Registration Program (PERP) placard and sticker issued by CARB.*

*The aforementioned requirements shall be noted on Grading Plans and submitted for review and approval by the City of Pittsburg Planning Division.*

### 4.1-4 Result in other emissions (such as those leading to odors) affecting a substantial number of people. Based on the analysis below, the impact is *less than significant*.

Pollutants of principal concern include emissions leading to odors, emission of dust, or emissions considered to constitute air pollutants. Air pollutants have been discussed in Impacts 4.1-1 through 4.1-3 above. Therefore, the following discussion focuses on emissions of odors and dust.

## Odors

According to the BAAQMD CEQA Guidelines, odors are generally regarded as an annoyance rather than a health hazard.[40] Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The presence of an odor impact is dependent on a number of variables including: the nature of the odor source; the frequency of odor generation; the intensity of odor; the distance of odor source to sensitive receptors; wind direction; and sensitivity of the receptor. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants, landfills, and composting facilities. The proposed project would not introduce any such land uses.

Construction activities often include diesel-fueled equipment and heavy-duty trucks, which could create odors associated with diesel fumes that may be considered objectionable. However, construction activities would be temporary, and hours of operation for construction equipment would be restricted to the hours of 8:00 AM and 5:00 PM Monday through Friday per Section 18.82.040 of the City of Pittsburg Municipal Code. Project construction would also be required to comply with all applicable BAAQMD rules and regulations, particularly associated with permitting of air pollutant sources. The aforementioned regulations would help to minimize emissions, including emissions leading to odors. Accordingly, substantial objectionable odors would not be expected to occur during construction activities.

Furthermore, the BAAQMD regulates objectionable odors through Regulation 7, Odorous Substances, which does not become applicable until the Air Pollution Control Officer (APCO) receives odor complaints from ten or more complainants within a 90-day period. Once effective, Regulation 7 places general limitations on odorous substances and specific emission limitations on certain odorous compounds, which remain effective until such time that citizen complaints have not been received by the APCO for one year. The limits of Regulation 7 become applicable again when the APCO receives odor complaints from five or more complainants within a 90-day period. Thus, although not anticipated, if odor complaints are made after the proposed project is developed, the BAAQMD would ensure that such odors are addressed, and any potential odor effects are minimized or eliminated.

## Dust

As noted previously, all projects under the jurisdiction of BAAQMD are required to implement the BAAQMD's BCMMs, including, but not limited to, the following measures that specifically relate to dust suppression:

- 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.

[40] Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines* [pg. 7-1]. May 2017.

- All visible mud or dirt track-out 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 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.

The aforementioned measures would ensure that construction of the proposed project does not result in substantial emissions of dust. Following project construction, the development area would be paved or landscaped and would not include any exposed topsoil. Thus, project operations would not generate significant amounts of dust that would adversely affect a substantial number of people.

### Conclusion

For the aforementioned reasons, construction and operation of the proposed project would not result in emissions (such as those leading to odors) adversely affecting a substantial number of people, and a ***less-than-significant*** impact would result.

### Mitigation Measure(s)

*None required.*

## Cumulative Impacts and Mitigation Measures

Global climate change is, by nature, a cumulative impact. As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

Emissions of GHG contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change (e.g., sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental impacts). While GHG emissions from a project in combination with other past, present, and future projects contribute to the world-wide phenomenon of global climate change and the associated environmental impacts, a single project could not generate enough GHG emissions to contribute noticeably to a change in the global average temperature. Due to the existing regulations within the State, for the purposes of this analysis, the geographic context for the analysis of GHG emissions presented in this EIR is the State of California.

### 4.1-5 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). Based on the analysis below, the project's incremental contribution to this

**significant cumulative impact is *less than cumulatively considerable.***

Buildout of the proposed project would lead to the release of emissions that would contribute to the cumulative regional air quality setting. The following section includes a discussion of the proposed project's cumulative contribution to cumulative operational emissions associated with implementation of the project, and the cumulative health effects of exposure to criteria pollutants. Construction activities result in one-time, relatively short-term emissions, and generally are not considered to contribute to cumulative emissions.

## Cumulative Operational Emissions from the Proposed Project

The long-term emissions associated with operation of the proposed project in conjunction with other existing or planned development in the area would incrementally contribute to impacts to the region's air quality. According to the BAAQMD's CEQA Guidelines, if a project were to exceed the identified significance thresholds, the project's emissions would be cumulatively considerable.[41] Operational emissions resulting from development of the project were discussed under Impact 4.1-2, the results are presented in Table 4.1-8. As shown in the table, the proposed project's operational emissions of ROG, $NO_X$, $PM_{10}$, and $PM_{2.5}$ would be below the applicable BAAQMD thresholds of significance. Therefore, the project's contribution to cumulative emissions of criteria pollutants would be less than cumulatively considerable.

## Cumulative Health Effects of Criteria Pollutants

As noted in Table 4.1-1, exposure to criteria air pollutants can result in adverse health effects. The AAQS presented in Table 4.1-2 are health-based standards designed to ensure safe levels of criteria pollutants that avoid specific adverse health effects. Because the SFBAAB is designated as nonattainment for State and federal eight-hour ozone and State $PM_{10}$ standards, the BAAQMD, along with other air districts in the SFBAAB region, has adopted federal and state attainment plans to demonstrate progress towards attainment of the AAQS. Full implementation of the attainment plans would ensure that the AAQS are attained and sensitive receptors within the SFBAAB are not exposed to excess concentrations of criteria pollutants. The BAAQMD's thresholds of significance were established with consideration given to the health-based air quality standards established by the AAQS, and are designed to aid the district in implementing the applicable attainment plans to achieve attainment of the AAQS.[42] Thus, if a project's criteria pollutant emissions exceed the BAAQMD's emission thresholds of significance, a project would be considered to conflict with or obstruct implementation of the BAAQMD's air quality planning efforts, thereby delaying attainment of the AAQS. Because the AAQSs are representative of safe levels that avoid specific adverse health effects, a project's hinderance of attainment of the AAQS could be considered to contribute towards regional health effects associated with the existing nonattainment status of ozone and $PM_{10}$ standards.

41 Bay Area Air Quality Management District. *Air Quality Guidelines* [pg. 2-1]. May 2017.
42 Bay Area Air Quality Management District. *Air Quality Guidelines* [pg. 2-1]. May 2017.

However, as discussed in Impact 4.1-1 and 4.1-2, and following implementation of Mitigation Measure 4.1-1, the proposed project would not result in exceedance of the applicable BAAQMD thresholds of significance. Consequently, implementation of the proposed project would not conflict with the BAAQMD's adopted attainment plans nor would the proposed project inhibit attainment of regional AAQS. Therefore, implementation of the proposed project would not contribute towards regional health effects associated with the existing nonattainment status of ozone and $PM_{10}$ standards.

### Conclusion

Based on the above, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant emissions for which the region is in nonattainment under an applicable federal and State AAQS. As such, the proposed project's incremental contribution to regional air quality impacts would be ***less than cumulatively considerable***.

### Mitigation Measure(s)

*None required.*

## 4.1-6 Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Based on the analysis below and with implementation of mitigation, the project's incremental contribution to this significant cumulative impact is *cumulatively considerable* and *significant and unavoidable*.

An individual project's GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHGs are inherently considered cumulative impacts.

Implementation of the proposed project would cumulatively contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of $CO_2$ and, to a lesser extent, other GHG pollutants, such as $CH_4$ and $N_2O$. Sources of GHG emissions include area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste.

Based on the modeling conducted for the proposed project, construction of the project was estimated to generate annual maximum unmitigated GHG emissions of 532.04 $MTCO_2e$/yr. The total unmitigated annual operational GHG emissions for the first year of project operation (assumed to be 2027) were estimated as presented in Table 4.1-11.

| **Table 4.1-11**<br>**Unmitigated Project Operational GHG Emissions** | |
|---|---|
| **Source** | **Annual GHG Emissions ($MTCO_2e$/yr)** |
| Area | 21.30 |
| Energy | 486.38 |
| Mobile | 1,474.73 |
| Waste | 133.60 |
| Water | 33.08 |
| **Total Annual Operational GHG Emissions** | **2,149.08** |
| **GHG Emissions per Capita** | **2.84 $MTCO_2e$/yr/capita** |
| Note: GHG Emissions per Capita = 2,149.08 $MTCO_2e$/yr / 756 residents.<br><br>***Source: CalEEMod, June 2022 (see Appendix C).*** | |

As noted previously, the applicable BAAQMD thresholds of significance for GHG emissions are qualitative, and the foregoing information is provided for disclosure purposes only. Potential impacts related to GHG emissions resulting from implementation of the proposed project are considered in comparison with BAAQMD's adopted thresholds of significance below.

## BAAQMD Thresholds of Significance

According to the BAAQMD thresholds of significance, a project must either include specific project design elements related to buildings and transportation or be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b). The City of Pittsburg has not prepared a qualified CAP under State CEQA Guidelines Section 15183.5(b). Thus, this discussion evaluates project consistency with the BAAQMD's Buildings and Transportation criteria.

With regard to Buildings criterion a., the project, as noted in the modeling assumptions, would include natural gas hearths. Thus, the applicant has not committed to the prohibition of natural gas infrastructure in the proposed project design, and, without mitigation, the proposed project could conflict with Buildings criterion a.

Consistency with Buildings criterion b. was evaluated in Section VI, Energy, of the Initial Study prepared for the proposed project (refer to Appendix A of this EIR). As noted therein, the temporary increase in energy use occurring during construction of the proposed project would not result in a significant increase in peak or base demands or require additional capacity from local or regional energy supplies. During project operations, the proposed project would be required to comply with all applicable regulations related to energy conservation and fuel efficiency, including the Building Energy Efficiency Standards and the CALGreen Code, which would ensure that building energy use associated with the proposed project would not be wasteful, inefficient, or unnecessary. As a result, the proposed project would comply with Buildings criterion b.

Consistency with Transportation criterion c. is evaluated in Chapter 4.5, Transportation, of this EIR. As presented therein, the proposed project would generate VMT per resident that exceeds 15 percent below the existing VMT per capita.

Therefore, without mitigation, the proposed project could conflict with Transportation criterion c.

With regard to Transportation criterion d., the 2022 CALGreen Code requires all single-family, townhomes, and duplexes be EV capable (i.e., each dwelling unit must have a listed raceway to accommodate a dedicated 208/40-volt branch circuit), which would be suitable for EV charging. For single-family residences and townhouses, compliance with the 2022 CALGreen Code would satisfy the requirements established by BAAQMD criterion d. It should be noted that based on direction from the City,[43] the parking for the live/work duplex units is considered residential parking, and, therefore, is covered under the 2022 CALGreen Code requirements. Thus, the proposed project would comply with Transportation criterion d.

## Conclusion

Based on the above, the proposed project would comply with Buildings criterion b., related to the wasteful, inefficient, or unnecessary use of energy and Transportation criterion d., related to the provision of EV charging stations. However, the proposed project has the potential to conflict with Buildings criterion a., related to the prohibition of natural gas, and Transportation criterion c., related to VMT. Because the proposed project could conflict with the BAAQMD's applicable thresholds of significance for GHG emissions, the proposed project could generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Thus, a ***cumulatively considerable*** and ***significant*** impact related to GHG emissions could occur.

## Mitigation Measure(s)

Implementation of Mitigation Measure 4.1-6(a) would ensure project consistency with Buildings criterion a. Mitigation Measure 4.1-6(b) would address Transportation criterion c. As discussed further in Chapter 4.5, Transportation, of this EIR, implementation of the measures required by Mitigation Measure 4.1-6(b) would reduce project VMT, but not to a level that would achieve 15 percent less than the regional average VMT. Therefore, even with the implementation of Mitigation Measure 4.1-6(b), the project would not comply with BAAQMD's Transportation criterion c. Consequently, even with implementation of the following mitigation measures, the project's incremental contribution to the cumulatively significant effects of GHG emissions and global climate change would remain *cumulatively considerable* and *significant and unavoidable*.

*4.1-6(a) Prior to the approval of project improvement plans, the applicant shall implement the following measure:*

- *Consistent with the BAAQMD's Buildings standard a., natural gas shall be prohibited in proposed structures.*

[43] Gunter, Kelsey, Associate Planner, City of Pittsburg Community & Economic Development Department - Planning Division. Personal Communication [email] with Rod Stinson, Vice President/Air Quality Specialist, Raney Planning & Management, Inc. September 28, 2022.

*Compliance with the foregoing measure shall be ensured by the City of Pittsburg Planning Division.*

*4.1-6(b) Implement Mitigation Measure 4.5-3.*

# 4.2 Cultural and Tribal Cultural Resources

# 4.2 CULTURAL AND TRIBAL CULTURAL RESOURCES

## 4.2.1 INTRODUCTION

The Cultural and Tribal Cultural Resources chapter of the EIR addresses known cultural and tribal cultural resources in the project vicinity and the potential for unknown resources to exist. Cultural resources can be categorized into prehistoric, tribal, and historic resources. Prehistoric and tribal resources include those sites and artifacts associated with indigenous, non-Euroamerican populations, generally prior to contact with people of European descent. Historic resources include structures, features, artifacts, and sites that date from Euroamerican settlement of the region. In addition, the chapter evaluates any adverse impacts to unique geologic features and/or paleontological resources. The analysis summarizes the existing setting, as a result of the proposed project. The analysis identifies the thresholds of significance, describes the potential impacts associated with the project, and includes mitigation measures that would reduce impacts to a less-than-significant level, if necessary. Information for this chapter was drawn primarily from the City of Pittsburg General Plan[1] and associated EIR,[2] as well as the Envision Pittsburg Existing Conditions Report.[3]

## 4.2.2 EXISTING ENVIRONMENTAL SETTING

The following existing environmental setting discussion consists of the paleontological, prehistoric, and historic context for the City of Pittsburg, as well as historical background of the project site.

### Paleontological Context

Paleontological resources are the mineralized (fossilized) remains of prehistoric plant and animal life exclusive of human remains or artifacts. Fossil remains, such as bones, teeth, shells, and leaves, are found in geologic deposits where the resources were originally buried. A University of California Museum of Paleontology (UCMP) database search was performed in 2014 by Dr. Kenneth Finger, Consulting Paleontologist, and identified 68 Pleistocene localities in Contra Costa County yielding 9,924 vertebrate specimens. All but one of the specimens represent the late Pleistocene Rancholabrean Land Mammal Stage (24,000 to 11,000 years before present), the exception being the middle- to late-Pleistocene fish cranium. The database did not list significant paleontological localities yet discovered in the Ecocene Markley Sandstone of Contra Costa County.

### Prehistoric Context

The following section includes the prehistoric and ethnohistoric context of the region and the potential for prehistoric resources to be found on-site.

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1 City of Pittsburg. *City of Pittsburg General Plan 2020: A Vision for the 21st Century*. January 2001.
2 City of Pittsburg. *City of Pittsburg General Plan Draft Environmental Impact Report (SCH#1999072109)*. January 2001.
3 City of Pittsburg. *Envision Pittsburg Existing Conditions Report, Chapter 5, Conservation*. November 2019.

## Prehistoric Setting

In prehistory, the abundance of natural resources in the delta supported large groups of native peoples along Honker Bay. Native Americans may have ventured inland on a seasonal basis to exploit available resources. Beginning with the Spanish missionaries in the 1700s, the influx of European and other immigrants into the regional area resulted in drastic changes to the natural environment. Overgrazing by domesticated livestock, introduction of non-native species, large-scale farming, and water diversions have contributed to degradation in the region.

The chronological sequence for the greater Sacramento River Valley region begins with the Windmiller Pattern, encompassing what is referred to as the Early and Middle Horizons. Sites from the Early and Middle Horizons date from about 4,500 to 2,500 years ago. Although earlier sites exist, sites from the "Paleoindian Period" and dating from about 10,000 to 4,500 years ago are thought to be buried under Holocene alluvial deposits and are not well documented in Bay Area region of California. Various scholars have suggested Windmiller Pattern sites are associated with an influx of peoples from outside of California who brought with them an adaptation to river-wetland environments.

Windmiller Pattern sites are often situated in riverine, marshland, and valley floor settings, and atop small knolls above prehistoric seasonal floodplains. The variety of plant and animal resources within the immediate area of the project site would have attracted populations who were intent on making efficient use of such resources. Most Windmiller Pattern sites have contained burials in what may be cemeteries. Typically, the remains are extended ventrally, oriented to the west, and contain copious amounts of grave goods. Grave artifacts often include large projectile points (spear or dart points) and a variety of fishing paraphernalia such as net weights, bone hooks, and spear points, as well as the faunal remains of large and small mammals. Seed-grinding implements at the sites show that gathering and processing of seed resources was also common, and other artifacts (e.g., charmstones, quartz crystals, abalone and Haliotis shell beads) suggest trade and a degree of ceremonialism were practiced.

The subsequent Berkeley Pattern, previously the Middle Horizon, covers a period from about 2,500 to 1,500 years ago. The Berkeley Pattern overlaps somewhat with Windmiller Pattern attributes at the beginning and Late Prehistoric artifacts at the end. Berkeley Pattern sites are much more common and well documented, and, therefore, better understood than Windmiller Pattern sites. The sites are distributed in more diverse environmental settings, although a riparian focus is common.

Deeply stratified midden deposits, resulting from generations of occupation, are common to Berkeley Pattern sites, as are an abundance of milling and grinding stones for the processing of vegetal resources. Projectile points are progressively smaller and lighter over time, culminating in the introduction of the bow and arrow during the late prehistoric period. As mentioned above, although the Windmiller Pattern manifestations have numerous shared traits, artifacts unique to Berkeley Pattern sites include slate pendants, steatite beads, stone tubes and ear ornaments, and, most importantly, burial techniques using variable directional orientation, flexed body positioning, and a general reduction of mortuary goods.

Characterized as the Augustine Pattern, the late prehistoric period, formerly the Late Horizon, ranges from about 1,500 to 150 years ago. The Augustine Pattern is typified by intensive fishing, hunting and gathering, the latter focusing on acorns, a large population increase, increased trade and exchange networks, increases in ceremonial and social attributes, and the practice of

cremation. Certain artifact types also typify the pattern: bone awls for use in basketry manufacture, small notched and serrated projectile points indicative of introduction of the bow and arrow, occasional pottery, clay effigies, bone whistles, and stone pipes. The presence of certain types of artifacts suggests a southward-moving influx of Wintuan populations into the Sacramento Valley, providing an important stimulus to the Augustine Pattern. Evidence from several sites (e.g., mutilation of skeletons and Wintuan-type barbed points imbedded in human remains) suggests the expansion was not altogether friendly. The Augustine Pattern and the late prehistoric period can be characterized as the apex of Native American cultural development in the Bay Area region of California.[4]

## Ethnographic Setting

Linguistic data suggest that the Miwok have resided in the delta of the Sacramento and San Joaquin rivers for approximately 2,500 years. The Bay Miwok occupied an area south of the Sacramento River, including portions of Contra Costa County east of present-day Walnut Creek. The smaller subdivisions of Bay Miwok that interacted more commonly are called tribelets. The tribelet that controlled the Pittsburg vicinity at the time of Euro-American contact was Chupcan. Along the river to their east were the Julpun, near present-day Antioch, and to the west were the Karkin.[5]

Shellfish were an important staple in the Miwok diet, as were acorns of the coast, live oak, valley oak, tanbark oak and California black oak. Seeds and berries, roots, grasses, and the meat of deer, elk, grizzly, sea lion, rabbit, and squirrel also contributed to the Miwok diet. The intensive use of shellfish, a subsistence strategy reflected in both coastal and bay shore midden deposits, was an indication of a general economic unity in the prehistoric region.

Abundant marine and terrestrial resources made both agriculture and animal husbandry unnecessary. Evidence of the success of their hunter-gatherer subsistence strategy may be seen in the number of flourishing village sites known to have existed at the time of contact with the Spanish. The detritus of the village sites were found in numerous locations around the shoreline of San Francisco Bay in the form of shellmounds, large accumulations of shell, ash, human artifacts, and occasionally human remains. With the influx of European settlers in the mid-19$^{th}$ century, most of the sites were destroyed or covered by buildings and roads.

The arrival of the Spanish in the San Francisco Bay Area in 1775 led to the rapid demise of native California populations. Diseases, declining birth rates, and the effects of the mission system served to eradicate the aboriginal ways of life. Brought into the missions, the surviving Costanoan along with former neighboring groups of Esselen, Yokuts, and Miwok were transformed from hunters and gatherers into agricultural laborers. With abandonment of the mission system and Mexican takeover in the 1840s, numerous ranchos were established. Generally, the few native Californians who remained were then forced, by necessity, to work on the ranchos.[6]

## Historic Context

The first introduction of Hispanic peoples into the area that constitutes modern Contra Costa County was accomplished by Pedro Fages, who toured the country with twelve soldiers, a Native American guide, and Father Juan Crespí in 1772. This expedition was followed in 1776 by a party

4 City of Pittsburg. *Faria/Southwest Hills Annexation Project EIR (SCH No. 2017032027)*. October 10, 2018.
5 City of Pittsburg. *Envision Pittsburg Existing Conditions Report, Chapter 5, Conservation* [pg 5-8]. November 2019.
6 City of Pittsburg. *Faria/Southwest Hills Annexation Project EIR (SCH No. 2017032027)*. October 10, 2018.

led by Captain Juan Bautista de Anza that generally followed along the same route from San Francisco Bay to the Carquinez Strait.[7]

In 1839, the Mexican government granted almost 10,000 acres, known as Rancho Los Medanos, to Jose Antonio Mesa and Jose Miguel Garcia. The rancho encompassed modern-day Pittsburg. The future site of Pittsburg was soon named the "New York of the Pacific". The area soon became known as New York Landing, and fishing and canning operations were established.

When coal was discovered in the nearby hills at the turn of the century, the name of the town was changed to Black Diamond. Finally, on February 11, 1911, five years after Columbia Geneva Steel opened, the town was renamed Pittsburg, after the famous birthplace of the steel industry in Pennsylvania. In 1942, the United States Army built Camp Stoneman. For thousands of G.I.s who went to fight in the Asiatic-Pacific Theater operations during World War II, Camp Stoneman was their last contact with the United States. In 1954, the Camp was closed and the property became part of the growing City of Pittsburg. The City and surrounding area have seen significant commercial and residential development in the last half of the 20th-century.[8]

## Project Site Historic Setting

A records search of the California Historical Resources Information System (CHRIS) was conducted by the Northwest Information Center (NWIC) at Sonoma State University to identify previous cultural resource studies in the project vicinity. A historical map from 1908 depicts three buildings and a railroad spur off the Topeka and Santa Fe Railroad within the project area. The CHRIS search indicated that one previous cultural resource study covers the entirety of the project site and, based on such, the site does not contain any recorded archeological resources nor recorded historic buildings or structures.[9]

Historically, the project site was occupied since the mid-1920s by a manufacturing plant that produced asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. Manufacture of asbestos-containing materials ceased in 1980 and commercial-grade roofing materials were manufactured at the plant until 2003, when operations terminated.

Several environmental investigations were conducted at the former manufacturing site, beginning in 1986 and continuing through 2005, and areas of potential concern associated with asbestos-containing materials were identified. The selected remedy for the environmental concerns at the project site was the removal of asbestos-containing materials and petroleum hydrocarbon-affected soil from the site and placement in engineered containment berms along the eastern boundary of the project site. Asbestos-impacted material and debris were placed into a trench excavated to 10 feet below ground surface (bgs) along the eastern boundary of the site, which was then capped by hydrocarbon-impacted soil. An engineered textile and two feet of clean, low-permeability soil was then added to the top of the materials to create the capped, vegetated berms. All remedial actions have been completed and approved by the Department of Toxic Substances Control (DTSC);[10] however, ongoing maintenance and monitoring is required. The

7 City of Pittsburg. *Envision Pittsburg Existing Conditions Report, Chapter 5, Conservation* [pg 5-6]. November 2019.
8 City of Pittsburg. *Faria/Southwest Hills Annexation Project EIR (SCH No. 2017032027)*. October 10, 2018.
9 California Historical Resources Information System, Northwest Information Center. *Re: Record search results for the proposed 420 E. 3rd Street Project*. December 6, 2021.
10 GSI Environmental Inc. *Site Investigation Report: 420 E. 3rd Street, Pittsburg, California*. June 2021.

remediation system is required to be operated and maintained as described in the Site Operation and Maintenance Plan[11] until the DTSC authorizes its modification or discontinuation.

## 4.2.3 REGULATORY CONTEXT

Federal, State, and local governments have developed laws and regulations designed to protect significant cultural resources that may be affected by actions that they undertake or regulate. The following section contains a summary of basic federal, State, and local regulations governing preservation of historic and archaeological resources of national, regional, State, and local significance, as well as paleontological resources.

### Federal Regulations

The following are the federal environmental laws and policies relevant to cultural resources.

### National Historical 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 the 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 36 Code of Federal Regulations (CFR) Part 800. The goal of the Section 106 review process is to offer a measure of protection to sites, which are determined eligible for listing on the National Register of Historic Places (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. While federal agencies must follow federal regulations, most projects by private developers and landowners do not require this level of compliance. Federal regulations only come into play in the private sector if a project requires a federal permit or uses federal funding.

### National Register of Historic Places

NRHP is the nation's master inventory of known historic resources. The NRHP includes listings of resources, including: buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, State, or local level. Resources over 50 years of age may be listed on the NRHP. However, properties under 50 years of age that are of exceptional significance or are contributors to a district may also be included on the NRHP. Four criteria are used to determine if a potential resource may be considered significant and eligible for listing on the NRHP. Potentially eligible resources include resources that:

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

[11] *Ibid.*

A resource can be individually eligible for listing on the NRHP under any of the above four criteria, or can be listed as contributing to a group of resources that are listed on the NRHP.

A resource can be considered significant in American history, architecture, archaeology, engineering, or culture. Once a resource has been identified as significant and potentially eligible for the NRHP, the resource's historic integrity must be evaluated. Integrity is a function of seven factors: location, design, setting, materials, workmanship, feeling, and association. The factors closely relate to the resource's significance and must be intact for NRHP eligibility.

Historical buildings, structures, and objects are usually eligible under Criteria A, B, and C based on historical research and architectural or engineering characteristics. Archaeological sites are usually eligible under Criterion D, the potential to yield information important in prehistory or history. An archaeological test program may be necessary to determine whether the site has the potential to yield important data. The lead federal agency makes the determination of eligibility based on the results of the test program and seeks concurrence from the State Historic Preservation Officer (SHPO).

Effects to NRHP-eligible resources (historic properties) are adverse if the project may alter, directly or indirectly, any of the characteristics of an historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

### Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) ensures that Native American cultural items, which includes both objects and human remains, that are excavated or discovered on federal or tribal lands remain under the ownership and control of Native American tribes. In addition, the Act recognizes that human remains of any ancestry shall be treated with dignity and respect.[12]

## State Regulations

The following are the State environmental laws and policies relevant to cultural and paleontological resources.

### California Environmental Quality Act and California Register of Historic Places

State historic preservation regulations affecting this project include the statutes and guidelines contained in CEQA (Public Resources Code [PRC] Sections 21083.2 and 21084.1 and sections 15064.5 and 15126.4 (b) of the CEQA Guidelines). CEQA requires lead agencies to consider the potential effects of a project on historic resources and unique archaeological resources. A "historic resource" includes, but is not limited to, any object, building, structure, site, area, place, record or manuscript that is historically or archaeologically significant (PRC Section 5020.1). Under Section 15064.5 of the CEQA Guidelines, a resource is considered "historically significant" if one or more of the following California Register of Historic Resources (CRHR) criteria have been met:

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

[12] Library of Congress. *H.R.5237 – Native American Graves Protection and Repatriation Act*. Available at: https://www.congress.gov/bill/101st-congress/house-bill/5237. Accessed January 2023.

(B) Is associated with the lives of important persons from our past;
(C) Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual or possesses high artistic values; or
(D) Has yielded, or may be likely to yield, important information in prehistory or history.

In addition, the resource must retain integrity. Cultural resources determined eligible for the NRHP by a federal agency are automatically eligible for the CRHR.

CEQA requires preparation of an EIR if a proposed project would cause a "substantial adverse change" in the significance of a historical resource. A "substantial adverse change" would occur if a proposed project would result in physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired (CEQA Guidelines Section 15064.5[b][1]).

In addition to historically significant resources, which can include archeological resources that meet the criteria listed above, CEQA also requires consideration of "unique archaeological resources." If a site meets the definition of a unique archaeological resource, the site must be treated in accordance with the provisions of CEQA Guidelines Section 21083.2. Under Section 21083.2(g), an archaeological resource is considered "unique" if it:

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

CEQA also includes specific guidance regarding the accidental discovery of human remains. Specifically, CEQA Guidelines Section 15064.5(e) requires that if human remains are uncovered, excavation activities must be stopped and that the county coroner be contacted. If the county coroner determines that the remains are Native American, the coroner must contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC identifies the most likely descendant, and that individual or individuals can make recommendations for treatment of the human remains under the procedures set forth in Section 15064.5 of the CEQA Guidelines.

The SHPO maintains the CRHR. Properties that are listed on the NRHP are automatically listed on the CRHR, along with State Landmarks and Points of Interest. The CRHR can also include properties designated under local ordinances or identified through local historical resource surveys.

## Assembly Bill 52

Assembly Bill (AB) 52 adds tribal cultural resources to the categories of cultural resources in CEQA, which had formerly been limited to historic, archaeological, and paleontological resources. "Tribal cultural resources" are defined as either:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

A. Included or determined to be eligible for inclusion in the California Register of Historical Resources.
B. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2. A resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the Lead Agency shall consider the significance of the resource to a California Native American tribe.

Under AB 52, a project that may cause a substantial adverse change in the significance of a Tribal Cultural Resource is defined as a project that may have a significant effect on the environment. Where a project may have a significant impact on a tribal cultural resource, the Lead Agency's environmental document must discuss the impact and whether feasible alternatives or mitigation measures could avoid or substantially lessen the impact. AB 52 (PRC 21080.3.1) requires lead agencies to provide notice to tribes that are traditionally and culturally affiliated with the geographic area of a proposed project if they have requested notice of projects proposed within that area. If the tribe(s) requests consultation within 30 days upon receipt of the notice, the Lead Agency must consult with the tribe(s). Consultation may include discussing the type of environmental review necessary, the significance of tribal cultural resources, the significance of the project's impacts on the tribal cultural resources, and alternatives and mitigation measures recommended by the tribe(s).

### Public Resources Code Section 5097.5

Section 5097.5 of the PRC establishes protections for historic, prehistoric, archaeological, and paleontological features. In particular, Section 5097.5 prohibits the intentional excavation, removal, destruction, injury, or defacement of historic or prehistoric ruins, burial grounds, and archaeological or vertebrate paleontological sites on public lands. Public lands are defined as those lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, public corporation, or any agency thereof.

## Local Regulations

The following are the applicable local environmental policies relevant to cultural resources and tribal cultural resources.

### City of Pittsburg General Plan

The Pittsburg General Plan objectives and policies relating to the protection of cultural, historical, and tribal resources that are applicable to the proposed project are presented below.

#### Resource Conservation Element

Goal 9-G-12 Encourage the preservation, protection, enhancement and use of structures that:

- Represent past eras, events and persons important in history;
- Provide significant examples of architecture;
- Embody unique and irreplaceable assets to the City and its neighborhoods; and
- Provide examples of the physical surroundings in which past generations lived.

Goal 9-G-13 Encourage municipal and community awareness, appreciation, and support for Pittsburg's historic, cultural, and archeological resources.

Policy 9-P-34 Encourage the preservation of varied architectural styles that reflect the cultural, industrial, social, economic, political and architectural phases of the City's history.

Policy 9-P-35 Expand the role of the City's Historical Resources Commission, currently responsible for only the New York Landing Historical District, to include all historical resources. The Commission should be responsible for designating historical resources, and acting as the community's liaison on these issues. However, the role of reviewing development proposals and remodelings in the Historical District should be transferred to the Planning Commission.

Policy 9-P-36 Provide for the educational and cultural enrichment of this and future generations by fostering knowledge of our heritage.

Education and cultural enrichment of Pittsburg's citizens will be a key element in the preservation of Pittsburg's historical and cultural resources. The Historic Resources Commission should implement interpretive facilities within the Historical District, including displays and signs to promote education and understanding of existing historical resources.

Policy 9-P-37 Redefine the New York Landing Historical District to designate and preserve historical structures not currently located within the district boundaries.

There are several structures outside the geographically distinct boundaries of the Historical District (See Figure 9-3: Historical Resources) that are important reflections of the City's history: for example, Black Diamond Grammar School (West Eighth and Black Diamond Streets), Pittsburg Seventh Day Adventist Church (East Ninth and Los Medanos Streets), Saint Peter Martyr Church (West Eighth and Black Diamond Streets), Presbyterian Church (East Leland Road), and Hindu Temple (Crestview Drive). While these are not part of the Historical District, these resources are important and should be protected accordingly.

Policy 9-P-39 Ensure the protection of known archeological resources in the City by acquiring a records review for any development proposed in areas of known resources. If such resources are found, limit urban development in the vicinity or account for the resources.

Policy 9-P-40 In accordance with State law, ensure the preparation of a resource mitigation plan and monitoring program by a qualified archeologist in the event that archeological resources are uncovered.

CEQA requires the evaluation of any archeological resource on the site of a development project. State law also protects these resources. City involvement in the identification, mitigation, and monitoring of project impacts on these resources will ensure the protection of Pittsburg's cultural heritage.

Policy 9-P-41 If archeological resources are found during ground-breaking for new urban development, halt construction immediately and conduct an archeological investigation to collect all valuable remnants.

Policy 9-P-42 Develop an identification and preservation system for cultural resources—those places or structures that qualify as "important" or "unique" to local community, ethnic, or social groups.

It should be noted that the City of Pittsburg is currently in the process of updating the General Plan; however, the General Plan Update has not yet been completed.

## 4.2.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to cultural, tribal cultural, and paleontological resources. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

### Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, an impact related to cultural, tribal cultural, or paleontological resources is considered significant if the proposed project would:

- Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines, Section 15064.5;
- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines, Section 15064.5;
- Disturb any human remains, including those interred outside of dedicated cemeteries;
- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:
    - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k);
    - A resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the Lead Agency shall consider the significance of the resource to a California Native American tribe; and/or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

## Method of Analysis

The methods used to gather information for the analysis are described in further detail below, along with a discussion of the tribal consultation efforts conducted by the City pursuant to AB 52. Information regarding the previous use of the project site and project region was used to determine the potential for cultural, tribal cultural, or paleontological resources to occur on-site.

### Records Search Methods

A cultural resources records search of the CHRIS for the project area was completed at the NWIC at Sonoma State University on December 6, 2021. The records search was conducted to determine the extent of previous cultural resource surveys within the project area, and whether previously documented pre-contact or historic archaeological sites, architectural resources, or traditional cultural properties exist within the area.

In addition, a search of the NAHC's Sacred Lands File was conducted on February 14, 2022 in order to determine whether sacred sites or tribal resources are known to exist in the project area.

### Native American Tribal Consultation

In compliance with AB 52, project notification letters were distributed on April 14, 2022, to the following tribes: Amah Mutsun Tribal Band of Mission San Juan Bautista, the Chicken Ranch Rancheria of Me-Wuk Indians, the Guidiville Indian Rancheria, the Indian Canyon Mutsun Band of Costanoan, the Muwekma Ohlone Indian Tribe of the San Francisco Bay Area, the Nashville Enterprise Miwok-Maidu-Nishinam Tribe, the North Valley Yokuts Tribe, the Ohlone Indian Tribe, and the Wilton Rancheria. Requests to consult were not received within the required response period.

## Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

### 4.2-1 Cause a substantial adverse change in the significance of a historical resource or a unique archeological resource pursuant to CEQA Guidelines, Section 15064.5 or disturb human remains, including those interred outside of dedicated cemeteries. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Historical resources are features that are associated with the lives of historically important persons and/or historically significant events, that embody the distinctive characteristics of a type, period, region or method of construction, or that have yielded, or may be likely to yield, information important to the pre-history or history of the local area, California, or the nation. Examples of typical historical resources include, but are not limited to, buildings, farmsteads, rail lines, bridges, and trash scatters containing objects such as colored glass and ceramics. The General Plan EIR indicates that the City of Pittsburg contains multiple historic sites relevant to the history of Pittsburg, including historical resources from the coal and steel eras.

As noted above, the CHRIS search found that a previous cultural resource study covered the entirety of the project site, and determined that known archeological resources do not exist on the project site.[13] The State Office of Historic Preservation Built Environment Resources Directory does not list any recorded buildings or structures on or near the project site. In addition, a records search by the NAHC of the Sacred Lands File returned negative results, indicating that sacred sites or tribal cultural resources are not known to exist on the project site.[14] Based on the foregoing information, known historical or archeological resources do not occur on-site.

In addition, the project site has been subject to substantial disturbance associated with previous development and remediation on-site. As noted above, the site has been occupied since the mid-1920s, and, in order to address concerns related to asbestos and hydrocarbon contamination, on-site soils have been excavated. Therefore, native soils on the project site have been disrupted, and undisturbed cultural resources are not anticipated to exist on the site.

Nonetheless, given the historical occupation of the project area by Native American tribes, the potential exists that unknown archaeological resources, including human remains, and/or historic resources could occur on-site. Should ground-disturbing activity related to project construction encounter such resources, an adverse effect could occur. Therefore, the proposed project could cause a substantial adverse change in the significance of a historic or archaeological resource pursuant to CEQA Guidelines Section 15064.5 and/or disturb human remains, including those interred outside of formal cemeteries during construction. Thus, impacts could be considered ***significant***.

## Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

*4.2-1(a)* *Prior to approval of Improvement Plans, plans shall be reviewed by the Pittsburg Community and Economic Development Department, Planning Division, to ensure the following note is included:*

*If any prehistoric or historic artifacts, or other indications of cultural deposits are found once ground disturbing activities are underway, all work within the vicinity of the find(s) shall cease, the Community and Economic Development Department, Planning Division, shall be notified, and the find(s) shall be immediately evaluated by a qualified archaeologist. If the find is determined to be a historical or unique paleontological or archaeological resource, contingency funding and a time allotment to allow for implementation of avoidance measures or appropriate mitigation shall be made available (CEQA Guidelines Section 15064.5). Work may continue on other parts of the project site*

[13] Northwest Information Center. *Records Search Results for the Proposed 420 East 3rd Street Project*. December 6, 2021.

[14] Native American Heritage Commission. *Letter RE: 420 E. 3rd Street Project, Contra Costa County*. February 14, 2022.

*while historical or unique archaeological resource mitigation takes place (PRC Sections 21083 and 21087).*

*4.2-1(b)* *Prior to approval of Improvement Plans, plans shall be reviewed by the Pittsburg Community and Economic Development Department, Planning Division, to ensure the following note is included:*

*In the event of the accidental discovery or recognition of any human remains, further excavation or disturbance of the find or any nearby area reasonably suspected to overlie adjacent human remains shall not occur until compliance with the provisions of CEQA Guidelines Section 15064.5(e)(1) and (2) has occurred. The Guidelines specify that in the event of the discovery of human remains other than in a dedicated cemetery, no further excavation at the site or any nearby area suspected to contain human remains shall occur until the County Coroner has been notified to determine if an investigation into the cause of death is required. If the coroner determines that the remains are Native American, then, within 24 hours, the Coroner must notify the Native American Heritage Commission, which in turn will notify the most likely descendants who may recommend treatment of the remains and any grave goods. If the Native American Heritage Commission is unable to identify a most likely descendant or most likely descendant fails to make a recommendation within 48 hours after notification by the Native American Heritage Commission, or the landowner or his authorized agent rejects the recommendation by the most likely descendant and mediation by the Native American Heritage Commission fails to provide a measure acceptable to the landowner, then the landowner or his authorized representative shall rebury the human remains and grave goods with appropriate dignity at a location on the property not subject to further disturbances. Should human remains be encountered, a copy of the resulting County Coroner report noting any written consultation with the Native American Heritage Commission shall be submitted as proof of compliance to the City's Community and Economic Development Department, Planning Division.*

**4.2-2 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k); or a resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. Based on the**

**analysis below and with implementation of mitigation, the impact is *less than significant*.**

As noted above, the search of the NAHC Sacred Lands File did not yield any information regarding the presence of tribal cultural resources within the project site or the immediate area.[15] Furthermore, a search of the CHRIS by the NWIC did not identify any known cultural resources or Native American resources within the project site.[16] In compliance with AB 52, a project notification letter was distributed to tribes which submitted request for consultation to the City. The letter was distributed on April 15, 2022, and requests to consult were not received within the 30-day consultation period. Based on the above, known tribal cultural resources do not exist within the project site. In addition, as noted previously, the project site has previously been subjected to substantial ground disturbance associated with site development and soil remediation. Therefore, any resources that may have occurred on-site have likely already been disrupted.

Nevertheless, given the known occupation of the project area by Native American tribes, the possibility exists that construction of the proposed project could result in a substantial adverse change in the significance of a tribal cultural resource if previously unknown resources are uncovered during grading or other ground-disturbing activities. Thus, a ***significant*** impact to tribal cultural resources could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

*4.2-2 Implement Mitigation Measures 4.2-1(a) and 4.2-1(b).*

**4.2-3 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.**

As previously discussed, the UCMP database search previously conducted for Contra Costa County indicated the presence of 68 Pleistocene localities and over 9,900 paleontological resources within the County. Thus, paleontological resources are known to occur within Contra Costa County, and may occur within the project site. However, is it noted that the project site has been subjected to substantial ground disturbance associated with previous development on-site and soil excavation and remediation activities. Nevertheless, the possibility exists that paleontological resources could be discovered during grading, excavation, and trenching associated with the proposed project.

As noted in the City's General Plan, the City is underlain by alluvium, which consists mainly of unconsolidated gravel, sand, silt, and clay deposits. Such soil types are not

[15] Native American Heritage Commission. *RE: 420 E. 3rd Street Project, Contra Costa County*. February 14, 2022.
[16] Northwest Information Center. *Records Search Results for the Proposed 420 East 3rd Street Project*. December 6, 2021.

considered unique geologic features and are common within the geographic area of the City. Furthermore, the City's General Plan does not note the existence of any unique geologic features within the City. Consequently, implementation of the proposed project would not be anticipated to have the potential to result in direct or indirect destruction of unique geologic features.

Although the proposed project would not have the potential to result in the destruction of unique geologic features, paleontological resources could exist within the project site. Should previously unknown paleontological resources exist within the project site, ground-disturbing activities associated with project construction have the potential to disturb or destroy such features. Consequently, the proposed project could result in the direct or indirect destruction of a unique paleontological resource, and a ***significant*** impact could occur.

### Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

*4.2-3 Implement Mitigation Measure 4.2-1(a).*

## Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Additional detail regarding the cumulative project setting can be found in Chapter 6, Statutorily Required Sections, of this EIR.

### 4.2-4 Cause a cumulative loss of cultural resources. Based on the analysis below, the cumulative impact is *less than significant*.

Generally, while some cultural resources may have regional significance, the resources themselves are site-specific, and impacts to them are project-specific. For example, impacts to a subsurface archeological find at one project site would not generally be made worse by impacts to a cultural resource at another site due to development of another project. Rather, the resources and the effects upon them are generally independent. A possible exception to the aforementioned general conditions would be where a cultural resource represents the last known example of its kind or is part of larger cultural resources such as a single building along an intact historic Main Street. For such a resource, cumulative impacts, and the contribution of a project to them, may be considered cumulatively significant.

As described throughout this chapter, historical, cultural, or tribal cultural resources are not known to occur on or adjacent to the project site. Thus, implementation of the proposed project would not disturb any known resources. Furthermore, implementation of the project-specific mitigation measures set forth in this chapter (Mitigation Measures 4.2-1[a] and 4.2-1[b]) would ensure that potential impacts related

to the disturbance of unknown cultural, tribal cultural, or paleontological resources within the site are reduced to less-than-significant levels.

Similar to the proposed project, future development projects within the City would be required to implement project-specific mitigation to ensure any potential impacts to identified cultural resources are reduced to a less-than-significant levels. In addition, future projects would be required to comply with all applicable City rules and regulations, including General Plan Policy 9-P-39, which requires the protection of known archeological resources, and Policy 9-P-40, which requires the preparation of a resource mitigation plan by a qualified archeologist if previously unknown archeological resources are discovered. Given that cultural resource impacts are generally site-specific and each future project associated with cumulative development within the City would be required to adhere to City policies, any potential impacts associated with cumulative buildout of the planning area would not combine to result in a significant cumulative impact.

Based on the above information, implementation of the aforementioned mitigation measures would reduce all project-specific impacts to less-than-significant levels, and the potential for impacts related to a cumulative loss of cultural resources, to which implementation of the proposed project might contribute, would be ***less than significant.***

## Mitigation Measure(s)

*None required*.

# 4.3 Geology and Soils

# 4.3 GEOLOGY AND SOILS

## 4.3.1 INTRODUCTION

The Geology and Soils chapter of the EIR describes the geologic and soil characteristics of the project site and evaluates the extent to which implementation of the proposed project could be affected by unstable earth conditions and various geologic and geomorphic hazards.

Information for this chapter is primarily drawn from a Geotechnical Feasibility Evaluation prepared by ENGEO Incorporated for the proposed project (Appendix D),[1] as well as the Pittsburg General Plan[2] and the associated EIR.[3]

## 4.3.2 EXISTING ENVIRONMENTAL SETTING

The existing environmental setting information regarding the geology, soils, and seismicity associated with the project site is provided below.

### Regional Setting

The project site is located within the City of Pittsburg, California, in the eastern portion of the San Francisco Bay Area. The following section describes the geology and seismicity of the project region.

### Regional Geology

The City of Pittsburg consists of two general topographic zones: the Lowland zone and the Hillside zone.

Lowland areas of the City that are underlain by Bay Mud deposits pose engineering changes related to weak compressible soils, and typically consist of unconsolidated silt and clay, with abundant organic material, local peat, sand, and gravel lenses or discontinuous beds. The Lowland areas underlain by Bay Mud deposits are at risk of liquefaction. Lowland areas of the City that are underlain by alluvium present the fewest geologic hazards.

Hillside areas in the western and southern portions of the City contain steep slopes, weak bedrock, and local landslide deposits. The Hillside zone consists primarily of tilted marine sedimentary and volcanic rocks that range in age from Paleocene to Pliocene. Typical geographic hazards that occur within the Hillside zone are landsliding, soil creek, debris flow, and hazards associated with historic coal mining.

The project site is located within the Lowland zone of the City. As shown on Figure 10-1 of the City's General Plan, the project site is not identified as being located within a geologic hazard

[1] ENGEO Incorporated. *420 East 3rd Street Development, Pittsburg, California, Geotechnical Feasibility Evaluation.* April 1, 2021.
[2] City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century*. Adopted November 16, 2001.
[3] City of Pittsburg. *City of Pittsburg General Plan Draft Environmental Impact Report (SCH#1999072109)*. January 2001.

zone, which includes zones that have a slope greater than 30 percent, are generally or moderately unstable, or have a high liquefaction potential.

## Regional Seismicity

A fault is defined as a fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side. A fault zone is a zone of related faults that is commonly braided and subparallel, but may be branching or divergent. Movement within a fault causes an earthquake. When movement occurs along a fault, the energy generated is released as waves that cause ground shaking. Ground shaking intensity varies with the magnitude of the earthquake, the distance from the epicenter, and the type of rock or sediment the seismic waves move through.

The potential risk of fault rupture is based on the concept of recency and recurrence. The more recently a particular fault has ruptured, the more likely the fault would rupture again. The California Geological Survey defines an "active fault" as one that has had surface displacement within the past 11,000 years (Holocene). Potentially active faults are defined as those that have ruptured between 11,000 and 1.6 million years before the present (Quaternary). Faults are generally considered inactive if evidence of displacement is not present during the Quaternary.

Eastern Contra Costa County, like the San Francisco Bay Area as a whole, is located in one of the most seismically active regions in the United States. Major earthquakes have occurred in the vicinity of Pittsburg in the past and can be expected to occur again in the near future. As shown on Figure 10-2 of the City's General Plan, several minor fault branches are located within the Hillside zone of the City. Historically active faults in the City include the Great Valley fault and Green Valley fault. The largest active fault in the region, the San Andreas Fault, is located approximately 40 miles west of Pittsburg.

## Project Site Characteristics

The project site is situated in the Coast Ranges geomorphic province of California, which is characterized by a series of parallel, northwesterly trending, folded and faulted mountain ranges and valleys. The site was originally tidal marshland prior to the historical development of the site from the mid-1920s through 2003. Currently, the project site consists primarily of ruderal grasses and is absent of structures. A 3.46-acre berm area runs north-to-south along the eastern boundary of the project site. Scattered trees are located along the west and south boundaries of the project site.

In November and December of 2007, the project site underwent remedial site grading, earthen embankment construction and repair, surcharging, and wick drain installation, which included compaction of engineered backfill placed within local "pond" excavations within the southeastern and northern portions of the site. The site was further graded sometime between 2008 and 2021 to level the site and remove soil stockpiles. In addition, historic utilities located within the site were removed and backfilled with engineered fill in 2006.

The geologic conditions on the project site are discussed below in further detail, including descriptions of existing site geology, soil conditions, seismicity and ground shaking, potential for earthquake-induced liquefaction, and expansive soils.

## Site Geology and Subsurface Soil Conditions

According to published geologic maps of the project area, the majority of the site is covered by existing fill deposits of variable thickness placed over alluvial deposits. Specifically, approximately two to 15 feet of man-made fill consisting of loose to medium dense sand and gravel with variable silt and clay is present throughout the site. In the southeastern portion of the site, an approximately three to 43-foot-thick layer of soft to medium stiff compressible clay is located below the fill. Below the compressible soil, medium stiff to stiff sandy silt and clay, medium dense to very dense sand, and dense to very dense sand and gravelly sand is present. The project site area lies downslope of the adjacent residential and landscaped areas; the slope appears to reach a maximum height of approximately 20 feet with a gradient of approximately 1.5:1 (horizontal:vertical).

The soil types underlying the project site consist of Clear Lake clay and Rincon clay loam (see Figure 4.3-1).[4] The Clear Lake clay soils make up the northern 41.4 percent of the site, while the Rincon clay loam soils make up the remaining 58.6 percent of the southern portion of the site. The parent material consists of clayey alluvium derived from metamorphic and sedimentary rock, and the depth to a root restrictive layer is more than 80 inches. The natural drainage class for Clear Lake clay is poorly drained, and the natural drainage class for Rincon clay loam is well drained. Water movement in the most restrictive layer for both soil types is moderately low to moderately high. The on-site soils are not flooded; however, the Clear Lake clay soils have a potential for frequent ponding. The shrink-swell potential of the soils is high. Water saturation zones do not occur within a depth of 72 inches. Organic matter content in the surface horizon is approximately 1.5 to two percent.

## Seismicity and Ground Shaking

The site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone and known surface expressions of active faults do not exist within the site. An active fault is defined by the State Mining and Geology Board as one that has had surface displacement within Holocene time (present day to approximately 11,000 years ago).

Because of the presence of nearby active faults, the Bay Area Region is considered seismically active. Numerous small earthquakes occur every year in the region, and large earthquakes have been recorded, and can be expected to occur in the future. Based on the United States Geological Survey's (USGS's) 2008 National Seismic Hazard Maps, the closest active faults in the area are the Great Valley fault and Green Valley fault, which are approximately 1.3 miles northwest and 9.5 miles west of the site, respectively. As a result, the project site is located within an area that is susceptible to severe seismic shaking.[5]

## Liquefaction

Liquefaction occurs when saturated fine-grained sands and/or silts lose physical strength temporarily during earthquake induced shaking and behave as a liquid due to the loss of point-to-point grain contact and transfer of normal stress to the pore water.

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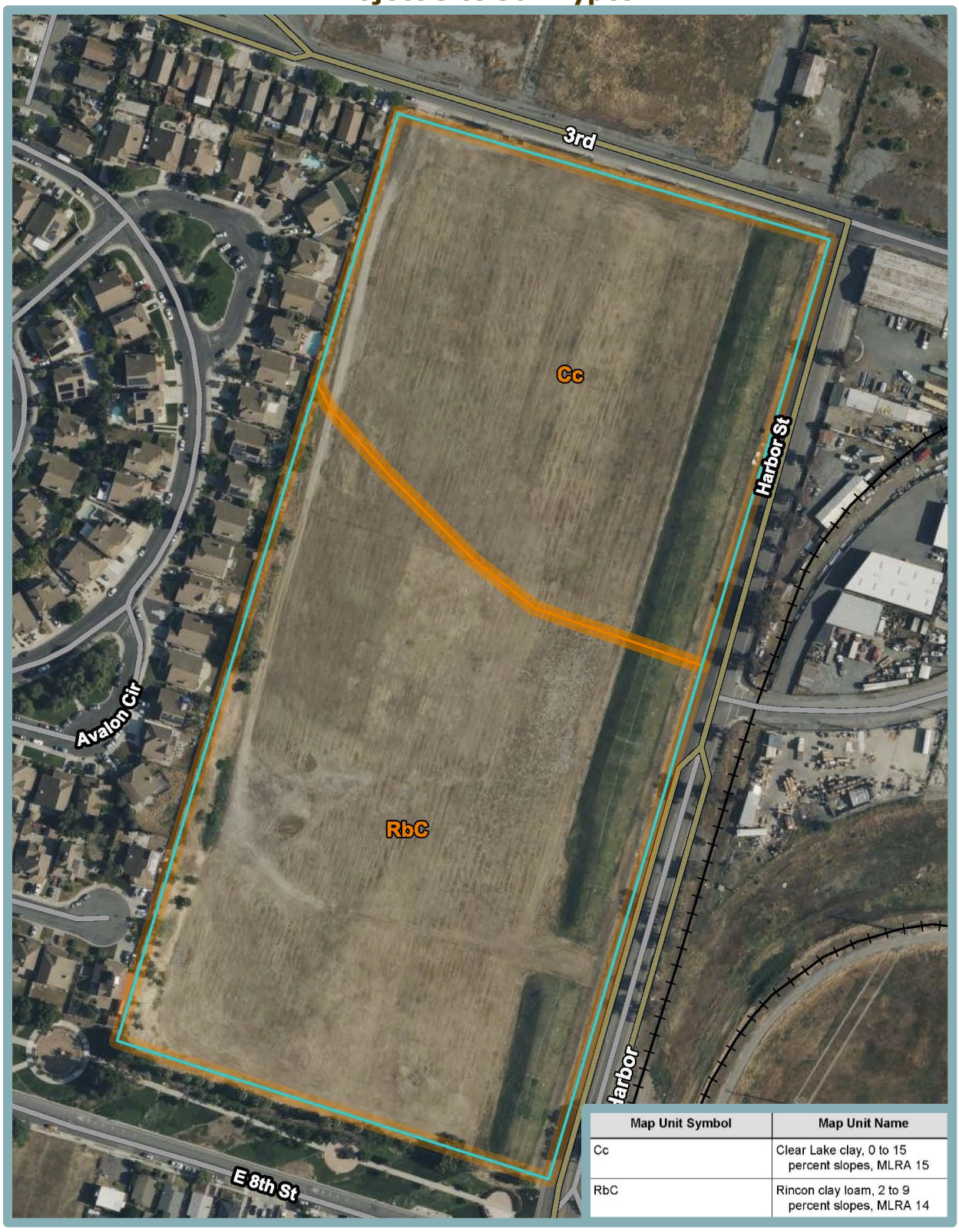
[4] U.S. Department of Agriculture, Natural Resources Conservation Service. *Web Soil Survey*. Available at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed January 2023.

[5] Association of Bay Area Governments. *Hazard Viewer Map.* Available at: https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8. Accessed January 2023.

**Figure 4.3-1**
**Project Site Soil Types**



Liquefaction potential varies with water level, soil type, material gradation, relative density, and probable intensity and duration of ground shaking. Saturated and loose fine sands/silts were not encountered during site explorations.

The California Geological Survey (CGS) has designated certain areas within California as potential liquefaction hazard zones, which are areas considered at risk of liquefaction-related ground failure during a seismic event based upon mapped surficial deposits and the depth to the areal groundwater table. According to CGS, the project site is located within an area that may be susceptible to liquefaction.

### Expansive Soils

Expansive soils are characterized by their ability to undergo significant volume change due to variation in moisture content. Compressible materials consisting of surficial organic material, loose soils, undocumented fills, debris, rubble, rubbish, etc., are considered unsuitable materials for support of proposed structures as such materials can differentially settle. Changes in soil moisture content can result from rainfall, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors and may cause unacceptable settlement of structures.

As discussed above, soils at the project site consist of Clear Lake clay and Rincon clay loam. Rincon clay loam makes up a majority of the project site soils and is known to have high shrink-swell potential.[6]

### Groundwater

Groundwater measurements during previous explorations at the site generally encountered groundwater 4.5 to 15.5 feet below ground surface (bgs). Fluctuations in the level of groundwater are expected to occur due to the proximity of the site to the New York Slough, as well as variations in rainfall, irrigation practices, and other factors.

### Unique Geologic Resources

As noted in the City's General Plan, the City is underlain by alluvium, which consists mainly of unconsolidated gravel, sand, silt, and clay deposits. Such soil types are not considered unique geologic features and are common within the geographic area of the City. Furthermore, the City's General Plan does not note the existence of any unique geologic features within the City.

## 4.3.3 REGULATORY CONTEXT

The following section is a brief summary of the regulatory context under which soils, geology, and seismic hazards are managed at the federal, State, and local levels.

### Federal Regulations

The following are the federal environmental laws and policies relevant to soils, geology, and seismic hazards.

### Federal Earthquake Hazards Reduction Act

Passed by Congress in 1977, the Federal Earthquake Hazards Reduction Act is intended to reduce the risks to life and property from future earthquakes. The Act established the National

[6] United States Department of Agriculture, Natural Resources Conservation Service. *Web Soil Survey*. Available at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed December 2022.

Earthquake Hazards Reduction Program (NEHRP). The goals of NEHRP are to educate and improve the knowledge base for predicting seismic hazards, improve land use practices and building codes, and to reduce earthquake hazards through improved design and construction techniques.

### International Building Code

The Uniform Building Code (UBC) was first published in 1927 by the International Council of Building Officials and is intended to promote public safety and provide standardized requirements for safe construction. The UBC was replaced in 2000 by the new International Building Code (IBC), published by the International Code Council (ICC), which is a merger of the International Council of Building Officials' UBC, Building Officials and Code Administrators International's National Building Code, and the Southern Building Code Congress International's Standard Building Code. The intention of the IBC is to provide more consistent standards for safe construction and eliminate any differences between the three preceding codes. All State building standard codes are based on the federal building codes.

## State Regulations

The following are the State environmental laws and policies relevant to soils, geology, and seismic hazards.

### Alquist-Priolo Earthquake Fault Zoning Act

The 1972 Alquist-Priolo Earthquake Fault Zone Act was passed to prevent the new development of buildings and structures for human occupancy on the surface of active faults. The Act is directed at the hazards of surface fault rupture and does not address other forms of earthquake hazards. The locations of active faults are established into fault zones by the Alquist-Priolo Zone Act. Local agencies regulate any new developments within the appropriate zones in their jurisdiction.

The Alquist-Priolo Zone Act regulates development near active faults so as to mitigate the hazard of surface fault rupture. The Alquist-Priolo Zone Act requires that the State Geologist (Chief of the California Department of Mines and Geology [CDMG]) delineate "special study zones" along known active faults in California. Cities and counties affected by the special study zones must regulate certain development projects within the special study zones. The Alquist-Priolo Zone Act prohibits the development of structures for human occupancy across the traces of active faults. According to the Alquist-Priolo Zone Act, active faults have experienced surface displacement during the last 11,000 years. Potentially active faults are those that show evidence of surface displacement during the last 1.6 million years. A fault may be presumed to be inactive based on satisfactory geologic evidence; however, the evidence necessary to prove inactivity sometimes is difficult to obtain and may not exist.

### Seismic Hazards Mapping Act

The California Seismic Hazards Mapping Act of 1990 (California Public Resources Code [PRC] Section 1690-2699.6) addresses non-surface rupture earthquake hazards, including liquefaction, induced landslides, and subsidence. A mapping program is also established by this Act, which identifies areas within California that have the potential to be affected by such non-surface rupture hazards. The Seismic Hazards Mapping Act specifies that the Lead Agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

## California Building Standards Code

The State of California regulates development within the State through a variety of tools that reduce or mitigate potential hazards from earthquakes or other geologic hazards. The California Building Standards Code (CBSC) (California Code of Regulations [CCR], Title 24) governs the design and construction of all building occupancies and associated facilities and equipment throughout California. In addition, the CBSC governs development in potentially seismically active areas and contains provisions to safeguard against major structural failures or loss of life caused by earthquakes or other geologic hazards. The California building standards include building standards in the national building code, building standards adapted from national codes to meet California conditions, and building standards adopted to address particular California concerns. It should be noted that the CBSC is updated on a triennial cycle. The most recent update, the 2022 CBSC, became effective on January 1, 2023.

## Local Regulations

The following are the local environmental policies relevant to soils, geology, and seismic hazards.

## City of Pittsburg General Plan

The City of Pittsburg General Plan goals and policies related to soils, geology, and seismic hazards applicable to the proposed project are presented below:

### Health and Safety Element

Goal 10-G-1 Minimize risk to life and property from geologic and seismic hazards.

Goal 10-G-2 Establish procedures and standards for geotechnical review of projects located in areas of steep slopes, unstable soils, or other geologic or seismic risks.

Goal 10-G-3 Minimize the potential for soil erosion by wind and stormwater runoff.

Goal 10-G-4 Mitigate potential seismic hazards, including landsliding and liquefaction, during the design and construction of new development.

Policy 10-P-5 Ensure that Bay Area Air Quality Management District requirements are implemented around construction sites to reduce wind velocity and soil transport at the sites.

Policy 10-P-6 Encourage the use of water-sprinkling trucks at large construction sites to keep the exposed soil moist during construction.

Policy 10-P-7 As part of the development approval process, restrict grading to only those areas going into immediate construction as opposed to grading the entire site, unless necessary for slope repair or creek bed restoration. On large tracts of land, avoid having large areas bare and unprotected; units of workable size shall be graded one at a time.

Policy 10-P-8 During development review, ensure that new development on unstable slopes (as designated in Figure 10-1 [of the General Plan]) is designed to avoid potential soil creep and debris flow

hazards. Avoid concentrating runoff within swales and gullies, particularly where cut-and-fill has occurred.

Policy 10-P-16 Ensure compliance with the current Uniform Building Code during development review. Explore programs that would build incentives to retrofit unreinforced masonry buildings.

Unreinforced masonry buildings are particularly vulnerable to earthquakes. Possible programs to encourage retrofit could include transfer taxes on property sales, which can be used by the owner to pay for seismic retrofit work; reduced permit fees; and grants or low-interest loans to offset retrofit costs. However, special consideration should be given to masonry buildings that are in the City's historic core. The City's Building Division should work with building owners to maintain and reserve such structures.

It should be noted that the City of Pittsburg is currently in the process of updating the General Plan; however, the General Plan Update has not yet been completed.

### Pittsburg Municipal Code

The City of Pittsburg Municipal Code sections relating to geology and soils that are applicable to the proposed project are presented below:

#### Chapter 15.88, Grading Erosion and Sediment Control

The City adopted Chapter 15.88 to protect natural resources and the public health through minimizing the adverse effects of grading, cut and fill operations, water runoff and soil erosion. Section 15.88 includes permitting requirements and grading regulations designed to prevent soil erosion, and the creation of hazards due to unstable slopes and improper grading. Grading permits sought under Chapter 15.88 are subject to prior review and written approval by the City Engineer.

## 4.3.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to parks and recreation. A discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

### Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact to geology and soils would occur if the proposed project would result in any of the following:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault;
  - Seismic ground shaking;
  - Seismic-related ground failure, including liquefaction; and
  - Landslides;

- Result in substantial soil erosion or loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 118-1-B of the UBC (1994), creating substantial risks to life or property; or
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

Impacts associated with soil erosion are discussed under Impact 4.4-3 in Chapter 4.4, Hydrology and Water Quality, of this EIR. As a result, the project's potential to result in substantial soil erosion of loss of topsoil is not addressed herein. In addition, it is noted that impacts related to unique paleontological resources or unique geologic features are evaluated in Chapter 4.2, Cultural and Tribal Cultural Resources, of this EIR.

## Method of Analysis

The analysis presented within this chapter is based primarily on the Geotechnical Feasibility Evaluation prepared for the proposed project by ENGEO Incorporated. The purpose of the Geotechnical Feasibility Evaluation was to evaluate the subsurface soil and geologic conditions within the project site and provide conclusions and recommendations pertaining to the geotechnical and geologic aspects of the proposed project, based on the conditions encountered.

The scope of the Geotechnical Feasibility Evaluation included a site reconnaissance; a review of USGS topographic maps, geologic maps and reports that included the project area, historical aerial photographs, and available groundwater information; and a review of previous environmental assessments completed within the project area. According to the Geotechnical Feasibility Evaluation, the site was explored in 2005 and again in 2006 by Treadwell and Rollo with a total of 61 cone penetration tests (CPTs) and 13 drilled borings throughout the site (see Figure 4.3-2).

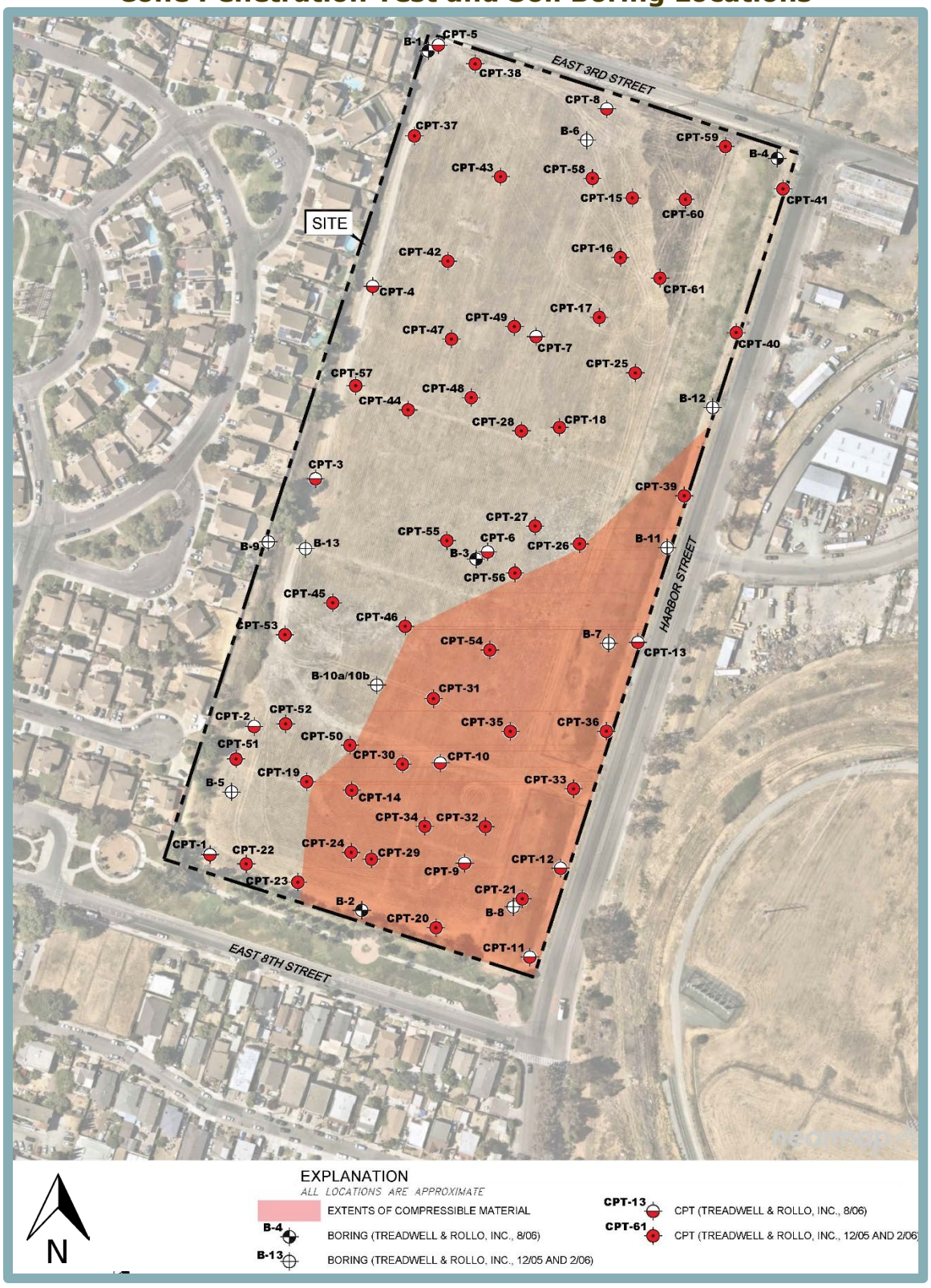
The CPTs ranged in depth between 30 and 50 feet and the borings ranged in depth between 19 and 51.5 feet. Laboratory testing of the soils encountered in the CPTs and borings was conducted. All relevant information from the Treadwell and Rollo soil testing was incorporated into the Geotechnical Feasibility Evaluation.

Additional information within this chapter was sourced from the Pittsburg General Plan and associated General Plan EIR, as well as the CGS, U.S. Department of Agriculture Web Soil Survey, and Association of Bay Area Governments (ABAG). Determinations of significance are made in this chapter based on the ability of the on-site soils to accommodate the proposed residential use.

## Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

## Figure 4.3-2
## Cone Penetration Test and Soil Boring Locations



**4.3-1 Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, or strong seismic ground shaking. Based on the analysis below, the impact is *less than significant*.**

As discussed above, the site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone and known surface expressions of active faults are not believed to exist within the site.

The closest active faults in the area are the Great Valley fault and Green Valley fault, which are approximately 1.3 miles northwest and 9.5 miles west of the site, respectively. In addition to the foregoing faults, the San Andreas Fault, located approximately 40 miles west of the project site, is the largest active fault in the region.

Due to the site's proximity to nearby active faults, the project site could be subject to moderate to severe (design-level) earthquakes and associated seismic ground shaking. However, the proposed buildings would be properly engineered in accordance with the CBSC, which includes engineering standards appropriate for the seismic area in which the project site is located. Projects designed in accordance with the CBSC should be able to: 1) resist minor earthquakes without damage, 2) resist moderate earthquakes without structural damage but with some nonstructural damage, and 3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Conformance with the design standards is enforced through Building Plan Review and approval by the City of Pittsburg Building Division prior to the issuance of Building Permits. Proper engineering of the proposed project would ensure that seismic-related effects would not cause substantial impacts.

Based on the above, the proposed project would not expose people or structures to the risk of loss, injury, or death involving rupture of an earthquake fault, or strong ground shaking, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
*None required.*

**4.3-2 Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction, or landslides; be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse; or be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code creating substantial direct or indirect risks to life or property. Based on the analysis below and with implementation of mitigation, the impact is *less than significant.***

Issues associated with unstable geologic units and/or soils, including landslide, lateral spreading, subsidence, liquefaction, collapse, and expansive soils, are discussed below.

## Landslides

Seismically-induced landslides are triggered by earthquake ground shaking. The risk of landslide hazard is greatest in areas with steep, unstable slopes. The topography of the project site is generally flat, with the exception of the approximately 10-to-14-foot-high engineered berms along the eastern boundary of the site. However, the berms are entirely covered in vegetation, regularly maintained, and do not include steep, unstable slopes. Therefore, the potential for landslides to adversely affect the proposed project is low, resulting in a less-than-significant impact.

## Lateral Spreading

Lateral spreading refers to horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face, such as an excavation, channel, or open body of water; typically, lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. According to the Geotechnical Feasibility Evaluation, based on the site location and distance from New York Slough, the risk for lateral spreading is low. Nevertheless, because the project site may be subject to liquefaction, lateral spreading could occur on-site.

## Subsidence/Settlement

Loose unsaturated sandy soils can settle during strong seismic shaking. Laboratory testing during previous investigations indicates soft clay in the southeastern portion of the project site. Thus, the compressible clay could experience moderate settlement under new fill loads if site grades are raised, with the magnitude of settlement depending on the building loads and height of fill. According to the Geotechnical Feasibility Evaluation, settlement could occur at a rate of approximately 0.5-inch per foot of additional fill, and raising of site grades and construction of structures may result in several inches of settlement in areas underlain by compressible material. Therefore, subsidence/settlement has the potential to occur on-site.

## Liquefaction

Liquefaction occurs when saturated fine-grained sand and/or silts lose their physical strength temporarily during earthquake-induced shaking and behave as a liquid. According to the Geotechnical Feasibility Evaluation prepared for the proposed projct, the site is located within a mapped State of California Seismic Hazard Zone for areas that may be susceptible to liquefaction. The existing subsurface data does not provide sufficient information for performing a rigorous liquefaction hazard evaluation. However, an analysis of data from previous investigations indicates up to 5.5 inches of liquefaction-induced settlement in localized areas. Therefore, a potential impact related to liquefaction could occur.

## Collapse

As discussed above, all structures constructed as part of the proposed project would be required to adhere to the provisions of the most recent version of the CBSC in effect at the time of building permit issuance. Structures built according to the seismic design

provisions of current building codes would be able to resist major earthquakes without collapse, but with some structural, as well as non-structural damage. Given the project's adherence to the CBSC requirements, the proposed project would not be subject to substantial risks associated with building collapse.

## Expansive Soils

If structures are underlain by expansive soils, foundation systems must be capable of tolerating or resisting any potentially damaging soil movements, and building foundation areas must be properly drained. According to the Natural Resource Conservation Service's Web Soil survey, soils at the project site consist of Clear Lake clay and Rincon clay loam. Rincon clay loam makes up a majority of the project site soils and is known to have high shrink-swell potential. Design of the proposed structures without incorporation of certain features could expose the proposed structures to potential risks due to expansive soils, should such soils exist within the project site.

Considering the above, without implementation of appropriate design measures, a significant impact could occur related to the location of the project on potentially expansive soil, as defined in Table 18-1B of the Uniform Building Code, creating substantial direct or indirect risks to life or property.

## Conclusion

Based on the above discussion, the project site may be susceptible to adverse effects associated with lateral spreading, subsidence/settlement, liquefaction, and expansive soils. Therefore, implementation of the proposed project could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction; be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site lateral spreading, subsidence, or liquefaction; or be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code creating substantial direct or indirect risks to life or property. Thus, a ***significant*** impact could occur.

## Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

*4.3-2* *Prior to Grading Permit issuance, the applicant shall submit a final design-level geotechnical report of the project site that addresses soil stability including liquefaction, lateral spreading, subsidence, and soil expansion. The report shall identify any on-site geotechnical hazards and provide design recommendations for such conditions. The design-level geotechnical report shall be reviewed and approved by the Director of Public Works/City Engineer. A qualified Geotechnical Engineer shall ensure that all geotechnical recommendations specified in the design-level geotechnical report are properly incorporated in the project design.*

### 4.3-3 Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater. Based on the analysis below, *no impact* would occur.

Sewer collection for the proposed project would be provided by construction of a new network of sewer lines that would connect to the existing 15-inch and 18-inch sewer lines located in Harbor Street and East 3rd Street, where the wastewater would be directed to the Delta Diablo wastewater treatment plant. The construction or operation of septic tanks or other alternative wastewater disposal systems is not included as part of the project. Therefore, ***no impact*** regarding the capability of soil to adequately support the use of septic tanks or alternative wastewater disposal systems would occur.

Mitigation Measure(s)

*None required.*

## Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Additional detail regarding the cumulative project setting can be found in Chapter 6, Statutorily Required Sections, of this EIR.

### 4.3-4 Cumulative increase in the potential for geological related impacts and hazards. Based on the analysis below, the cumulative impact is *less than significant*.

Impacts to geology, soils, and seismicity related to implementation of the proposed project are analyzed throughout this chapter. As discussed above, with implementation of Mitigation Measure 4.3-2, the geological and soil conditions on the site would be adequate to support development of the proposed project.

While some geologic characteristics may affect regional construction practices, impacts and mitigation measures are primarily site-specific and project-specific. For example, impacts resulting from development on expansive soils at one project site are not worsened by impacts from development on expansive soils or undocumented fill at another project site. Rather, the soil conditions, and the implications of such conditions for each project, are independent. Additionally, any future project would be required to prepare a geotechnical report and incorporate all appropriate recommendations into project design, similar to the proposed project.

As such, the potential for cumulative impacts related to geology and soils, to which implementation of the proposed project might contribute, would be ***less than significant***.

## Mitigation Measure(s)

*None required.*

# 4.4 Hydrology and Water Quality

# 4.4 HYDROLOGY AND WATER QUALITY

## 4.4.1 INTRODUCTION

The Hydrology and Water Quality chapter of the EIR describes existing drainage patterns on the project site, current stormwater flows, and stormwater infrastructure. The chapter also evaluates potential impacts of the proposed project with respect to increases in impervious surface area and associated stormwater flows, degradation of water quality, and increases in on- and off-site flooding. Information used for the chapter was primarily drawn from the Envision Pittsburg Existing Conditions Report, the City of Pittsburg 2020 Urban Water Management Plan (UWMP), and the Contra Costa Water District (CCWD) 2020 UWMP.[1,2,3] Further information was sourced from the City of Pittsburg General Plan and the City of Pittsburg General Plan EIR.[4,5]

## 4.4.2 EXISTING ENVIRONMENTAL SETTING

The section below describes regional hydrology, the existing drainage patterns within the project site, including peak flows, existing water quality, and groundwater conditions.

### Regional Hydrology

The project site is located within the City of Pittsburg, California, which is in the San Francisco Bay Hydrologic Region. The San Francisco Bay Hydrologic Region covers approximately 2.88 million acres (4,500 square miles) and includes all of San Francisco County and portions of the counties of Marin, Sonoma, Napa, Solano, San Mateo, Santa Clara, Contra Costa, and Alameda. Significant geographic features include the Santa Clara, Napa, Sonoma, Petaluma, Suisun-Fairfield, and Livermore valleys; the Marin and San Francisco peninsulas; the San Francisco, Suisun, and San Pablo bays; and the Santa Cruz Mountains, Diablo Range, Bolinas Ridge, and Vaca Mountains of the Coast Range.

The San Francisco Bay Hydrologic Region consists of 28 identified groundwater basins. Groundwater use accounts for only about five percent (68,000 acre-feet [AF]) of the region's estimated average water demand for agricultural and urban uses. Despite the tremendous urban development in the region, the San Francisco Bay demand accounts for less than one percent of statewide groundwater use. The Sacramento and San Joaquin rivers flow into the San Joaquin River Delta (Delta) and into San Francisco Bay. The Delta is the largest estuary on the West Coast, receiving nearly 40 percent of the State's surface water from the Sierra Nevada and the Central Valley. The interaction between Delta outflow and Pacific Ocean tides determines how far salt water intrudes into the Delta. The resulting salinity distribution influences the distribution of many estuarine fish and invertebrates, as well as the distribution of plants, birds, and animals in wetlands areas. The north lobe of San Francisco Bay is brackish and known as San Pablo Bay. San Pablo Bay is surrounded by Marin, Sonoma, Napa, and Solano counties. Suisun Marsh is

1 City of Pittsburg. *Envision Pittsburg: Existing Conditions Report, City of Pittsburg General Plan Update*. November 2019.
2 City of Pittsburg. *2020 Urban Water Management Plan*. July 2021.
3 Contra Costa Water District. *2020 Urban Water Management Plan*. June 2021.
4 City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century*. Adopted November 16, 2001.
5 City of Pittsburg. *City of Pittsburg General Plan Environmental Impact Report (SCH No. 1999072109)*. January 2001.

between San Pablo Bay and the Delta and is the largest contiguous brackish marsh on the West Coast, providing more than 10 percent of California's remaining natural wetlands. The south and central lobes of San Francisco Bay are saltier than San Pablo Bay.

Annual rainfall in the area is approximately 13.33 inches, with nearly all precipitation falling during the winter rainy season, which occurs between November and April. Runoff from impervious surfaces in the City limits is conveyed to the City's existing drainage system, which is comprised of channelized creeks fed by surface runoff and underground storm drains. The developed portions of the City's central and eastern areas are within the Kirker Creek watershed, which drains into New York Slough. The City is responsible for maintaining the storm drainage system within the City limits. In the unincorporated portions of the planning area, the Contra Costa County Flood Control and Water Conservation District (Flood Control District) maintains major channels and creeks, over which they hold land rights. The Contra Costa County Department of Public Works maintains road drainage systems and several detention basins.

## Project Site and Surrounding Area Drainage

The project site is located at 420 East 3rd Street, southwest of the intersection of East 3rd Street and Harbor Street, approximately one mile north of State Route (SR) 4 in the City of Pittsburg. The project site consists primarily of ruderal grasses and is currently absent of structures. A 3.46-acre fenced berm area runs north-to-south along the eastern boundary of the project site and consists of two sections. The north section is approximately 1,070 feet long. The south section is approximately 300 feet long. Both berm sections are elevated approximately 10 feet above the existing grade. Scattered trees are located along the west and south boundaries of the project site. East 3rd Street bounds the northern boundary of the site. Harbor Street bounds the site's eastern property line.

As shown in Figure 4.4-1, the project site is located within the Kirker Creek watershed. An existing 48-inch storm drain line is located in Harbor Street, immediately east of the project site, and contains two existing 24-inch stubs to the site. In addition, the project site contains an existing 24-inch storm drain line segment towards the northern portion of the berm area, which connects to the 48-inch storm drain line in Harbor Street. An existing 12-inch storm drain line is also located in East 3rd Street, immediately north of the site, to which runoff from the storm drain line in Harbor Street is conveyed.

According to Figure 4.4-2, a significant portion of the project site is located within an area designated by the Federal Emergency Management Agency (FEMA) as an Area of Minimal Flood Hazard (Zone X).[6] Areas in the site's northeastern and eastern portions are within the 500-year floodplain (Zone X). Pursuant to the Phase I Environmental Site Assessment (Phase I ESA) prepared for the proposed project by GSI Environmental, on-site elevations range from 15 to 20 feet above the North American Vertical Datum of 1988 (NAVD88) in the southern portion of the site to 12 to 13 feet above the NAVD88 in the northern portion of the site (see Appendix D of the Initial Study, attached as Appendix A to this EIR).[7,8]

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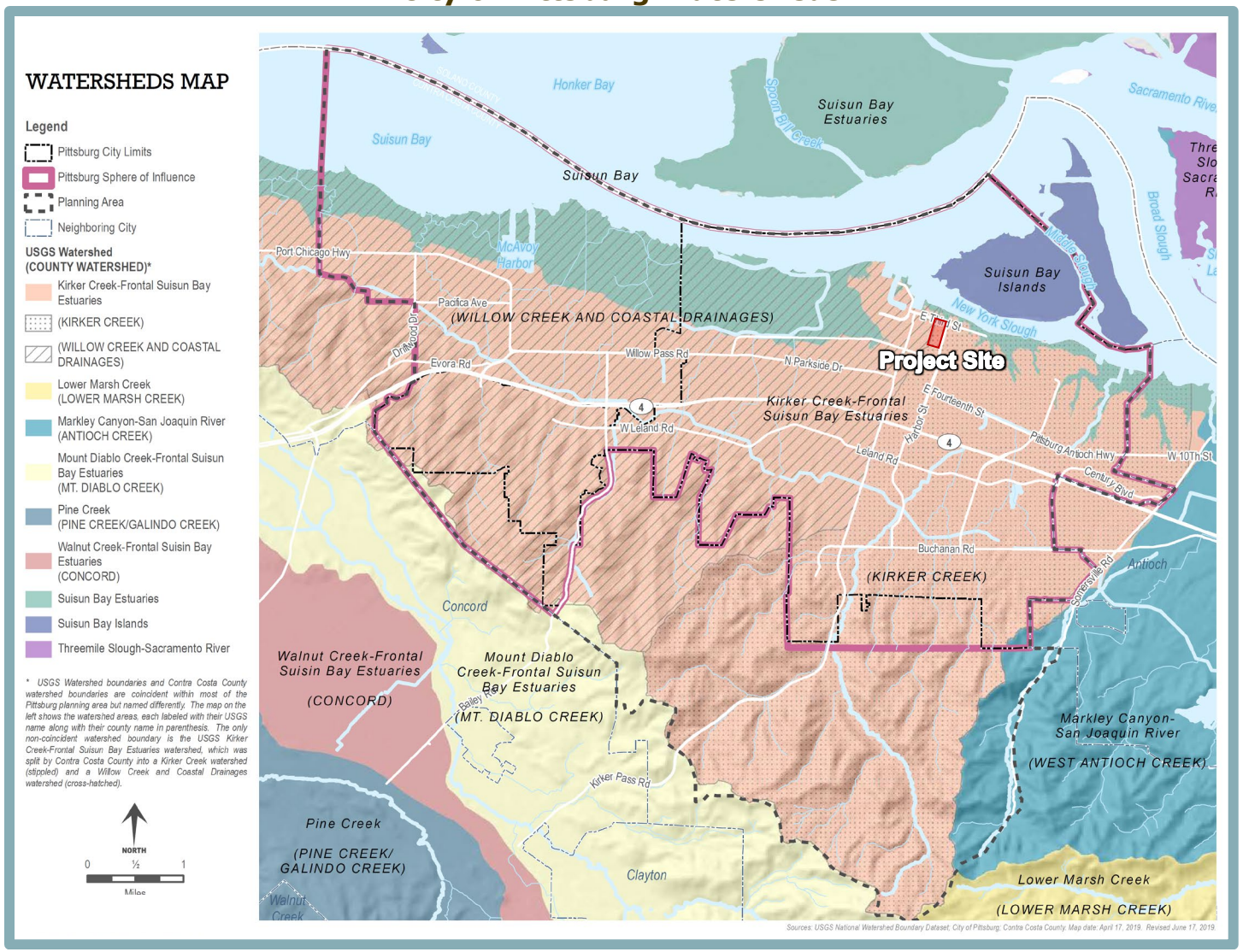
6 Federal Emergency Management Agency. *National Flood Hazard Layer FIRMette, 06013C0117G, eff. 9/30/2015*. Available at https://www.fema.gov/flood-maps/national-flood-hazard-layer. Accessed January 2023.

7 GSI Environmental. *Phase I Environmental Site Assessment, Former Johns Manville Plant Site, 420 East 3rd Street, Pittsburg, California*. April 9, 2021.

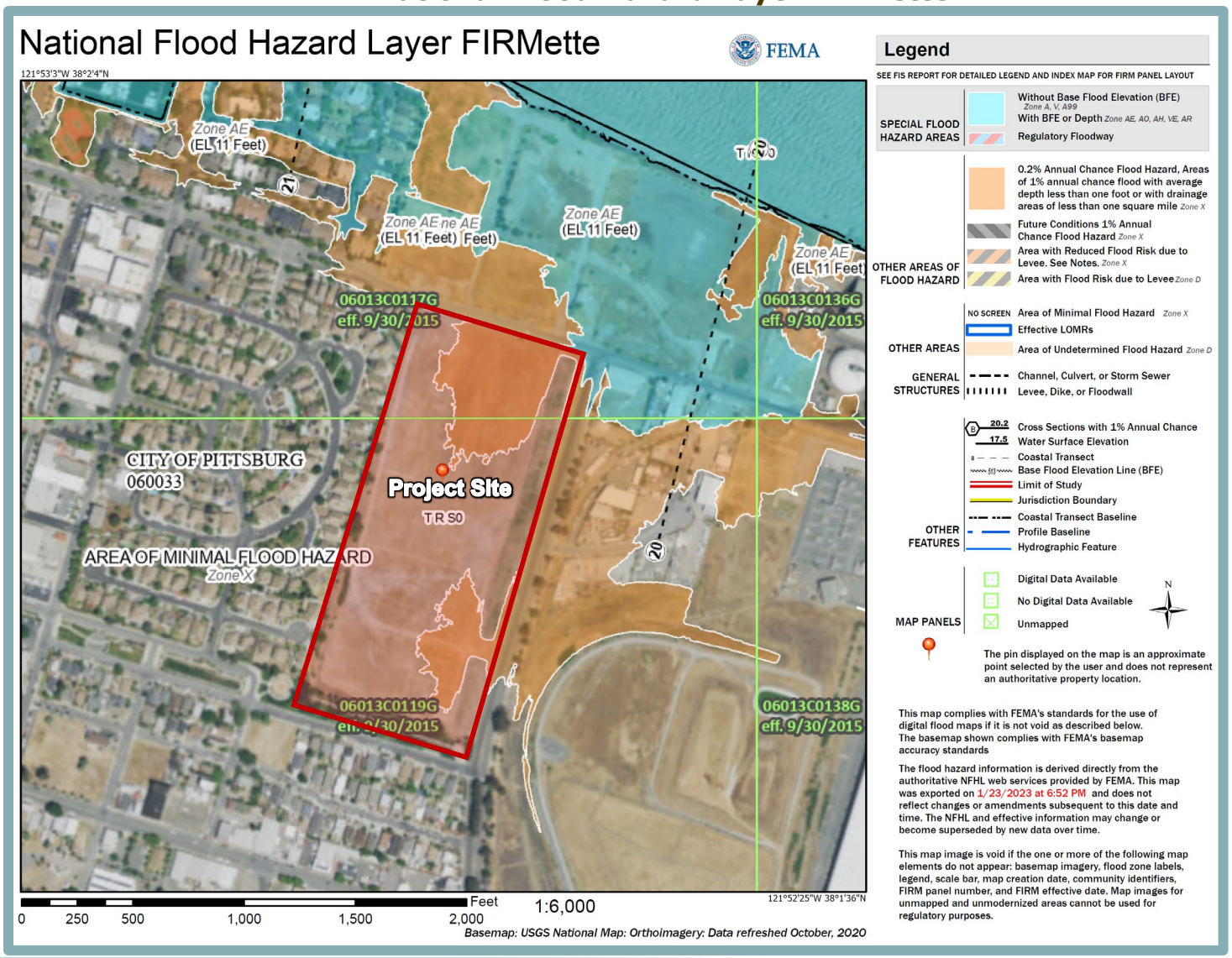
8 NAVD 88 consists of a leveling network on North America, ranging from Alaska, through Canada, across the U.S., affixed to a single origin point on the continent. NAVD 88 was established for vertical control surveying in the U.S.

## Figure 4.4-1
## City of Pittsburg Watersheds




***Source: City of Pittsburg, Envision Pittsburg: Existing Conditions Report, 2019.***

**Figure 4.4-2**
**FEMA National Flood Hazard Layer FIRMette**



Native lithology underlying the project site is composed of interlayered silt, sand, clay, and gravel. Groundwater in the project vicinity flows to the north-northeast toward New York Slough, which is the closest surface water body to the project site. In addition, the majority of stormwater runoff within the project site currently sheet flows along the eastern, southern, and western boundaries towards drainage swales previously installed adjacent to the berm area. Flows that do not percolate into the on-site soils within the drainage swales are directed to the existing 24-inch storm drain line segment located towards the northern portion of the berm area. Flows conveyed to the 24-inch storm drain line are then discharged to the 48-inch storm drain line in Harbor Street and the 12-inch storm drain line in East 3rd Street. As previously discussed, runoff from the Kirker Creek watershed drains into New York Slough.

The local topography within the City's General Plan planning area ranges in elevation from approximately 23 to 886 feet above mean sea level (amsl). According to Table 4.2-4 of the Envision Pittsburg Existing Conditions Report, the General Plan planning area is not located in an area in which sea level rise presents a potential hazard.[9]

## Regional Water Quality

The most critical period for surface water quality in the project region is following a rainstorm that produces significant amounts of runoff into streams at low flow, which results in poor dilution of contaminants in the low-flowing stream. Such conditions are most frequent during the fall season, which is at the beginning of the rainy season when stream flows are near their lowest annual levels. Activities and/or conditions that have the potential to degrade water quality include but are not limited to, construction activities and urban stormwater runoff.

Construction activities have the potential to cause erosion and sedimentation associated with groundbreaking and clearing activities, which could cause unstabilized soil to be washed or wind-blown into nearby surface water. In addition, the use of heavy equipment during construction activities, especially during rainfall events, has the potential to cause petroleum products and other pollutants to enter nearby drainages.

Water quality degradation from urban stormwater runoff is primarily the result of runoff carrying pollutants from the land surface (e.g., streets, parking lots, etc.) to the receiving waters (e.g., streams and lakes). Pollutants typically found in urban runoff include facility maintenance and lawn-care/landscaping chemicals (insecticides, herbicides, fungicides and rodenticides), heavy metals (such as copper, zinc and cadmium), oils and greases from automobiles and other mechanical equipment, and fertilizer/nutrients (nitrogen and phosphorus).

Section 303(d) of the federal Clean Water Act (CWA) requires states to identify waters that do not meet water quality standards or objectives and, thus, are considered "impaired." Upon being listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and, thereby, serves as the basis for states to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved. Within the project vicinity, Suisun Bay is listed by the San Francisco Bay Regional Water Quality Control Board (RWQCB) as having limited water quality, pursuant to Section 303(d) of the CWA. More specifically, Suisun Bay is listed as having water quality issues related to the following compounds and conditions:

[9] City of Pittsburg. *Envision Pittsburg: Existing Conditions Report, City of Pittsburg General Plan Update* [Table 4.2-4]. November 2019.

- Chlordane;
- Dichlorodiphenyltrichloroethane (DDT);
- Diazinon;
- Dieldrin;
- Dioxin Compounds;
- Exotic Species;
- Furan Compounds;
- Mercury;
- Nickel;
- Polychlorinated biphenyls (PCBs) (both standard and dioxin-like); and
- Selenium.

Overall, Suisun Bay is listed as containing 27,498 acres of polluted water surface. Kirker Creek is also listed pursuant to Section 303(d) of the CWA for trash, toxicity, and pyrethroids. Pyrethroids are organic compounds that are produced by the flowers of pyrethrums and used as commercial and household insecticides.

With respect to the existing on-site conditions that could potentially degrade water quality, according to the Phase I ESA prepared for the proposed project, the project site was occupied beginning in the mid-1920s by the Johns Manville Products Company, which consisted of a manufacturing plant that produced asbestos-containing materials (ACMs), such as asbestos-cement products, asphalt roofing materials, and asbestos-containing pipe covering. As a result, a significant number of ACMs were deposited on-site on the ground surface. Manufacturing of ACMs ceased in 1980 and commercial-grade roofing materials were manufactured at the plant until 2003, at which point operations terminated. Several environmental investigations were conducted at the site, beginning in 1986 and continued through 2005. Various historical areas of potential concern associated with ACMs were identified.

The Johns Manville Products Company entered into a Voluntary Cleanup Agreement (VCA) with the Department of Toxic Substances Control (DTSC) in November 2000. In September 2004, a new property owner, Pittsburg River Park, LLC, purchased the project site, and entered into a new VCA with DTSC in November 2004. To remediate the project site, asbestos abatement and demolition activities commenced in late 2005 and continued throughout 2006 and again in late 2007 and early 2008. Remedial actions to excavate and encapsulate the on-site ACMs, as well as petroleum hydrocarbon-impacted soil, were conducted in conjunction with demolition activities. As part of remediation of the site, ACMs and debris were placed into a trench dug to 10 feet below ground surface (bgs) along the site's eastern boundary, which was then capped by hydrocarbon-impacted soil. An engineered textile and two feet of clean, low-permeability soil was added to the top of the materials to create the capped, vegetated berms. An automated irrigation system exists to maintain the vegetation. Drainage swales were installed adjacent to the berm area and graded such that stormwater flows toward the catch basins on the eastern site boundary. The drainage swales were installed in conjunction with the DTSC-required remedial actions for the site. The swales and other remediation systems are required to be evaluated every five years by the DTSC, in accordance with a certified Operations and Maintenance Agreement between DTSC and Pittsburg River Park, LLC, signed September 25, 2009.

Overall, remediation of the project site resulted in the removal of 11 underground storage tanks (USTs), off-site disposal of approximately 10,500 cubic yards of ACMs, off-site disposal of approximately 18,000 cubic yards of petroleum hydrocarbon-impacted soil, and the encapsulation

of approximately 60,000 cubic yards of ACM-affected soil and debris and 4,000 cubic yards of petroleum hydrocarbon-impacted soil within the on-site berm area. All on-site groundwater monitoring wells that existed at the time were abandoned prior to the aforementioned excavation activities. In addition, a pair of water supply wells discovered during demolition activities were also abandoned. The project site has remained undeveloped since 2005. While the certified Operations and Maintenance Agreement requires the swales and other remediation systems to be evaluated every five years, starting in 2008, the berm area has been inspected twice a year. Significant damage or issues have not been reported. The most frequently reported maintenance issue is the presence of rodent burrows in the upper two feet of clean fill cover for the berms. Due to the remediation of the site in accordance with applicable State requirements, the DTSC has approved the non-berm area portion of the site for residential use.

## Regional Groundwater Conditions

The majority of the City is within the Pittsburg Plain Groundwater Basin. The Pittsburg Plain Groundwater Basin is located in northern Contra Costa County along the south shore of Suisun Bay. The basin is approximately 40 miles northeast of San Francisco and bounded by Suisun Bay to the north, the Tracy Subbasin of the San Joaquin Valley Water Groundwater Basin to the east, and the Clayton Valley Groundwater Basin to the west. The southern boundary of the Pittsburg Plain Groundwater Basin extends inland from the Suisun Bay by one to three miles. According to the City's 2020 UWMP, the basin is not an adjudicated groundwater basin. Department of Water Resources (DWR) well data indicate that groundwater levels in the basin have remained generally stable during the period of record. Based on present groundwater conditions and DWR well data, overdraft conditions are not expected to occur in the groundwater basin. Therefore, the Pittsburg Plain Groundwater Basin is not listed as a critically over-drafted groundwater basin by DWR.

Groundwater extracted from the Pittsburg Plain Groundwater Basin serves local domestic, municipal, and industrial water needs. To ensure that groundwater resources within and underlying the City are managed and protected, the City prepared the Pittsburg Plain Groundwater Basin Groundwater Management Plan (GWMP) in October 2012.[10] The primary objectives of the GWMP include the following:

- Provide a long-term strategy to maintain the quality, reliability, and sustainability of the Pittsburg Plain groundwater resources;
- Manage groundwater conjunctively with available surface water resources; and
- Support Basin Management Objectives that promote sustainability and optimal use of groundwater supplies.

According to the GWMP, both the City of Pittsburg and the community of Bay Point conjunctively manage groundwater and surface water as a means for increasing the reliability of available resources and reducing costs to users. Groundwater accounts for 13 percent of the City's water supply. Other groundwater pumping from the Pittsburg Plain Groundwater Basin serves industrial and small-scale domestic use. The City is the largest groundwater pumper within the Pittsburg Plain Groundwater Basin area. Pursuant to the City's 2020 UWMP, the City has two active wells, Rossmoor and Bodega, that are capable of producing approximately 600 gallons per minute (gpm) and 1,200 gpm, respectively. The volume of groundwater in acre-feet (AF) pumped by the City over the past five years is summarized in Table 4.4-1.

[10] City of Pittsburg. *Pittsburg Plain Groundwater Basin Groundwater Management Plan*. October 2012.

**Table 4.4-1**
**Groundwater Pumped from Pittsburg Plain Groundwater Basin (AF)**

| 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|
| 1,353 | 1,429 | 1,470 | 1,154 | 1,480 |

***Source: City of Pittsburg, 2020 Urban Water Management Plan, July 2021.***

According to the Geotechnical Feasibility Evaluation prepared for the proposed project by ENGEO, Inc., groundwater management during previous explorations at the project site generally encountered groundwater 4.5 to 15.5 feet bgs (see Appendix D of this EIR).[11] According to the California Geological Survey's Seismic Hazard Zone Report for the Honker Bay Point 7.5-Minute Quadrangle, depths to groundwater are typically 0 to 10 feet bgs. The Geotechnical Feasibility Evaluation noted that fluctuations in groundwater are expected to occur due to the project site's proximity to New York Slough, as well as variations in rainfall, irrigation practice, and other factors. Pursuant to the Site Investigation Report prepared for the proposed project, soil borings excavated within the project site encountered groundwater at depths ranging between 7.8 and 15.1 feet bgs (see Appendix E of the Initial Study, attached as Appendix A to this EIR).[12]

## 4.4.3 REGULATORY CONTEXT

The following is a description of federal, State, and local environmental laws and policies that are relevant to the review of hydrology and water quality under the CEQA process.

### Federal Regulations

The following section includes federal environmental goals and policies relevant to the CEQA review process pertaining to the hydrology and water quality aspects of the proposed project.

### Federal Emergency Management Agency

FEMA is responsible for determining flood elevations and floodplain boundaries based on U.S. Army Corps of Engineers (USACE) studies. FEMA is also responsible for distributing the Flood Insurance Rate Maps (FIRMs), which are used in the National Flood Insurance Program (NFIP). The FIRMs identify the locations of Special Flood Hazard Areas (SFHAs), including the 100-year floodplains.

### Federal Clean Water Act

The National Pollutant Discharge Elimination System (NPDES) permit system was established in the federal CWA to regulate municipal and industrial discharges to surface waters of the U.S. Each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that the U.S. Environmental Protection Agency (USEPA) must consider in setting effluent limits for priority pollutants.

Nonpoint sources are diffuse and originate over a wide area rather than from a definable point. Nonpoint pollution often enters receiving water in the form of surface runoff, but is not conveyed by way of pipelines or discrete conveyances. As defined in the federal regulations, such nonpoint sources are generally exempt from federal NPDES permit program requirements. However, two

[11] ENGEO, Inc. *Geotechnical Feasibility Evaluation, 420 East 3rd Street Development, Pittsburg, California*. April 1, 2021.
[12] GSI Environmental. *Site Investigation Report, 420 E. 3rd Street, Pittsburg, California*. June 1, 2021.

types of nonpoint source discharges are controlled by the NPDES program – nonpoint source discharge caused by general construction activities, and the general quality of stormwater in municipal stormwater systems. The 1987 amendments to the CWA directed the USEPA to implement the stormwater program in two phases. Phase I addressed discharges from large (population 250,000 or above) and medium (population 100,000 to 250,000) municipalities and certain industrial activities. Phase II addresses all other discharges defined by the USEPA that are not included in Phase I.

Section 402 of the CWA mandates that certain types of construction activities comply with the requirements of the NPDES stormwater program. The Phase II Rule, issued in 1999, requires that construction activities that disturb land equal to or greater than one acre require permitting under the NPDES program. In California, permitting occurs under the General Permit for Stormwater Discharges Associated with Construction Activity, issued to the State Water Resources Control Board (SWRCB), implemented and enforced by the nine RWQCBs.

As of July 1, 2010, all dischargers with projects that include clearing, grading or stockpiling activities expected to disturb one or more acres of soil are required to obtain compliance under the NPDES Construction General Permit Order 2009-0009-DWQ. The General Permit requires all dischargers, where construction activity disturbs one or more acres, to take the following measures:

1. Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) to include a site map(s) of existing and proposed building and roadway footprints, drainage patterns and stormwater collection and discharge points, and pre- and post- project topography;
2. Describe types and placement of Best Management Practices (BMPs) in the SWPPP that will be used to protect stormwater quality;
3. Provide a visual and chemical (if non-visible pollutants are expected) monitoring program for implementation upon BMP failure; and
4. Provide a sediment monitoring plan if the area discharges directly to a water body listed on the 303(d) list for sediment.

To obtain coverage, a SWPPP must be submitted to the RWQCB electronically. When project construction is completed, the landowner must file a Notice of Termination (NOT).

## State Regulations

The following section includes the State regulations relevant to the CEQA review process pertaining to the hydrology and water quality aspects of the proposed project.

### State Water Resources Control Board

The SWRCB and the RWQCBs are responsible for ensuring implementation and compliance with the provisions of the federal CWA and California's Porter-Cologne Water Quality Control Act. The project site is situated within the jurisdictional boundaries of the San Francisco Bay RWQCB (Region 2). The San Francisco Bay RWQCB has the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within their jurisdiction.

#### San Francisco Bay Regional Water Quality Control Board

As authorized by the Porter-Cologne Water Quality Control Act, the San Francisco Bay RWQCB's primary function is to protect the quality of the waters within its jurisdiction for all beneficial uses.

State law defines beneficial uses of California's waters that may be protected against quality degradation to include, but not be limited to: domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

The San Francisco Bay RWQCB is responsible for issuing permits for a number of activities. Activities subject to the San Francisco Bay RWQCB permitting requirements include stormwater, wastewater, and industrial water discharge, disturbance of wetlands, and dewatering. Permits issued and/or enforced by the San Francisco Bay RWQCB include, but are not limited to, the NPDES Construction General Permit, Municipal Regional Stormwater NPDES Permit, Industrial Stormwater General Permits, CWA Section 401 and 404 Permits, and Dewatering Permits.

The cities of Clayton, Concord, El Cerrito, Hercules, Lafayette, Martinez, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek, the towns of Danville and Moraga, Contra Costa County, and the Flood Control District (the Contra Costa Permittees) form the Contra Costa Clean Water Program. The Contra Costa Permittees are currently subject to NPDES Permit No. CAS612008, issued by Order No. R2-2002-0018 on May 11, 2022, which pertains to stormwater runoff discharges from storm drains and watercourses within their jurisdictions.[13] New development or redevelopment projects that disturb one or more acres of land area must contain and treat stormwater runoff from the site, as part of compliance with Provision C.3 of NPDES Permit No. CAS612008. The proposed project would disturb greater than one acre of land area and is, thus, a C.3-regulated project.

The goal of Provision C.3 is for the NPDES Permittees to use their planning authorities to require new development projects to include stormwater treatment measures within the site design to address pollutants in stormwater runoff and prevent increases in runoff flows. New development projects primarily accomplish such requirements through incorporating low impact development (LID) techniques. The goal of the LID techniques is to reduce runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover. LID employs principles such as preserving and recreating natural landscape features and minimizing imperviousness to create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product. LID techniques include measures such as rain barrels and cisterns, green roofs, permeable pavement, preserving undeveloped open space, and biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes. The Contra Costa Permittees require all projects to implement LID source control, site design, and stormwater treatment on-site or at a joint stormwater treatment facility in accordance with Provisions C.3.c and C.3.d of NPDES Permit No. CAS612008, unless the Provision C.3.e alternate compliance options are invoked.

## Basin Plans and Water Quality Objectives

The Porter-Cologne Water Quality Control Act provides for the development and periodic review of water quality control plans (basin plans) that are prepared by the RWQCBs. Basin plans designate beneficial uses of California's major rivers and groundwater basins, and establish narrative and numerical water quality objectives for those waters. Beneficial uses represent the services and qualities of a water body (i.e., the reasons why the water body is considered valuable), while water quality objectives represent the standards necessary to protect and support those beneficial uses. Basin plans are primarily implemented through the NPDES permitting

[13] California Regional Water Quality Control Board, San Francisco Bay Region. *Municipal Regional Stormwater NPDES Permit, Order No. R2-2022-0018, NPDES Permit No. CAS612008.* May 11, 2022.

system and by issuing waste discharge regulations to ensure that water quality objectives are met.

Basin plans provide the technical basis for determining waste discharge requirements and taking regulatory enforcement actions, if deemed necessary. The project site is located within the jurisdiction of the San Francisco Bay RWQCB. A basin plan has been adopted for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Basin Plan), which covers the project area.

The Basin Plan includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan also establishes water quality standards for all the ground and surface waters of the region. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards. Additionally, water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the CWA and the California Water Code.

### Delta Protection Commission

The Delta Protection Commission was established by the Delta Protection Act of 1992 (Act). In passing the Act, the Legislature affirmed "it is the policy of the State to recognize, preserve and protect those resources of the Delta for the use and enjoyment of current and future generations." Later amendments to the Act introduced the concept of the "co-equal goals" of both (1) Delta ecosystem protection and (2) "providing a more reliable water supply for California[,]" but insisted that the co-equal goals "be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource and agricultural values of the Delta as an evolving place" (see Public Resources Code [PRC] Section 29702[a]).

The Delta Protection Commission serves as a forum for Delta residents to provide recommendations and take actions to benefit the Delta, including promoting, facilitating, and administering efforts to improve flood protection, agriculture, habitat, cultural resources and recreation. The Delta Protection Commission also performs a land use function by adopting a Land Use and Resource Management Plan (LURMP) and ensuring that local government land use decisions are consistent with that plan. In cases where local land use decisions are inconsistent, they are subject to review by the Delta Protection Commission, which may overturn local land use decisions deemed inconsistent with the LURMP.

## Local Regulations

Relevant goals and policies from the City of Pittsburg General Plan, as well as various other local guidelines and regulations related to hydrology and water quality, are discussed below.

### City of Pittsburg General Plan

The following policies from the City of Pittsburg General Plan related to hydrology and water quality are applicable to the proposed project:

Goal 9-G-4 Minimize the runoff and erosion caused by earth movement by requiring development to use best construction management practices.

Goal 9-G-5 Preserve and enhance Pittsburg's creeks for their value in providing visual amenity, drainage capacity, and habitat value.

Policy 9-P-15 As part of development plans, require evaluation and implementation of appropriate measures for creek bank stabilization as well as necessary BMPs to reduce erosion and sedimentation. Encourage preservation of natural creeks and riparian habitat as best as possible.

Policy 9-P-17 To prevent flood hazards in the Kirker Creek watershed, ensure that new development minimizes paved areas, retaining large blocks of undisturbed, naturally vegetated habitat to allow for water infiltration.

Additional flood control mitigation may include intermixing areas of pavement with the naturally vegetated infiltration sites to reduce the concentration of stormwater runoff from pavement and structures.

Policy 9-P-21 As part of project review and CEQA documentation, require an assessment of downstream drainage (creeks and channels) and City storm-water facilities impacted by potential project runoff.

Calculate potential sedimentation and runoff based on the maximum storm event and determine necessary capacity of the downstream drainage system. If the project presents potential downstream sedimentation, runoff or flooding issues, require additional mitigation including but not limited to limitations on grading, construction only in dry seasons, and funding for downstream improvements, maintenance, and repairs.

Goal 9-G-7 Comply with Regional Water Quality Control Board regulations and standards to maintain and improve the quality of both surface water and groundwater resources.

Policy 9-P-22 Continue working with the Regional Water Quality Control Board in the implementation of the National Pollutant Discharge Elimination System (NPDES), with specific requirements established in each NPDES permit.

Policy 9-P-23 Require new urban development to use Best Management Practices to minimize creek bank instability, runoff of construction sediment, and flooding.

The City's BMPs will ensure that new development projects consider the effects of construction debris and sediment on local water supplies. However, it is imperative that the City review and update the BMPs to promote state-of-the-art construction practices.

Policy 9-P-24 Reduce sedimentation and erosion of waterways by minimizing site disturbance and vegetation removal along creek corridors.

Policy 9-P-27 Protect water quality by reducing non-point sources of pollution and the dumping of debris in and near creeks, storm drains, and Contra Costa Canal. Continue use and implementation of the City's storm drain marking program in newly developed or redeveloped areas.

The quality of groundwater and water flowing into the City's creeks is most likely to be affected by non-point pollution sources in Pittsburg. Urban development can potentially pose a threat to surface and groundwater quality through construction sediment, use of insecticides and herbicides, and related increases in automobile use.

Goal 10-G-8 Ensure that new development mitigates impacts to the City's storm drainage capacity from storm water runoff in excess to runoff occurring from the property in its undeveloped state.

Policy 10-P-18 Evaluate storm drainage needs for each development project in the context of demand and capacity when the drainage area is fully developed. Ensure drainage improvements or other mitigation of the project's impacts on the storm drainage system appropriate to the project's share of the cumulative effect.

Policy 10-P-19 Assure through the Master Drainage Plan and development ordinances that proposed new development adequately provides for on-site and downstream mitigation of potential flood hazards.

Policy 10-P-20 Develop and implement a Storm Flooding Mitigation Fee Program to fund required drainage improvements during construction of new development.

Cooperate with the County Flood Control District in developing a Storm Flooding Mitigation Fee Program for incorporated and unincorporated lands within the City's watersheds.

Policy 10-P-23 Ensure that all new development (residential, commercial, or industrial) contributes to the construction of drainage improvements in the Kirker Creek and other watersheds in the Planning Area, as required by the City's adopted ordinances.

Policy 10-P-24 Allow the construction of detention basins as mitigation in new developments. Ensure that detention basins located in residential neighborhoods, schools, or child-care facilities are surrounded by a gated enclosure, or protected by other safety measures.

| | |
|---|---|
| | The enclosure of detention basins, particularly in areas where small children are present, is necessary to ensure the safety of local residents when recessed areas are saturated with floodwaters. |
| Policy 10-P-25 | Ensure adequate minimum setbacks to reduce potential for property damage from storm flooding. |
| Policy 10-P-26 | Reduce the risk of localized and downstream flooding and runoff through the use of high infiltration measures, including the maximization of permeable landscape. |
| Policy 10-P-27 | Adopt practices for development and construction on sites where the erosion potential is moderate to severe. |
| Policy 10-P-28 | Bench terraces should be used where areas of long slopes may create a stormwater gradient flow. Berms should be constructed between any riparian corridor and the construction site to preclude sediment-laden stormwaters from entering riparian zones. |
| Policy 10-P-30 | Encourage residential development that includes post-construction Best Management Practices to minimize runoff from the site to the stormdrain system (for example, using permeable surfaces for parking lots, sidewalks, and bike paths, or using roof runoff as irrigation). |

It should be noted that the City of Pittsburg is currently in the process of updating the General Plan; however, the General Plan Update has not yet been completed.

## City of Pittsburg Municipal Code

The following sections of the Pittsburg Municipal Code are applicable to the proposed project.

### Section 13.28.050: Stormwater Control Plan Required

Every application for a development project, including, but not limited to, a rezoning, tentative map, parcel map, conditional use permit, variance, site development permit, design review, or building permit that is subject to the development runoff requirements in the City's NPDES permit must be accompanied by a stormwater control plan that meets the criteria in the most recent version of the Contra Costa Clean Water Program Stormwater Section C.3 Guidebook.

Implementation of an approved stormwater control plan and submittal of an approved stormwater control operation and maintenance plan by a project applicant is a condition precedent to the issuance of a certificate of occupancy for a project subject to Pittsburg Municipal Code Section 13.28.050. All stormwater management facilities must be designed in a manner to minimize the need for maintenance and reduce the chances of failure. Design guidelines are outlined in the guidebook.

### Section 13.28.090: Best Management Practices and Standards

Any person owning or operating a premises that may contribute pollutants to the City's stormwater system must implement BMPs to reduce the potential for pollutants entering the system to the maximum extent practicable. Examples of BMPs include, but are not limited to, those described in publications by the USEPA, the SWRCB, the California Stormwater Quality Association, the Bay Area Stormwater Management Agencies Association, the Contra Costa Clean Water Program, and the City of Pittsburg.

### Pittsburg Plain Groundwater Basin Groundwater Management Plan

Groundwater use in the Pittsburg Plain Groundwater Basin is subject to the GWMP, which was prepared by the City of Pittsburg in October 2012.[14] Because the project site is located within the Pittsburg Plain Groundwater Basin, all discharges to groundwater are subject to the GWMP requirements. The requirements of the GWMP include, but are not limited to, the following: comply with the County's well construction and destruction policies and State permitting requirements as stipulated by the California Department of Public Health; employ BMPs to limit potential sources of contamination in the environment; identify locations of point sources of contamination; identify major non-point sources of contamination; seek to avoid and/or mitigate potential impacts on groundwater quality resulting from point or non-point sources of contamination; and seek to avoid and/or mitigate groundwater contamination to the extent that the water supply is not adversely affected.

### Contra Costa County Flood Control and Water Conservation District

The Flood Control District provides a variety of services related to flood protection within Contra Costa County. Such services include flood control planning and maintenance, development review and infrastructure financing fees, development of flood control standards, data collection and hydraulic modeling, and technical review of developments and environmental documents. The Flood Control District is separated into Drainage Areas, and new development within such areas are assessed drainage fees specific to the Drainage Area. The project site is located in Drainage Area 100.

## 4.4.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to hydrology and water quality. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

### Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if the proposed project would result in any of the following:

- Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces,

[14] City of Pittsburg. *Pittsburg Plain Groundwater Basin Groundwater Management Plan*. October 2012.

in a manner which would:
  - Result in substantial erosion or siltation on- or off-site;
  - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
  - Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
  - Impede or redirect flood flows;
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

## Method of Analysis

The analysis herein is based primarily on information from the Envision Pittsburg Existing Conditions Report, the City of Pittsburg 2020 UWMP, and the CCWD 2020 UWMP. Further information was sourced from the City of Pittsburg General Plan and the City of Pittsburg General Plan EIR. More specifically, with respect to the proposed project's consistency with applicable water quality standards and/or waste discharge requirements, as well as potential substantial adverse effects related to substantial degradation of surface or groundwater quality, exceedance of downstream capacity, and flooding, this chapter evaluates the project's potential to result in impacts through consistency with applicable regulations, including the NPDES Construction General Permit and Municipal Regional Stormwater Permit, as well as the Guidebook. This chapter also assesses potential alterations to the existing setting, as established by the Envision Pittsburg Existing Conditions Report and FEMA, that could occur through development of the proposed project. Determinations of significance are made in this chapter based on the proposed infrastructure's ability to accommodate the proposed residential use.

In addition, with respect to the existing on-site conditions that could potentially degrade water quality associated with previous operations by the Johns Manville Products Company, this chapter incorporates information from the Phase I ESA and Site Investigation Report prepared for the proposed project by GSI Environmental (see Appendix A of this EIR) and the Geotechnical Feasibility Evaluation prepared for the project by ENGEO, Inc. (see Appendix D of this EIR). The methodology used as part of the Phase I ESA, Site Investigation Report, and Geotechnical Feasibility Evaluation are discussed further below.

### Phase I Environmental Site Assessment and Site Investigation Report

As part of confirming the current and past site use, the physical description of the project site, and the site's geologic, hydrogeologic, hydrologic, and topographic conditions, GSI Environmental contracted with Environmental Data Resources to compile a physical setting report (included as Appendix A to the Phase I ESA). The physical setting report was used in combination with information obtained by GSI Environmental during an on-site reconnaissance, historical document review, interviews with representatives of the property owner, a review of regulatory agency records, and a review of prior site reports provided to GSI Environmental. Through the combined aforementioned sources of information, GSI Environmental developed a description of the project site and the site's physical setting.

With respect to groundwater samples collected as part of the Site Investigation Report, GSI Environmental contracted with PeneCore Drilling, Inc. to advance 21 borings, identified as SB-01

through SB-21, for the collection of soil and grab groundwater samples, and the installation of temporary soil vapor probes. The installation of the borings, soil and groundwater sampling, and installation of the soil vapor probes occurred on March 17, 19, and 22, 2021. Boreholes were advanced using a combination of hand auger and dual-tube direct-push drilling methods to depths ranging from 3.5 to 22 feet bgs. The upper 3.5 to 5.5 feet of each boring was advanced using a hand auger to clear for potential underground utilities. The deeper borings were then drilled and continuously cored using a Geoprobe dual-tube direct push drill rig. Borings SB-01, SB-04, SB-05, SB-08, SB-17, and SB-18 were drilled to depths ranging between 15 and 22 feet bgs using the combination of hand auger and direct push drill rig. Boring lithology was logged by GSI Environmental in general accordance with the visual-manual procedures of American Society for Testing and Materials (ASTM) Standard D2488-09a for guidance, which is based on the Unified Soil Classification System (ASTM Standard D2487).

### Geotechnical Feasibility Evaluation

As part of the preparation of the Geotechnical Feasibility Evaluation, ENGEO, Inc. received the following reports, the information from which was incorporated into the Geotechnical Feasibility Evaluation:

- Treadwell and Rollo – Preliminary Geotechnical Investigation, Proposed Harbor Bay Development, Pittsburg, California, October 17, 2005;
- Treadwell and Rollo – Geotechnical Investigation, Proposed Harbor Park Development, Pittsburg, California, June 13, 2006;
- Treadwell and Rollo – Geotechnical Consultation, Selected Approach for Remedial Mass Grading and Revised Earthen Embankment Construction, Harbor Park Development, Pittsburg, California, July 31, 2007;
- Treadwell and Rollo – Final Report, Geotechnical Services during Remedial Mass Grading, The Proposed Harbor Park Development, Pittsburg, California, July 17, 2008;
- Sandis – Topographic Survey, 415 & 420 East 3rd Street, Pittsburg, California, March 13, 2017;
- Rockridge Geotechnical – Geotechnical Investigation, Proposed New Campus & Sports Complex, Making Waves Academy, 959 E. 3rd Street, Pittsburg, California, May 11, 2018; and
- Urban Arena – 420 E. 3rd Street, Pittsburg, California, February 18, 2021.

## Project Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

### 4.4-1 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during project construction or operation. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

The following discussion provides a summary of the proposed project's potential to violate water quality standards or waste discharge requirements or otherwise degrade water quality during construction and operation.

## Construction

Project construction activities such as grading, excavation, and trenching for site improvements would result in the disturbance of on-site soils. During the early stages of project construction activities, topsoil would be exposed due to grading and excavation of the project site. After grading and prior to overlaying the ground surface with impervious surfaces and structures, the potential exists for wind and water erosion to discharge sediment and/or urban pollutants into stormwater runoff, which could adversely affect water quality downstream. The exposed soils have the potential to affect water quality in two ways: 1) suspended soil particles and sediments transported through runoff; or 2) sediments transported as dust that eventually reach local water bodies. Spills or leaks from heavy equipment and machinery, staging areas, or building sites also have the potential to enter runoff. Typical pollutants include, but are not limited to, petroleum and heavy metals from equipment and products such as paints, solvents, and cleaning agents, which could contain hazardous constituents. Sediment from erosion of graded or excavated surface materials, leaks or spills from equipment, or inadvertent releases of building products could result in water quality degradation if runoff containing the sediment or contaminants enters receiving waters in sufficient quantities. Impacts from construction-related activities would generally be short-term and of limited duration.

Pursuant to Pittsburg Municipal Code Section 13.28.090, construction activities that would include discharges are required to comply with the provisions established by the applicable NPDES General Permit. Dischargers whose projects disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the NPDES Construction General Permit. Because the proposed project would disturb one or more acres of land, the project would be subject to the requirements set forth by the NPDES Construction General Permit. As part of compliance with the Construction General Permit, the project applicant would be required to file a Notice of Intent (NOI) with the SWRCB and prepare a SWPPP prior to the commencement of construction activities. The SWPPP would be required to incorporate BMPs to control or minimize pollutants from entering stormwater and would address potential grading/erosion impacts and non-point source pollution impacts of the development project, including potential post-construction impacts.

Additionally, as set forth by Pittsburg Municipal Code 15.88.030, construction activities involving grading, filling, excavating, or storing or disposing of soil and earth materials are required to obtain an Engineering Construction Permit from the City of Pittsburg Engineering Division. Thus, the proposed project would be required to obtain an Engineering Construction Permit. As part of applying for said permit, Pittsburg Municipal Code Section 15.88.050 requires that preparation of an Erosion and Sediment Control Plan, which would be submitted as part of the permit application. The Erosion and Sediment Control Plan would be required to include a delineation and description of the interim erosion and sediment control measures that would be implemented to retain sediment on-site during project construction, including features such as berms, sediment detention basins, mulches, diverters, and dikes.

Based on the above, through compliance with the NPDES Construction General Permit and the applicable provisions of Pittsburg Municipal Code Chapters 13.28 and 15.88, project construction activities would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground

water quality. However, because a SWPPP and Erosion and Sediment Control Plan have not yet been prepared for the proposed project, proper compliance with the aforementioned regulations cannot be ensured at this time. Thus, project construction activities could violate water quality standards or waste discharge requirements or otherwise degrade water quality, and a significant impact could occur.

### Operation

Following project construction activities, impervious surfaces on the project site could contribute incrementally to the degradation of downstream water quality during storm events. During the dry season, vehicles and other urban activities could release contaminants onto the impervious surfaces, where they would accumulate until the first storm event. During the initial storm event, or first flush, the concentrated pollutants would be transported through stormwater runoff from the site to the stormwater drainage system and eventually a downstream waterway. Typical urban pollutants that would likely be associated with the proposed project include sediment, household pesticides, oil and grease, nutrients, metals, bacteria, and trash. In addition, stormwater runoff could cause soil erosion if not properly addressed and provide a more lucrative means of transport for pollutants to enter the waterways.

Pursuant to Pittsburg Municipal Code Section 13.28.050, development projects that require City approval of a Rezone, Tentative Map, Parcel Map, Conditional Use Permit, Variance, Site Development Permit, Design Review, or Building Permit are subject to the development runoff requirements set forth by the Municipal Regional Stormwater NPDES Permit (Permit No. CAS612008), including the applicable standards established by the Contra Costa Clean Water Program Stormwater C.3. Guidebook (Guidebook). The project requires City approval of Rezone, Vesting Tentative Map, and Design Review, and thus, is subject to the provisions of the Municipal Regional Stormwater NPDES Permit, including Provision C.3. As necessitated by the Guidebook, new development and redevelopment projects that create or alter 10,000 square feet (sf) or more of impervious area must contain and treat all stormwater runoff from the project site. As discussed further under Impact 4.4-3, the proposed project would result in 455,206 sf of total new effective impervious area. Thus, the project would be required to contain and treat all stormwater runoff from the developed project site, primarily through the implementation of LID techniques that would reduce runoff and mimic the project site's predevelopment hydrology.

As described in further detail under Impact 4.4-3, based on the Preliminary Stormwater Control Plan, the proposed project would include six bioretention areas. Runoff from the developed project site would be directed to inlets within the proposed internal roads, where flows would be conveyed to the on-site bioretention areas. Each bioretention area would consist of biotreatment soil mix, which would provide initial treatment of on-site runoff before flows either percolate into underlying soils or are routed to the City's existing storm drain system in Harbor Street and East 3rd Street. Therefore, the inclusion of new bioretention areas to treat on-site runoff prior to discharge to the City's storm drain system would be consistent with the LID principles established by Provision C.3 of the Municipal Regional Stormwater NPDES Permit. In addition, as previously discussed, drainage swales were previously installed adjacent to the berm area and graded such that stormwater flows toward the catch basins on the eastern site boundary. The drainage swales were installed in conjunction with DTSC-required remedial actions for the site. The swales and other remediation

systems are required to be evaluated every five years by the DTSC, in accordance with a certified Operations and Maintenance Agreement between DTSC and Pittsburg River Park, LLC.

Based on the above, through compliance with Provision C.3 of the Municipal Regional Stormwater NPDES Permit, project operations would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. However, because a final Stormwater Control Plan and Report demonstrating compliance with Provision C.3 has not yet been prepared for the project, proper compliance with the aforementioned regulation cannot be ensured at this time. Thus, project operation could violate water quality standards or waste discharge requirements or otherwise degrade water quality, and a significant impact could occur.

## Conclusion

Based on the above, because a SWPPP, Erosion and Sediment Control Plan, and a final Stormwater Control Plan and Report demonstrating compliance with applicable regulations and standards have not yet been prepared for the project, proper compliance with the aforementioned regulations cannot be ensured at this time. Thus, project construction and operation could violate water quality standards or waste discharge requirements or otherwise degrade water quality, and a ***significant*** impact could occur.

## Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

*4.4-1(a)* *Prior to issuance of grading permits, the applicant shall prepare a Storm Water Pollution Prevention Plan (SWPPP). The developer shall file the Notice of Intent (NOI) and associated fee to the SWRCB. The SWPPP shall serve as the framework for identification, assignment, and implementation of BMPs. The SWPPP shall be submitted to the Director of Public Works/City Engineer for review and approval and shall remain on the project site during all phases of construction. Following implementation of the SWPPP, the contractor shall subsequently demonstrate the SWPPP's effectiveness and provide for necessary and appropriate revisions, modifications, and improvements to reduce pollutants in stormwater discharges to the maximum extent practicable. The contractor shall implement BMPs to reduce pollutants in stormwater discharges to the maximum extent practicable.*

*4.4-1(b)* *In addition to a SWPPP, prior to issuance of grading permits, the project applicant shall create an interim and final erosion and sediment control plan which shall include a delineation and brief description of the measures to be undertaken to retain sediment on the site, including but not limited to, the design and specifications of berms and sediment detention basins and a schedule for maintenance. The plan shall also contain a delineation and brief description of the surface runoff and erosion control measures, including but not limited to, types and method of applying mulches, and designs and specifications for*

*diverters, dikes, and drains. The plan shall be reviewed and approved by the City Community and Economic Development Department.*

*4.4-1(c) The project applicant shall submit a complete Stormwater Control Plan and Report compliant with the requirements set forth in the City's most current NPDES permit. The C.3 treatment facilities shall be adequately sized to treat the stormwater runoff from the associated drainage management areas. The grading and/or building plans shall include drawings and specifications necessary to implement all measures in the approved Stormwater Control Plan. Design features shall incorporate low impact development design standards as outlined in the most current edition of the Contra Costa Clean Water Program's C.3 Guidebook. All plans shall be reviewed and approved by the City Community and Economic Development Department.*

### 4.4-2 Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin or conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Based on the analysis below, the impact is *less than significant*.

Water supplies for the proposed project would be provided by the City of Pittsburg, which is located within the CCWD service area. According to the City's 2020 UWMP, the City received approximately 83 percent of its 2020 water supply from CCWD. CCWD provides untreated surface water, pumped from the Delta, which is then delivered to the City's treatment facility by way of the Contra Costa Canal. With respect to groundwater use, as previously discussed, groundwater accounts for 13 percent of the City's water supply. The City overlies the Pittsburg Plain Groundwater Basin and extracts groundwater using two wells, Rossmoor and Bodega, which are capable of producing approximately 600 gpm and 1,200 gpm, respectively.

As shown in Table 4.4-1, the annual volume of groundwater pumped by the City over the past five years ranged from 1,353 to 1,480 AF, with the highest amount of groundwater consumption occurring in 2020. According to the City's 2020 UWMP, the rate of water use is approximately 120 gallons per capita per day and, as noted above, groundwater accounts for approximately 13 percent of the City's water supply.[15] Given that the proposed project would result in the addition of approximately 756 new residents (refer to Appendix A of this EIR), the total amount of groundwater demand that could reasonably be expected from the project would be 13.22 AF per year, which is less than a one percent increase in current groundwater consumption. Furthermore, pursuant to the DWR State Groundwater Sustainability Agency (SGMA) Data Viewer, the Pittsburg Plain Groundwater Basin is characterized by DWR as a basin of very low priority, and is not classified as being critically over-drafted.[16] Thus, because water demand associated with the proposed project would primarily be met by surface water

[15] City of Pittsburg. *2020 Urban Water Management Plan* [pg 4-3]. July 2021.
[16] California Department of Water Resources. *SGMA Data Viewer*. Available at: https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#boundaries. Accessed January 2023.

and would result in only an incremental increase in the City's groundwater use, the project would not substantially decrease groundwater supplies.

With respect to potential impacts associated with groundwater recharge, the proposed project would disturb approximately 17.04 acres of the 20.5-acre site, with the project maintaining the pervious surfaces within the remaining 3.46 acres. As discussed under Impact 4.4-1, runoff from the developed project site would be directed to inlets within the proposed internal roads, where flows would be conveyed to the proposed on-site bioretention areas. Each bioretention area would provide initial treatment of on-site runoff before flows either percolate into underlying soils or are routed to the City's existing storm drain system in Harbor Street and East 3rd Street. Ultimately, runoff from the Kirker Creek watershed, in which the project site is located, drains into New York Slough. Consequently, the pervious areas of the site would allow for stormwater infiltration into underlying soils or for flows to be routed to New York Slough. Both outcomes would contribute to groundwater recharge. Thus, the proposed project would not result in substantial interference with groundwater recharge such that the project would impede sustainable groundwater management of the Pittsburg Plain Groundwater Basin.

Finally, as previously discussed, groundwater use in the Pittsburg Plain Groundwater Basin is subject to the GWMP. Because the project site is located within the Pittsburg Plain Groundwater Basin, discharges that occur as a result of the project to groundwater would be subject to the GWMP requirements. Therefore, the proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Based on the above, the proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge, nor would the project conflict with or obstruct implementation of the GWMP. Thus, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

*None required.*

**4.4-3 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: substantially increase the rate or amount of surface runoff in a manner which would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; or create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.**

The project site consists primarily of ruderal grasses and is currently absent of structures. As part of the proposed project, approximately 17.04 acres of the 20.5-acre site would be disturbed, with the project resulting in the development of 227 residential units, new internal roadways, associated utility improvements, and landscaping. Thus, the existing drainage pattern of the project site would be altered as a result of the proposed project. Potential impacts that could occur related to on- or off-site erosion or siltation, on- or off-site flooding, and exceeding the capacity of the City's storm drain system are discussed further below.

## On- or Off-Site Erosion or Siltation

As discussed under Impact 4.4-1, the proposed project would be subject to the provisions established by the NPDES Construction General Permit during project construction, which would include the filing of a NOI with the SWRCB and preparation of a SWPPP prior to the commencement of construction activities. The SWPPP would be required to incorporate BMPs to control or minimize pollutants from entering stormwater and would address potential grading/erosion impacts and non-point source pollution impacts of the development project. In addition, the project would be required to prepare an Erosion and Sediment Control Plan, which would be required to include a delineation and description of the interim erosion and sediment control measures that would be implemented to retain sediment on-site during project construction, including features such as berms, sediment detention basins, mulches, diverters, and dikes.

During project operation, the project would be required to comply with the Municipal Regional Stormwater NPDES Permit (Permit No. CAS612008), including Provision C.3 requirements, which necessitate that the project contain and treat all stormwater runoff from the developed project site. As part of complying with such requirements, the proposed project would include bioretention areas, the majority of which are proposed along the eastern boundary of the project site. Runoff from the developed project site would be directed to inlets within the proposed internal roads, where flows would be conveyed to the on-site bioretention areas. Each bioretention area would consist of biotreatment soil mix, which would provide initial treatment of on-site runoff before flows are routed to the City's existing storm drain system in Harbor Street and East 3rd Street.

Through compliance with the aforementioned regulations and standards, the project would not result in substantial erosion or siltation on- or off-site. However, because a SWPPP, Erosion and Sediment Control Plan, and final Stormwater Control Plan and Report demonstrating compliance with applicable regulations and standards have not yet been prepared for the project, Mitigation Measures 4.4-1(a) through 4.4-1(c) are required to ensure proper compliance with the aforementioned regulations.

## On- or Off-Site Flooding

As previously discussed under Impact 4.4-1, as part of compliance with the Guidebook, C.3-regulated projects that create or alter 10,000 sf or more of impervious area must contain and treat all stormwater runoff from the project site. The proposed project would result in 455,206 sf of total new effective impervious area. Thus, the project would be required to contain and treat all stormwater runoff from the developed project site and would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding off-site.

With respect to potential impacts related to on-site flooding, the project site is located within an area designated by FEMA as an Area of Minimal Flood Hazard (Zone X) and portions of the project site are within the 500-year floodplain (Zone X) (see Figure 4.4-2). Neither on-site designation is considered a Special Flood Hazard Area. In addition, as previously discussed, drainage swales were previously installed adjacent to the berm area and graded such that stormwater flows toward the catch basins on the eastern site boundary. Thus, the existing on-site conditions limit the potential for on-site flooding to occur.

As part of the proposed project, runoff from the developed project site would be directed to inlets within the proposed internal roads, where flows would be conveyed to the on-site bioretention areas. Each bioretention area would provide initial treatment of on-site runoff before flows either percolate into underlying soils or are routed to the City's existing storm drain system in Harbor Street and East 3rd Street. The storm drain improvements installed as part of the proposed project would be required to be designed consistent with applicable standards set forth by the City's Standard Details and Specifications, ensuring that the aforementioned drainage features reduce the potential for on-site flooding to occur. Furthermore, the existing drainage swales installed adjacent to the berm area would be maintained. Therefore, the on-site storm drain system would be designed to reduce flood risks.

Based on the above, the proposed project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, and a less-than-significant impact would occur.

### Exceed the Capacity of the City's Storm Drain System or Provide Substantial Additional Sources of Polluted Runoff

As previously discussed, the proposed project is subject to the applicable provisions of the Municipal Regional Stormwater NPDES Permit, including Provision C.3 requirements established by the Guidebook. As part of compliance with the Guidebook, C.3-regulated projects are required to prepare a Stormwater Control Plan that divides the project site into Drainage Management Areas (DMAs), with each DMA identified as self-treating, self-retaining (zero-discharge), draining to a self-retaining area, or draining to an Integrated Management Practice (IMP).

A Preliminary Stormwater Control Plan has been prepared for the proposed project showing the 22 DMAs in which the project site has been divided (see Figure 4.4-3). Runoff from DMAs within the developed project site would be directed to inlets within the proposed internal roads, where flows would be conveyed to the on-site bioretention areas. Each bioretention area would consist of biotreatment soil mix, which would provide initial treatment of on-site runoff before flows either percolate into underlying soils or are routed to the City's existing storm drain system.

DMAs 1 through 18 would include new impervious surfaces developed as part of the proposed project and would drain to IMPs 1 through 6. IMPs 1 through 6 coincide with Bioretention Areas (BRs) 1 through 6. DMAs 19 through 22 would include only self-treating areas, comprised of the existing berm area (DMAs 19 and 20) or landscaped areas devoid of impervious surfaces (DMAs 21 and 22).

# Figure 4.4-3
# Preliminary Stormwater Control Plan


| BIO-RETENTION AREA SUMMARY | | | | |
|---|---|---|---|---|
| BR # | TOP ELEVATION | BOTTOM ELEVATION | GRATE ELEVATION | MINIMUM PONDING DEPTH |
| 1 | 12.40 | 11.70 | 12.20 | 6" |
| 2 | 14.20 | 13.50 | 14.00 | 6" |
| 3 | 11.80 | 11.10 | 11.60 | 6" |
| 4 | 10.30 | 9.60 | 10.10 | 6" |
| 5 | 12.70 | 12.20 | 12.50 | 6" |
| 6 | 12.30 | 11.60 | 12.10 | 6" |

LEGEND
- DRAINAGE MANAGEMENT AREA (DMA)
- INTEGRATED MANAGEMENT PRACTICES (IMP) – BIO-RETENTION AREA

C.3 CALCULATIONS

| IMP 1 (BR #1) | | | | |
|---|---|---|---|---|
| | POST-PROJECT SURFACE TYPE | DRAINAGE AREA | RUNOFF FACTOR | EFFECTIVE IMPERVIOUS AREA |
| DMA 1 | LANDSCAPE | 68,093 SF | 0.1 | 6,809 SF |
| DMA 2 | CONCRETE OR ASPHALT | 31,631 SF | 1.0 | 31,631 SF |
| DMA 3 | CONVENTIONAL ROOF | 43,680 SF | 1.0 | 43,680 SF |
| | TOTAL EFFECTIVE IMPERVIOUS AREA | | | 82,120 SF |
| | REQUIRED TREATMENT AREA (EIA * 0.04) | | | 3,285 SF |
| | PROVIDED TREATMENT AREA | | | 3,307 SF |

| IMP 2 (BR #2) | | | | |
|---|---|---|---|---|
| | POST-PROJECT SURFACE TYPE | DRAINAGE AREA | RUNOFF FACTOR | EFFECTIVE IMPERVIOUS AREA |
| DMA 4 | LANDSCAPE | 31,324 SF | 0.1 | 3,132 SF |
| DMA 5 | CONCRETE OR ASPHALT | 18,984 SF | 1.0 | 18,984 SF |
| DMA 6 | CONVENTIONAL ROOF | 25,760 SF | 1.0 | 25,760 SF |
| | TOTAL EFFECTIVE IMPERVIOUS AREA | | | 47,876 SF |
| | REQUIRED TREATMENT AREA (EIA * 0.04) | | | 1,915 SF |
| | PROVIDED TREATMENT AREA | | | 1,958 SF |

| IMP 3 (BR #3) | | | | |
|---|---|---|---|---|
| | POST-PROJECT SURFACE TYPE | DRAINAGE AREA | RUNOFF FACTOR | EFFECTIVE IMPERVIOUS AREA |
| DMA 7 | LANDSCAPE | 105,835 SF | 0.1 | 10,584 SF |
| DMA 8 | CONCRETE OR ASPHALT | 77,866 SF | 1.0 | 77,866 SF |
| DMA 9 | CONVENTIONAL ROOF | 81,130 SF | 1.0 | 81,130 SF |
| | TOTAL EFFECTIVE IMPERVIOUS AREA | | | 169,580 SF |
| | REQUIRED TREATMENT AREA (EIA * 0.04) | | | 6,783 SF |
| | PROVIDED TREATMENT AREA | | | 8,473 SF |

| IMP 4 (BR #4) | | | | |
|---|---|---|---|---|
| | POST-PROJECT SURFACE TYPE | DRAINAGE AREA | RUNOFF FACTOR | EFFECTIVE IMPERVIOUS AREA |
| DMA 10 | LANDSCAPE | 82,697 SF | 0.1 | 8,270 SF |
| DMA 11 | CONCRETE OR ASPHALT | 58,498 SF | 1.0 | 58,498 SF |
| DMA 12 | CONVENTIONAL ROOF | 67,130 SF | 1.0 | 67,130 SF |
| | TOTAL EFFECTIVE IMPERVIOUS AREA | | | 133,898 SF |
| | REQUIRED TREATMENT AREA (EIA * 0.04) | | | 5,356 SF |
| | PROVIDED TREATMENT AREA | | | 6,368 SF |

| IMP 5 (BR #5) | | | | |
|---|---|---|---|---|
| | POST-PROJECT SURFACE TYPE | DRAINAGE AREA | RUNOFF FACTOR | EFFECTIVE IMPERVIOUS AREA |
| DMA 13 | LANDSCAPE | 8,537 SF | 0.1 | 854 SF |
| DMA 14 | CONCRETE OR ASPHALT | 5,278 SF | 1.0 | 5,278 SF |
| DMA 15 | CONVENTIONAL ROOF | 4,095 SF | 1.0 | 4,095 SF |
| | TOTAL EFFECTIVE IMPERVIOUS AREA | | | 10,227 SF |
| | REQUIRED TREATMENT AREA (EIA * 0.04) | | | 409 SF |
| | PROVIDED TREATMENT AREA | | | 414 SF |

| IMP 6 (BR #6) | | | | |
|---|---|---|---|---|
| | POST-PROJECT SURFACE TYPE | DRAINAGE AREA | RUNOFF FACTOR | EFFECTIVE IMPERVIOUS AREA |
| DMA 16 | LANDSCAPE | 5,439 SF | 0.1 | 544 SF |
| DMA 17 | CONCRETE OR ASPHALT | 4,226 SF | 1.0 | 4,226 SF |
| DMA 18 | CONVENTIONAL ROOF | 6,735 SF | 1.0 | 6,735 SF |
| | TOTAL EFFECTIVE IMPERVIOUS AREA | | | 11,505 SF |
| | REQUIRED TREATMENT AREA (EIA * 0.04) | | | 460 SF |
| | PROVIDED TREATMENT AREA | | | 611 SF |

| SELF-TREATING AREAS | | |
|---|---|---|
| | POST-PROJECT SURFACE TYPE | DRAINAGE AREA |
| DMA 19 | LANDSCAPE | 29,844 SF |
| DMA 20 | LANDSCAPE | 104,415 SF |
| DMA 21 | LANDSCAPE | 15,363 SF |
| DMA 22 | LANDSCAPE | 15,901 SF |

VESTING TENTATIVE MAP - TRACT 9584

STORMWATER CONTROL PLAN

420 E. 3RD STREET

CITY OF PITTSBURG CONTRA COSTA COUNTY CALIFORNIA

SCALE: 1" = 60' DATE: AUGUST 2, 2022

0 60 120 180

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SHEET NO. TM07 OF 8 SHEETS

Table 4.4-2 summarizes the total effective impervious area within each DMA, the required treatment area within each IMP, and the provided treatment area within each IMP.

**Table 4.4-2**
**C.3 Calculations**

| DMA | Post-Construction Surface Type | Drainage Area (sf) | Runoff Factor | Effective Impervious Area (sf) |
|---|---|---|---|---|
| **IMP 1 (BR 1)** | | | | |
| 1 | Landscape | 68,093 | 0.1 | 6,809 |
| 2 | Concrete or Asphalt | 31,631 | 1.0 | 31,631 |
| 3 | Conventional Roof | 43,680 | 1.0 | 43,680 |
| Total Effective Impervious Area | | | | 82,120 |
| Required Treatment Area | | | | 3,285 |
| Provided Treatment Area | | | | 3,307 |
| **IMP 2 (BR 2)** | | | | |
| 4 | Landscape | 31,324 | 0.1 | 3,132 |
| 5 | Concrete or Asphalt | 18,984 | 1.0 | 18,984 |
| 6 | Conventional Roof | 25,760 | 1.0 | 25,760 |
| Total Effective Impervious Area | | | | 47,876 |
| Required Treatment Area | | | | 1,915 |
| Provided Treatment Area | | | | 1,958 |
| **IMP 3 (BR 3)** | | | | |
| 7 | Landscape | 105,835 | 0.1 | 10,584 |
| 8 | Concrete or Asphalt | 77,866 | 1.0 | 77,866 |
| 9 | Conventional Roof | 81,130 | 1.0 | 81,130 |
| Total Effective Impervious Area | | | | 169,580 |
| Required Treatment Area | | | | 6,783 |
| Provided Treatment Area | | | | 8,473 |
| **IMP 4 (BR 4)** | | | | |
| 10 | Landscape | 82,697 | 0.1 | 8,270 |
| 11 | Concrete or Asphalt | 58,498 | 1.0 | 58,498 |
| 12 | Conventional Roof | 67,130 | 1.0 | 67,130 |
| Total Effective Impervious Area | | | | 133,898 |
| Required Treatment Area | | | | 5,356 |
| Provided Treatment Area | | | | 6,368 |
| **IMP 5 (BR 5)** | | | | |
| 13 | Landscape | 8,537 | 0.1 | 854 |
| 14 | Concrete or Asphalt | 5,278 | 1.0 | 5,278 |
| 15 | Conventional Roof | 4,095 | 1.0 | 4,095 |
| Total Effective Impervious Area | | | | 10,227 |
| Required Treatment Area | | | | 409 |
| Provided Treatment Area | | | | 414 |
| **IMP 6 (BR 6)** | | | | |
| 16 | Landscape | 5,439 | 0.1 | 544 |
| 17 | Concrete or Asphalt | 4,226 | 1.0 | 4,226 |
| 18 | Conventional Roof | 6,735 | 1.0 | 6,735 |
| Total Effective Impervious Area | | | | 11,505 |
| Required Treatment Area | | | | 460 |
| Provided Treatment Area | | | | 611 |

As shown in Table 4.4-2, the provided treatment area within each IMP would exceed the required treatment area, which indicates that the proposed bioretention areas are sized to adequately retain and treat all stormwater flows from the developed project site. Given that DMAs 19 through 22 would be comprised of the existing berm area or landscaped areas, runoff in the foregoing DMAs would be self-treating/self-retained and would not substantially affect the City's existing storm drain system. In addition, as a portion of on-site flows within IMPs 1 through 6 would percolate into underlying soils, only peak flows in the aforementioned areas would be anticipated to be routed to the City's existing storm drain system in Harbor Street and East 3rd Street following on-site treatment, which would ensure that runoff from impervious surfaces in the developed project site does not exceed the capacity of the City's existing storm drain system.

Based on the above, the proposed project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. However, because a final Stormwater Control Plan and Report demonstrating compliance with applicable regulations and standards has not yet been prepared for the project, Mitigation Measure 4.4-1(c) is required to ensure proper compliance with the Municipal Regional Stormwater NPDES Permit.

### Conclusion

Based on the above, because a SWPPP, Erosion and Sediment Control Plan, and final Stormwater Control Plan and Report demonstrating compliance with applicable regulations and standards have not yet been prepared for the project, the proposed project could substantially alter the existing drainage pattern of the site in a manner which would result in substantial erosion or siltation on- or off-site or create or contribute runoff water which would exceed the capacity of the City's existing storm drain system or provide substantial additional sources of polluted runoff. Thus, a ***significant*** impact could occur.

### Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

*4.4-3 Implement Mitigation Measures 4.4-1(a) through (c).*

## 4.4-4 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows. Based on the analysis below, the impact is *less than significant*.

As discussed under Impact 4.4-3, the project site is located within an area designated by FEMA as an Area of Minimal Flood Hazard (Zone X) and portions of the project site are within the 500-year floodplain (Zone X) (see Figure 4.4-2). As such, because the project site is not located in a SFHA, the proposed project would not result in substantial adverse effects associated with impeding or redirecting floods. In addition,

according to Table 4.2-4 of the Envision Pittsburg Existing Conditions Report, the General Plan planning area is not located in an area in which sea level rise presents a potential hazard. Furthermore, as discussed previously, the proposed project would include installation of storm drain improvements designed consistent with applicable standards set forth by the City's Standard Details and Specifications. Installation of the aforementioned storm drainage features would further limit the potential for on-site flooding to occur. The existing drainage swales installed adjacent to the berm area would be maintained, ensuring that the existing on-site conditions that limit the potential for on-site flooding to occur would remain. It should be noted that the site topography/elevation would not substantially change through development of the proposed project and, additionally, in the unlikely event of a flood, floodwater could flow around the proposed structures, and the proposed project would not impede such flows.

Based on the above, the proposed project would not alter the existing drainage pattern of the site in a manner that would impede or redirect flood flows, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
*None required*.

### 4.4-5 In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation. Based on the analysis below, the impact is *less than significant*.

The project site is not located in a SFHA. Tsunamis are defined as sea waves created by undersea fault movement, whereas a seiche is defined as a wave generated by rapid displacement of water within a reservoir or lake due to an earthquake that triggers land movement within the water body or land sliding into or beneath the water body. While the project area is located in proximity to a coastline, according to the California Department of Conservation, the potential for the project to be affected by flooding risks associated with tsunamis is very low.[17] Seiches do not pose a risk to the proposed project, as the project site is not located adjacent to a large, closed body of water.

Based on the above, the proposed project would not risk release of pollutants from project inundation due to flood hazard, tsunami, or seiche zones, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
*None required*.

## Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single

[17] California Department of Conservation. *California Tsunami Maps and Data.* Available at: https://www.conservation.ca.gov/cgs/tsunami/maps. Accessed January 2023.

project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

The cumulative setting for impacts related to hydrology and water quality encompasses the Kirker Creek watershed, which, as discussed above, includes the developed portions of the City's central and eastern areas, including the entirety of the project site. Additional details regarding the cumulative project setting can be found in Chapter 6, Statutorily Required Sections, of this EIR.

### 4.4-6 Cumulative impacts related to the violation of water quality standards or waste discharge requirements, groundwater quality, management, and recharge, and impacts resulting from the alteration of existing drainage patterns. Based on the analysis below, the cumulative impact is *less than significant*.

Potential impacts related to stormwater quality, groundwater, and drainage patterns that could occur as a result of reasonably foreseeable future development in the Kirker Creek watershed, in conjunction with the proposed project, are discussed separately below.

#### Stormwater Quality

Construction activities have the potential to affect water quality and contribute to localized violations of water quality standards if stormwater runoff from construction activities enters receiving waters. Runoff from additional construction sites within the project area could carry sediment from erosion of graded or excavated surface materials, leaks or spills from equipment, or inadvertent releases of building products, which could result in water quality degradation if runoff containing such materials enters receiving waters in sufficient quantities. Thus, construction activities associated with the proposed project, in combination with the construction activities of reasonably foreseeable projects in the Kirker Creek watershed, could result in potential cumulative impacts related to water quality.

However, all construction projects resulting in disturbance of more than one acre of soil are required to comply with the provisions set forth by the NPDES Construction General Permit. Conformance with the Construction General Permit would require preparation of SWPPPs for all such projects, and subsequent implementation of BMPs to prevent the discharge of pollutants. Considering the existing permitting requirements for construction activity in the project vicinity, cumulative construction within the Kirker Creek watershed would be heavily regulated and impacts related to the degradation of water quality would be minimized to the extent feasible. In addition, as the City's central and eastern areas are predominantly built out with existing uses, construction of new development projects would be reasonably assumed to not occur at a high level.

Similar to the proposed project, cumulative development that could occur within the Kirker Creek watershed would be subject to the applicable provisions of the Municipal Regional Stormwater NPDES Permit, including Provision C.3 requirements set forth by the Guidebook. More specifically, C.3-regulated projects are required to include

appropriate source control, site design, and stormwater treatment measures to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows. Addressing stormwater runoff pollutant discharges would be accomplished primarily through the implementation of LID techniques, such as rain barrels and cisterns, green roofs, permeable pavement, preserving undeveloped open space, and biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes.

Finally, the City's General Plan EIR evaluated potential impacts that could occur to stormwater quality through new development facilitated by buildout of the General Plan planning area and concluded that through implementation of applicable General Plan goals and policies, all potential impacts would be reduced to a less-than-significant level. As a program-level EIR, the General Plan EIR serves as a cumulative analysis of buildout of the City limits. As such, the City has previously assessed potential cumulative impacts that could occur through buildout of the planning area, and cumulative development, in conjunction with the proposed project, would not result in impacts beyond those identified in the General Plan EIR.

Based on the above, compliance with the foregoing regulations would ensure that potential cumulative impacts that could occur as a result of reasonably foreseeable future development within the Kirker Creek watershed related to stormwater quality are less than significant.

### Groundwater

Cumulative development within the Kirker Creek watershed would result in increased impervious surfaces, which would reduce the infiltration of groundwater within the project vicinity. However, as previously discussed, the City's central and eastern areas are predominantly built out with existing uses. Accordingly, new construction within the aforementioned areas of the City would primarily consist of redevelopment, which generally does not result in a substantial increase in impervious surface area, given the previous development that has already occurred. Thus, buildout of reasonably foreseeable future development, in conjunction with the proposed project, would not result in a significant cumulative loss of groundwater recharge.

As discussed under Impact 4.4-2, groundwater accounts for 13 percent of the City's water supply. Furthermore, pursuant to the DWR SGMA Data Viewer, the Pittsburg Plain Groundwater Basin is characterized by DWR as a basin of very low priority, and is not classified as being critically over-drafted. Thus, because water demand associated with reasonably foreseeable future development would primarily be met by surface water and would result in only an incremental increase in the City's groundwater use, the cumulative development within the Kirker Creek watershed would not substantially decrease groundwater supplies. In addition, as previously discussed, groundwater use in the Pittsburg Plain Groundwater Basin is subject to the GWMP. Because the City's central and eastern areas are located within the Pittsburg Plain Groundwater Basin, discharges that occur as a result of the cumulative development to groundwater would be subject to the GWMP requirements. Furthermore, City's 2020 UWMP includes an assessment of projected of overall water supply and demand (i.e., surface and groundwater combined) under normal, single dry, and multiple dry year scenarios through the year 2045. The UWMP concludes that

the City would have adequate water supply to meet the projected demand in normal, single dry, and most multiple dry year scenarios. Thus, as groundwater accounts for only 13 percent of the City's overall supply, cumulative development would not be anticipated to substantially decrease groundwater supplies.

Finally, the City's General Plan EIR evaluated potential impacts that could occur related to groundwater consumption through new development facilitated by buildout of the General Plan planning area and concluded that through implementation of applicable General Plan goals and policies, all potential impacts would be reduced to a less-than-significant level. The proposed project is consistent with the level of intensity assumed for the project site in the General Plan EIR. Thus, the City has previously assessed potential cumulative impacts that could occur through buildout of the planning area, and cumulative development, in conjunction with the proposed project, would not result in impacts beyond those identified in the General Plan EIR. Therefore, reasonably foreseeable future development, in conjunction with the proposed project, would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

### Drainage Patterns

Similar to the proposed project, cumulative development that could occur within the Kirker Creek watershed would be subject to the applicable provisions of the Municipal Regional Stormwater NPDES Permit, including Provision C.3 requirements set forth by the Guidebook. C.3-regulated projects are required to prepare a Stormwater Control Plan that divides the project site into DMAs, and preparation of a Stormwater Control Plan would ensure that reasonably foreseeable future development provides treatment area within each DMA that would equal or exceed the required treatment area necessary for each DMA. In addition, new storm drain infrastructure would be required to be designed consistent with applicable standards set forth by the City's Standard Details and Specifications, ensuring that new drainage features limit the potential for on- or off-site site flooding to occur, and a less-than-significant impact would occur.

Finally, as discussed previously, the City's General Plan EIR evaluated potential impacts that could occur related to drainage pattern alterations through new development facilitated by buildout of the General Plan planning area and concluded that through implementation of applicable General Plan goals and policies, all potential impacts would be reduced to a less-than-significant level. As such, the City has previously assessed potential cumulative impacts that could occur through buildout of the planning area, and cumulative development, in conjunction with the proposed project, would not result in impacts beyond those identified in the General Plan EIR.

### Conclusion

Based on the above, similar to the proposed project, any future development that could occur within the Kirker Creek watershed would be subject to regulations and standards set forth by the NPDES Construction General Permit, the Municipal Regional Stormwater NPDES Permit, and the City's Standard Details and Specifications, which would ensure that potential impacts related to stormwater quality, groundwater, and drainage patterns are limited in severity to the extent feasible. Thus, the potential

cumulative impact associated with reasonably foreseeable future development, in conjunction with the proposed project, would be ***less than significant***.

## Mitigation Measure(s)

*None required.*

# 4.5 TRANSPORTATION

# 4.5 TRANSPORTATION

## 4.5.1 INTRODUCTION

The Transportation chapter of the EIR discusses the existing transportation and circulation facilities within the project vicinity, as well as applicable policies and guidelines used to evaluate operation of such facilities. Where development of the proposed project would conflict with applicable policies or guidelines, mitigation measures are identified. The information contained within this chapter is primarily based on the Traffic Impact Analysis (TIA) prepared for the proposed project by Fehr & Peers (see Appendix E),[1] as well as the City of Pittsburg General Plan[2] and the City of Pittsburg General Plan EIR.[3]

Pursuant to the CEQA Guidelines Section 15064.3, environmental documents must use vehicle miles traveled (VMT) rather than level of service (LOS) as the metric to analyze transportation impacts. Therefore, the analysis include in this chapter focuses on VMT. The State's requirement to transition from LOS to VMT is aimed at promoting infill development, public health through active transportation, and a reduction in greenhouse gas (GHG) emissions. However, an analysis of LOS is available in the project-specific TIA, and will be used by the City in the project review process for determining consistency with General Plan goals and policies.

## 4.5.2 EXISTING ENVIRONMENTAL SETTING

The section below describes the physical and operational characteristics of the existing transportation system within the project vicinity, including the surrounding roadway network, pedestrian, bicycle, and transit facilities.

### Existing Roadways

Regional access to the site is provided by State Route (SR) 4 and Railroad Avenue; local access is provided by East 3rd Street, East 8th Street, and Harbor Street. The following sections provide a summary of the foregoing roadways within the project area.

### SR 4

SR 4 is defined as a Route of Regional Significance in the Contra Costa Transportation Authority's (CCTA's) East County Action Plan for Routes of Regional Significance. SR 4 is an east-west freeway that extends from the City of Hercules in the west to the City of Stockton, and beyond, in the east. The facility is an eight-lane freeway within the project vicinity, with interchanges at Railroad Avenue. All signalized intersections at SR 4's on and off-ramps are operated by the California Department of Transportation (Caltrans).

1 Fehr & Peers. *Pittsburg Harbor View Transportation Impact Assessment.* June 2022
2 City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century*. Adopted November 16, 2001.
3 City of Pittsburg. *City of Pittsburg General Plan Environmental Impact Report (SCH No. 1999072109)*. January 2001

## Railroad Avenue

Railroad Avenue is defined as a Route of Regional Significance in the CCTA's East County Action Plan for Routes of Regional Significance, connecting to the cities of Walnut Creek and Clayton.[4] Routes of Regional Significance are major roadway and freeway corridors that serve regional traffic, identified in Action Plans adopted by the CCTA under the countywide Measure J program. Railroad Avenue is a north-south major arterial with two travel lanes in each direction and a center left turn lane, and a posted speed limit of 35 miles per hour (mph). In the project vicinity, sidewalks with no buffers and sidewalks with landscaped buffers are provided on both sides at various locations along Railroad Avenue. Bicycle facilities are present south of East 10th Street, and north of Civic Avenue.

## East 3rd Street

East 3rd Street is an east-west local road with two travel lanes in each direction west of the project site, and one travel lane in each direction east of the project site. East 3rd Street serves residential communities west of the project site and industrial developments east of the project site. The posted speed limit is 25 mph. Sidewalks are provided between Railroad Avenue, west of the project site, and Riverway Drive on both sides without buffers. Sidewalks without buffers are provided between Riverway Drive and Harbor Street, along the northern boundary of the project site. East 3rd Street does not contain sidewalks east of Harbor Street. Bicycle facilities are not present along East 3rd Street in the project vicinity. An entrance to the project site is proposed on East 3rd Street.

## East 8th Street

East 8th Street is an east-west local road with one travel lane in each direction. East 8th Street serves the residential communities east of the project site, and provides access to Harbor Street. The posted speed limit is 25 mph. Sidewalks with landscaped buffers and bicycle lanes are provided.

## Harbor Street

Harbor Street is a north-south local road with two travel lanes in each direction and a center left turn lane. Harbor Street serves residential communities located south of the project site, and the posted speed limit is 35 mph. Sidewalks without buffers and bicycle lanes are provided. Currently, sidewalks are not present on the west side of Harbor Street abutting the project site. The posted speed limit is 35 mph. An entrance to the project site is proposed on Harbor Street.

## Nearby Intersections

The following intersections are located in the project area (see Figure 4.5-1):[5]

1. East 8th Street/Railroad Avenue;
2. East 8th Street/Harbor Street;
3. East 10th Street/Railroad Avenue;
4. Railroad Avenue/Civic Avenue;
5. Railroad Avenue/SR 4 Westbound Ramps;

[4] Contra Costa Transportation Authority. *2017 Countywide Comprehensive Transportation Plan*. September 2017.

[5] Operations of the listed nearby intersections are evaluated in the TIA. However, as noted previously, the analysis related to intersection LOS is not applicable for this CEQA analysis, but will otherwise be used by the City in the project review process. The discussion included herein is intended to describe the existing circulation system in the project area.

**Figure 4.5-1**
**Nearby Intersection Locations**


***Source: Fehr & Peers, 2022.***

6. Railroad Avenue/SR 4 Eastbound Ramps;
7. East 10th Street/Harbor Street; and
8. California Avenue/Harbor Street.

## Vehicle Miles Traveled

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. 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 Senate Bill (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 CEQA Guidelines, VMT is the primary metric used to identify transportation impacts to roadway systems within this chapter. Daily home-based VMT per resident is defined as the VMT generated by residents of households for trips made to and from home for a typical weekday. Any other trips made during the day, such as trips between a workplace and a grocery store, are not considered in home-based VMT per resident calculations. The established baseline (2021) average daily home-based VMT per resident in Contra Costa County is 17.2.

## Pedestrian, Bicycle and Transit Facilities

The sections below describe the existing pedestrian, bicycle and transit facilities located within the vicinity of the project site.

### Pedestrian Facilities

Pedestrian facilities in the project vicinity include sidewalks, crosswalks, pedestrian signals, and multi-use trails. Three- to ten-foot sidewalks are provided on most roadways in the project area, although a number of gaps exist. Crosswalks are provided at signalized and unsignalized intersections. Pedestrian push-button actuated signals are provided at signalized intersections in the project vicinity.

### Bicycle Facilities

Bicycle paths, lanes, and routes are typical examples of bicycle transportation facilities, which are defined by Caltrans as being in one of the following three classes:

- *Bike Paths (Class I)* – Bike paths provide a completely separate right-of-way and are designated for the exclusive use of people riding bicycles and walking with minimal cross-flow traffic. Such paths can be well situated along creeks, canals, and rail lines. Class I Bikeways can also offer opportunities not provided by the road system by serving as both recreational areas and/or desirable commuter routes.
- *Bike Lanes (Class II)* – Bike lanes provide designated street space for bicyclists, typically adjacent to the outer vehicle travel lanes. Bike lanes include special lane markings, pavement legends, and signage. Bike lanes may be enhanced with painted buffers between vehicle lanes and/or parking, and green paint at conflict zones (such as driveways or intersections).
- *Bike Routes (Class III)* – Bike routes provide enhanced mixed-traffic conditions for bicyclists through signage, striping, and/or traffic calming treatments, and to provide

continuity to a bikeway network. Bike routes are typically designated along gaps between bike trails or bike lanes, or along low-volume, low-speed streets. Bicycle boulevards provide further enhancements to bike routes to encourage slow speeds and discourage non-local vehicle traffic via traffic diverters, chicanes, traffic circles, and/or speed tables. Bicycle boulevards can also feature special wayfinding signage to nearby destinations or other bikeways.

Existing bicycle facilities in the project area include Class II bike lanes on Railroad Avenue, Harbor Street, and East 8th Street.

As described in the Pittsburg Moves: Active Transportation Plan, a Class II Bike Lane is planned for East 3rd Street, north of the project site, and a Class I Bike Path is planned for Harbor Street, east of the project site (see Figure 4.5-2).[6]

## Transit System

Two major public mass transit operators provide service within or adjacent to the study area: the Eastern Contra Costa Transit Authority (or Tri Delta Transit) and Bay Area Rapid Transit (BART) (see Figure 4.5-3).

### Tri Delta Transit

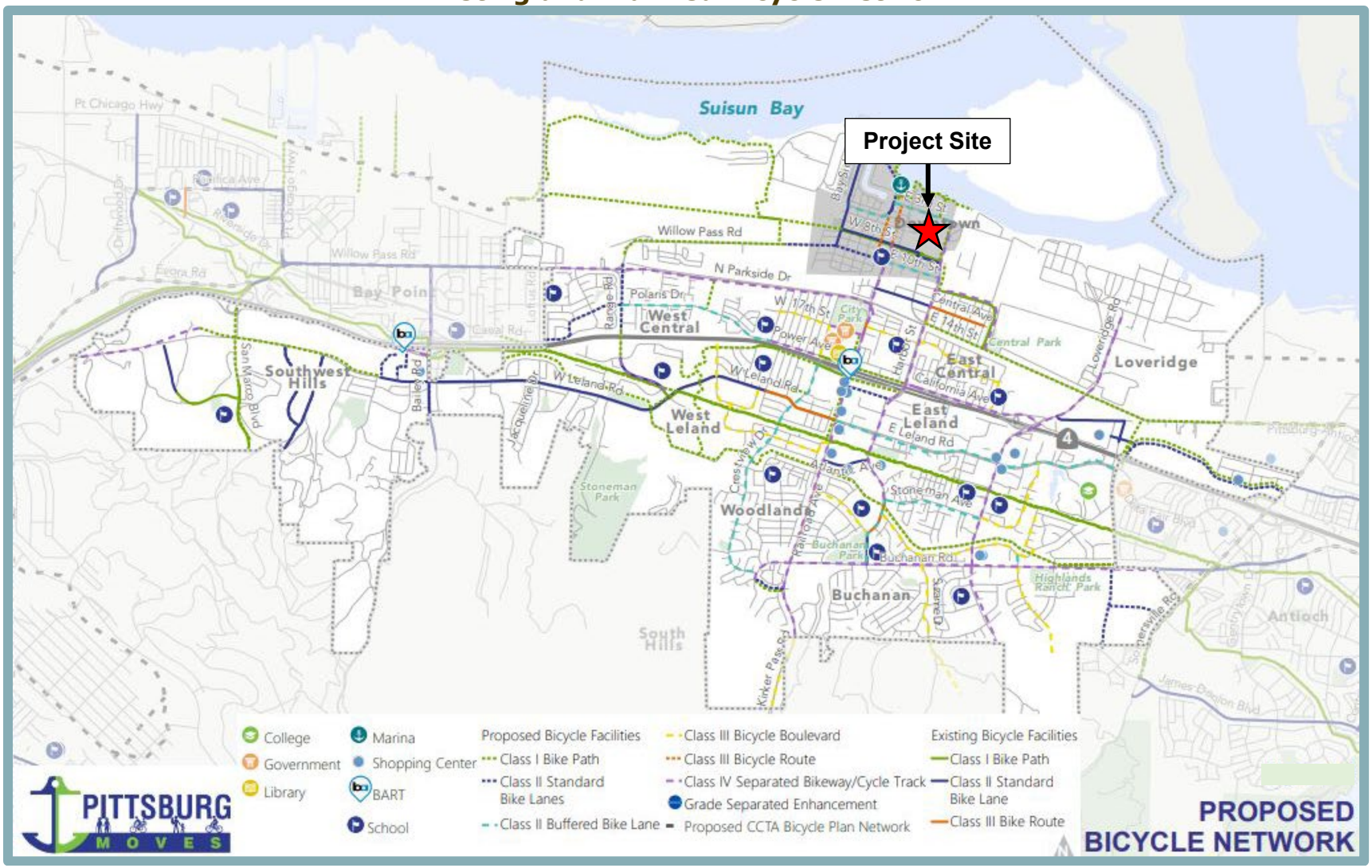
Tri Delta Transit serves the East County including Brentwood, Oakley, Pittsburg, Antioch, Bay Point and unincorporated areas of East County. Tri Delta Transit operates 14 local bus routes from Monday to Friday, including three express services, and four local bus routes during weekends and holidays. The following routes operate in the vicinity of the project site:

- Route 380 – Pittsburg-Bay Point BART/Antioch BART (Weekends only);
- Route 381 – Pittsburg Marina/Los Medanos College Pittsburg (Weekdays only);
- Route 387 – Antioch BART/Pittsburg-Bay Point BART (Weekdays only);
- Route 388 – Pittsburg-Bay Point BART/Kaiser Antioch Medical Center (Weekdays only);
- Route 390 – Antioch BART/Pittsburg-Bay Point BART (Weekdays only/Commute hours);
- Route 391 – Brentwood Park & Ride/Pittsburg Center Station (Weekdays only);
- Route 392 – Antioch BART/Pittsburg-Bay Point BART (Weekends and Holidays);
- Route 394 – Antioch BART/Pittsburg Bay Point BART (Weekends and Holidays); and
- Route 396 – Somersville Towne Center/Bay Point (Weekends and Holidays).

The Tri Delta Transit route that runs closest to the proposed project is Route 387, with an eastbound stop on the project site's East 3rd Street frontage and the westbound stop across the street on East 3rd Street. Route 387 operates on weekdays from approximately 6:30 AM to 6:00 PM with approximately one-hour headways. The route provides a connection to the Pittsburg Transit Center and the Pittsburg/Bay Point BART station, where 10 of the 19 Tri Delta Transit bus routes make connections (Routes 200, 201, 380, 387, 388, 389, 390, 392, 394 and 396). In addition to the regular transit service to the project area, dial-a-ride door-to-door service within Eastern Contra Costa County is provided by Tri Delta Transit for people with disabilities of all ages, as well as senior citizens.

6 City of Pittsburg. *Pittsburg Moves – Active Transportation Plan.* December 2020.

**Figure 4.5-2**
**Existing and Planned Bicycle Network**




***Source: City of Pittsburg. Pittsburg Moves – Active Transportation Plan. December 2020.***

**Figure 4.5-3**
**Existing Transit Facilities**


***Source: City of Pittsburg. Pittsburg Moves – Active Transportation Plan. December 2020.***

### Bay Area Rapid Transit

BART is a rapid mass transit system which provides regional transportation connections to much of the Bay Area. The Yellow Line-Antioch-SFO/Millbrae line provides access to two stations located within Pittsburg. The Pittsburg/Bay Point station is located approximately five miles west of the project site, and the Pittsburg Center BART station is located approximately 1.4-mile south of the project site. Weekday service is provided on approximately 15-minute headways and weekend service is provided on approximately 20-minute headways. The Antioch-SFO/Millbrae Line connects to key regional employment centers, including Concord, Pleasant Hill, Walnut Creek, Oakland, and San Francisco. Transfers to other lines can be made in Oakland.

## 4.5.3 REGULATORY CONTEXT

Existing transportation policies, laws, and regulations that would apply to the proposed project are summarized below and provide a context for the impact discussion related to the project's consistency with the applicable regulatory conditions. Federal plans, policies, regulations, or laws related to transportation and circulation are not directly applicable to the proposed project. Rather, the analysis presented herein focuses on State and local regulations, which govern the regulatory environment related to transportation and circulation at the project level.

### State Regulations

The following are the regulations pertinent to the proposed project at the State level, organized chronologically.

### Senate Bill 743

In 2013, SB 743 was passed to amend Sections 65088.1 and 65088.4 of the Government Code, amend Sections 21181, 21183, 21186, 21187, 21189.1, and 21189.3 of the Public Resources Code (PRC), to add Section 21155.4 to the PRC, to add Chapter 2.7 (commencing with Section 21099) to Division 13 of the PRC, to add and repeal Section 21168.6.6 of the PRC, and to repeal and add Section 21185 of the PRC, relating to environmental quality. In response to SB 743, the Office of Planning and Research (OPR) has updated the CEQA Guidelines to include new transportation-related evaluation metrics. In December 2018, the California Natural Resources Agency certified and adopted the CEQA Guidelines update package along with an updated Technical Advisory related to Evaluating Transportation Impacts in CEQA. Full compliance with the Guidelines became effective July 2020. As a result of SB 743, and Section 15064.3 of the CEQA Guidelines, as discussed in further detail below, local jurisdictions may no longer rely on vehicle LOS and similar measures related to delay as the basis for determining the significance of transportation impacts under CEQA, and instead a VMT metric should be evaluated.

### Technical Advisory on Evaluating Transportation Impacts in CEQA

In December of 2018, the OPR published the Technical Advisory on Evaluation Transportation Impacts in CEQA (Technical Advisory), which is a guidance document to provide advice and recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. The Technical Advisory is intended to be a resource for the public to use at their discretion, and the OPR does not enforce any part of the recommendations contained therein. The Technical Advisory includes recommendations regarding methodology, screening thresholds, and recommended thresholds per land use type.

## Vehicle Miles Traveled-Focused Transportation Impact Study Guide

In May of 2020, Caltrans adopted the Vehicle Miles Traveled-Focused Transportation Impact Study Guide (TISG) to provide direction to lead agencies regarding compliance with SB 743. The TISG replaces the Caltrans' 2002 Guide for the Preparation of Traffic Impact Studies and is for use with local land use projects, not for transportation projects on the State Highway System. The objectives of the TISG are to provide:[7]

a) Guidance in determining when a Lead Agency for a land use project or plan should analyze possible impacts to the State Highway System, including its users.
b) An update to the Guide for the Preparation of Traffic Impact Studies (Caltrans, 2002) that is consistent with SB 743 and the CEQA Guidelines adopted on December 28, 2018.
c) Guidance for Caltrans land use review that supports state land use goals, state planning priorities, and GHG emission reduction goals.
d) Statewide consistency in identifying land use projects' possible transportation impacts to the State Highway System and to identify potential non-capacity increasing mitigation measures.
e) Recommendations for early coordination during the planning phase of a land use project to reduce the time, cost, and/or frequency of preparing a Transportation Impact Study or other indicated analysis.

Caltrans has jurisdiction over State highways. Therefore, Caltrans controls all construction, modification, and maintenance of State highways, and any improvements to such roadways require Caltrans approval.

## Local Regulations

Local rules and regulations applicable to the proposed project are discussed below.

## Contra Costa Transportation Authority

The CCTA is a public agency formed by the Contra Costa voters to manage the County's transportation sales tax program and to perform countywide transportation planning. The most relevant plans, including the Contra Costa Countywide Comprehensive Transportation Plan, the East County Action Plans, the Contra Costa Congestion Management Program, and the CCTA's Approval of the Vehicle Miles Traveled Analysis Methodology for Land Use Projects in the Growth Management Program, are discussed below.

### Contra Costa Countywide Comprehensive Transportation Plan

The 2017 Countywide Comprehensive Transportation Plan, adopted September 20, 2017, is the CCTA's most recent, broadest policy and planning document.[8] The Plan identifies the criteria for analyzing transportation impacts and sets forth plans for future roadway improvements in the County. In addition, the Plan relies on collaboration with and between partners, both on the countywide and regional levels. Each of the County's five Regional Transportation Planning Committees created an Action Plan, which identifies a complete list of actions to be completed as a result of the Action Plan. The project site is located within the East County Action Plan.

[7] Caltrans. *Vehicle Miles Traveled-Focused Transportation Impact Study Guide*. May 20, 2020.
[8] Contra Costa County Transportation Authority. *2017 Countywide Comprehensive Transportation Plan.* September 20, 2017.

## East County Action Plans

As part of the Action Plan process, each Regional Transportation Planning Committee identified projects and programs in the form of actions to be included in the Action Plan for the Routes of Regional Significance. Each Action Plan states the vision, goals, and policies; designates Routes of Regional Significance; sets objectives for such routes; and presents specific actions to achieve established objectives. The actions are listed on both a route-by-route and a regional scale, and aim to support the transportation objectives as specified by each Regional Transportation Planning Committee. The latest East County Action Plan for Routes of Regional Significance was adopted September 2017.

## Contra Costa Congestion Management Program

The CCTA is responsible for preparing and adopting a Congestion Management Program (CMP) and updating the Program every other year. The CCTA adopted the County's first CMP in October 1991. The 2019 Contra Costa CMP Update represents the 14th biennial update. The 2019 update, which was prepared with help from and consultation with representatives of local, regional and State agencies, transit operators and the public, responds to changes in regional transportation planning, projects, and programs made since 2017. The 2019 CMP focuses primarily on bringing the required seven-year CIP up to date, while also responding to primarily technical changes and corrections from the 2017 CMP. The 2021 Contra Costa CMP Update has been prepared, but has not yet been adopted.

## Contra Costa Growth Management Program Implementation Guide

The overall goal of the CCTA Growth Management Program is to achieve a cooperative process for growth management on a countywide basis, while maintaining local authority over land use decisions and the establishment of performance standards. Methods of achieving such goals are outlined in the Growth Management Program Implementation Guide. On July 15, 2020, the CCTA adopted criteria, standards, and thresholds for the assessment of VMT in the Approval of the Vehicle Miles Traveled Analysis Methodology for Land Use Projects in the Growth Management Program Implementation Guide. The methods and thresholds adopted by CCTA follow the guidance and recommendations of OPR pertaining to the implementation of SB 743. Current CCTA guidance related to VMT is as follows:

- Residential Projects should use the home-based VMT per capita metric to evaluate project generated VMT. The project generated home-based VMT per resident constitutes a significant impact if it is higher than 85 percent of the home-based VMT per resident in the subject municipality or unincorporated Authority subregion (for areas outside of municipalities) or 85 percent of the existing county-wide average home-based VMT per resident, whichever is less stringent.
- Employment-Generating Projects should use the home-work VMT per worker metric for their project generated VMT estimates. The project generated home-work WMT per worker constitutes a significant impact if it is higher than 85 percent of the home-work VMT per worker in the subject municipality or unincorporated Authority subregion (for areas outside of municipalities) or 85 percent of the existing Bay Area region-wide average home-work VMT per worker, whichever is less stringent.
- Other Uses and Projects need to be analyzed using a methodology developed by the Lead Agency specifically for the project, taking into account the specific methodologies and thresholds identified in Approval of the Vehicle Miles Traveled Analysis Methodology for Land Use Projects in the Growth Management Program.
- Mixed-Use Projects may be analyzed using a combination of techniques.

In addition, CCTA guidance provides the following criteria to screen projects out of conducting a project-level VMT analysis:

- CEQA Exemption – Any project that is exempt from CEQA is not required to conduct a VMT analysis.
- Small projects – Small projects can be presumed to cause a less-than-significant VMT impact. Small projects are defined as having 10,000 sf or less of non-residential space or 20 residential units or less, or otherwise generating less than 836 VMT per day.
- Local-Serving Uses – Projects that consist of Local-Serving Uses can generally be presumed to have a less-than-significant impact absent substantial evidence to the contrary, because local serving projects would primarily draw users and customers from a relatively small geographic area that will lead to short-distance trips and trips that are linked to other destinations.
- Projects Located in Transit Priority Areas (TPAs) – Projects located within a TPA can be presumed to have a less-than-significant impact absent substantial evidence to the contrary.
- Projects located in Low VMT Areas – residential and employment-generating projects located within a low VMT-generating area can be presumed to have a less-than-significant impact absent substantial evidence to the contrary. A Low VMT area is defined as follows:
    - For housing projects: Cities, towns and unincorporated portions within Contra Costa that have existing home-based VMT per capita that is 85 percent or less of the existing county-wide average.
    - For employment-generating projects: Cities, towns, and unincorporated portions within Contra Costa that have existing home-work VMT per worker that is 85 percent or less of the existing regional average.

## Regional Transportation Development Impact Mitigation

The East Contra Costa Regional Fee & Financing Authority establishes a funding source for capital improvements projects in Eastern Contra Costa County. The fee was designed to collect funds for regional transportation improvements, such as the West Leland Road extension, the SR 4 bypass, and the widening of SR 4 through Pittsburg and Antioch.

## City of Pittsburg General Plan

The following are applicable policies related to transportation, traffic, and circulation from the Transportation Element of the Pittsburg General Plan, adopted in 2001.

Goal 7-G-3 Coordinate circulation system plans with other jurisdictions' and agencies' plans, including Antioch and Concord, the CCTA, and Caltrans.

Goal 7-G-6 Locate high traffic-generating uses so that they have direct access or immediate secondary access to arterial roadways.

Goal 7-G-7 Complete arterial roadway improvements required to mitigate traffic impacts of an approved project before the project is fully occupied. Arterial improvements should be completed by creating funding sources, which include but are not limited to Traffic Mitigation Fees, Development Agreements, and Assessment Districts.

Policy 7-P-1 Require mitigation for development proposals that are not part of the Traffic Mitigation Fee program which contribute more than one percent of the volume to an existing roadway or intersections with inadequate capacity to meet cumulative demand.

Development projects that contribute to future traffic congestion on existing roadways shall provide mitigation to ensure adequate future capacities. Traffic analysis of development plans will determine the proportion of cumulative impact each project is creating.

Policy 7-P-2 Use the adopted Regional and Local Transportation Impact Mitigation Fee ordinances to ensure that all new development pays an equitable pro-rata share of the cost of transportation improvements. Review the Traffic Impact Mitigation Fee schedule annually and update every five years at a minimum.

Policy 7-P-4 Require that all traffic studies be conducted by professional transportation consultants selected by the Planning and Building and Engineering Departments, with the City acting as the Lead Agency. Ensure that all costs associated with the traffic study are paid by the applicant.

Policy 7-P-10 Require mitigation for development proposals which result in projected parking demand that would exceed the proposed parking supply on a regular and frequent basis.

Policy 7-P-11 Maximize the carrying capacity of arterial roadways by controlling the number of intersections and driveways, minimizing residential access, implementing Transportation Systems Management (TSM) measures, and requiring sufficient on-site parking to meet the needs of each project (see also Table 7-1 of the Pittsburg General Plan).

Additional guidelines for arterial access include providing smooth ingress/egress to development. This includes designing parking areas so that traffic turning into the parking areas does not stack up on the arterial roadway; combining driveways to serve small parcels; and maintaining adequate distance between driveways and intersections to permit efficient traffic merges. In the built environment, roadway right-of-way may not be available to increase arterial capacity. Therefore, improving the efficiency of existing arterials through TSM measures should be one of the first considerations to meet level of service standards. TSM measures include signal coordination, channelization and signal improvements at intersections, and implementation of new traffic control technology.

Policy 7-P-14 Increase access to alternative north-south routes providing connection to SR 4, other than Railroad Avenue.

Policy 7-P-15 Support Caltrans' planned improvements to the Railroad Avenue and Loveridge Road interchanges in conjunction with SR 4 widening projects. Work with Federal, State and regional authorities to ensure timely completion of these projects needed to adequately serve local circulation needs.

Policy 7-P-21 Design local residential streets and implement traffic-control measures to keep traffic below 5,000 vehicles per day.

Policy 7-P-22 Avoid adding traffic roadways carrying volumes above the standards, and consider traffic control measures where perceived nuisance is severe.

Policy 7-P-23 Develop procedures and guidelines to mitigate neighborhood traffic impacts in areas where traffic speeds or volumes exceed posted speed limits or standards established in the Pittsburg General Plan.

Measures that may be considered include:

- Installation of way-finding signs on arterial routes that encourage motorists to use routes that do not pass through residential areas.
- Operational changes, such as signalization, turn lanes and extended turning bays on arterial streets that encourage their use as inter-community connectors.
- Traffic calming measures such as curb extensions or gateway features at intersections on streets leading into residential areas to inform motorists that they are entering a neighborhood area.
- Community educational and awareness programs to promote selection of routes within the City that do not pass through residential areas.

Goal 7-G-8 Cooperate with public agencies and other jurisdictions to promote local regional public transit serving Pittsburg and provide an express bus system between Pittsburg, Brentwood, Oakley, Antioch, and the Pittsburg/Bay Point BART Station.

The City should encourage transit development, expansion, coordination and aggressive marketing throughout eastern CCC to serve a broader range of local and regional transportation needs including commuter and express service.

Policy 7-P-26 Require mitigation for development proposals which increase transit demand above the service levels provided by public transit operators and agencies.

Policy 7-P-27 Support the expansion of the existing transit service area and an increase in the service levels of existing transit. Support increased Tri-Delta and County Connection express bus service to the

Pittsburg/Bay Point BART Station to reduce traffic demand on SR 4.

Policy 7-P-28 Encourage the extension of BART to Railroad Avenue within the median of SR 4. Cooperate with BART and regional agencies to develop station area plans and transit-oriented development patterns.

Policy 7-P-30 Work with Tri-Delta and planning area residents to plan for local bus routes that more effectively serve potential riders within local neighborhoods.

Goal 7-G-10 Study the feasibility of a comprehensive network of on- and off-road bike routes to encourage the use of bikes for commute, recreational and other trips.

A continuous network of safe and convenient bikeways has the potential to connect neighborhoods with major activity centers, parks, schools, employment centers, civic uses, the waterfront, and the County bicycle system.

Goal 7-G-11 Coordinate with neighboring communities and regional agencies to establish a continuous regional system of bicycle and pedestrian facilities.

Goal 7-G-14 Develop urban design and streetscape standards and guidelines to improve pedestrian environments and accessibility in new development projects and in Downtown.

Goal 7-G-15 Encourage walking as a regular means of transportation for people who live within a half-mile walk of school, work, or routine shopping destinations.

Policy 7-P-33 Require mitigation for development proposals which result in potential conflicts, or fail to provide adequate access, for pedestrians and bicycles.

Policy 7-P-34 As part of development approval, ensure that safe and contiguous routes for pedestrians and bicyclists are provided within new development projects and on any roadways that are impacted as a result of new development.

Policy 7-P-36 Ensure continued compliance with Title 24 of the Uniform Building Code, requiring removal of all barriers to disabled persons on arterial and collector streets.

Policy 7-P-38 Develop a series of continuous pedestrian systems within Downtown and residential neighborhoods, connecting major activity centers and trails with City and County open space areas.

Sidewalks should be creatively designed to invite safe use by pedestrians, and be free of obstacles, such as newspaper racks, bus benches, utility poles, and fire hydrants.

Policy 7-P-39 Ensure that residential and commercial developments provide pedestrian pathways between lots for direct routes to commercial centers, schools, and transit facilities.

Policy 7-P-42 Improve pedestrian crossing safety at heavily used intersections by installing crossing controls that provide adequate time for pedestrians to cross the street.

Policy 7-P-43 Provide adequate roadway width dedications for bicycle lanes, paths, and routes as designated in Figure 7-4 of the Pittsburg General Plan.

Policy 7-P-45 During review of development projects, encourage secure bicycle facilities and other alternative transportation facilities at employment sites, public facilities, and multi-family residential complexes.

Policy 7-P-46 Construction or expansion of roadways and intersections within the City shall not result in the severance of an existing bicycle route, unless an alternative exists or is provided.

Policy 7-P-48 Ensure that construction of bulb-outs and curb extensions at intersections for pedestrian safety does not endanger bicyclists by forcing them into traffic lanes.

Policy 7-P-52 Require that new arterial and collector streets accommodate bicyclists.

Policy 7-P-53 Require that any grind and overlay of existing arterial and collector streets consider the needs of bicyclists.

Policy 7-P-54 Amend engineering standards to require the use of bicycle grates on all new catch basins and storm drain inlet replacements on streets.

It should be noted that the City of Pittsburg is currently in the process of updating the General Plan; however, the General Plan Update has not yet been completed.

### Pittsburg Moves: Active Transportation Plan

Pittsburg Moves is a plan that was developed by the City of Pittsburg and adopted in October 2020 to promote better active transportation in the community. Active transportation is any self-propelled, human-powered form of transportation, such as walking or bicycling. By prioritizing active transportation, the City of Pittsburg hopes to improve its residents' health, mobility, livability, economy, and environment.

### Pittsburg Local Traffic Mitigation Fee

The City of Pittsburg has a local traffic mitigation fee for development projects within the City of Pittsburg. The fee was designed to aid in funding for capital improvement projects within the City

limits. In addition, the fee may be used for implementing signal interconnect on local roadways, installing traffic signals, and other intersection improvements.

### Pittsburg 5-Year Capital Improvement Program

The City of Pittsburg's 5-Year Capital Improvement Program (CIP) is a multi-year planning instrument for the construction of new and expansion, rehabilitation, or replacement of existing City-owned assets. The 5-Year CIP is used by City staff members as a guide for project prioritization to accomplish community goals. The Program is updated annually to account for projects that have been completed, changing priorities, new priorities, and funding availability.

The 5-Year CIP for Fiscal Year 2019/2020 through 2023/2024 includes various projects for the Pittsburg area. Each of the projects meets some or all of the following criteria:

- Elimination of potentially hazardous or unsafe conditions and potential liabilities;
- Replacement of high maintenance and inefficient/ineffective infrastructure;
- Improvement to and/or creation of new services to the public;
- Outside agency regulatory requirements and mandates;
- Stimulation of the local economy/eliminate blighted conditions;
- Compliance with the City of Pittsburg General Plan; and
- Preservation of existing assets.

The schedule for capital improvement projects is based on available funding, public benefit, and funding restrictions. The project schedule is updated annually with the annual 5-Year CIP update.

## 4.5.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to transportation and circulation.

### Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, the proposed project would be considered to result in a significant adverse impact on the environment in relation to transportation and circulation if the project would result in any of the following:

- Conflict with a program, plan, ordinance, or policy, addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;
- Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);
- Substantially increase hazards to vehicle safety due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- Result in inadequate emergency access.

Specific application of the general thresholds is provided in the following section, based on guidance from the City of Pittsburg and the CCTA.

### Vehicle Miles Traveled

According to Section 15064.3(b)(3) of the CEQA Guidelines, a Lead Agency has discretion to choose the most appropriate methodology to evaluate a project's VMT, including whether to express the change in absolute terms, per capita, per household or in any other measure. Thus,

a Lead Agency may analyze a project's VMT qualitatively based on the availability of transit, proximity to destinations, etc.

As Lead Agency, City of Pittsburg does not currently have established VMT significance thresholds for environmental review purposes. In November 2017, OPR released the proposed text for Section 15064.3, Determining the Significance of Transportation Impacts, which summarized the criteria for analyzing transportation impacts for land use projects and transportation projects and directs lead agencies 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 household or in any other measure." OPR recommends that for most instances a per service population threshold should be adopted and that a fifteen percent reduction below that of existing development would be a reasonable threshold.

The CCTA provides recommended criteria, standards, and thresholds for the assessment of VMT in the CCTA Growth Management Program Implementation Guide.[9] As noted therein, the recommended Target VMT Reduction of 85 percent of baseline levels, is largely based on the OPR's Technical Advisory. Therefore, the methods and thresholds adopted by CCTA follow the guidance and recommendations of OPR pertaining to the implementation of SB 743. As the City of Pittsburg has not yet formally adopted VMT criteria, standards, or thresholds at the time this report was prepared, this assessment follows the current OPR and CCTA guidance related to VMT, and the applicable threshold of significance is 85 percent of the existing County home-based VMT per resident. Given that the existing County home-based VMT per resident is 17.2, the applicable threshold herein is 14.6 VMT per resident (17.2 x 0.85 = 14.6).

## Method of Analysis

The analysis methodology provided in the TIA prepared for the proposed project by Fehr & Peers is discussed below.

## Project Trip Generation

The trip generation for the proposed project was calculated using trip generation rates published in the 11th Edition Trip Generation Manual prepared by the Institute of Transportation Engineers. The applicable rate for the proposed 207 proposed single-family detached housing units is category 210 (Single Family Residential). Fehr & Peers elected to apply category 220 (Multiple Family Residential – Low Rise) as the applicable rate for the 20 proposed live/work units. Although the proposed live/work units would include a commercial component, the Multiple Family Residential – Low Rise trip generation rate would offer a conservative approach to analysis, as applying a trip generate rate for the same building area as a commercial land use would generate fewer vehicle trips.

Application of the foregoing trip generation rates yields a total of 2,088 daily trips with 153 trips expected in the AM peak hour and 206 trips generated during the PM peak hour. Table 4.5-1, included on the following page, summarizes the estimated trip generation for the proposed project.

## Vehicle Miles Traveled Assessment

To conduct the VMT assessment, the CCTA Travel Demand Model was used to estimate average daily vehicle miles of travel for each of the project's proposed components.

[9] Contra Costa Transportation Authority. *Implementation Guide.* February 17, 2021.

**Table 4.5-1**
**Project Trip Generation**

| Land Use | Units | Trip Generation | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Daily | AM Peak Hour | | | PM Peak Hour | | |
| | | | In | Out | Total | In | Out | Total |
| Single Family Detached Housing | 207 | 1,953 | 38 | 107 | 145 | 122 | 73 | 195 |
| Multi-Family Housing (Live/Work Units) | 20 | 135 | 1 | 7 | 8 | 6 | 5 | 11 |
| ***Total*** | | ***2,088*** | ***39*** | ***114*** | ***153*** | ***128*** | ***78*** | ***206*** |

***Source: Fehr & Peers, 2022.***

According to CCTA guidance, home-based VMT was used to evaluate project generated VMT for the proposed project. A select zone analysis was conducted using the CCTA model whereby all the trips generated by each of the project's components were tracked through the transportation system.

## Project-Specific Impacts and Mitigation Measures

The proposed project impacts on the transportation system are evaluated in this section based on the thresholds of significance and methodology described above. Each impact is followed by recommended mitigation to reduce the identified impacts, if needed.

### 4.5-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system during construction activities. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Construction activities associated with the proposed project would include use of construction equipment, including vehicles removing or delivering fill material, bulldozers, and other heavy machinery, as well as building materials delivery, and construction worker commutes. The transport of heavy construction equipment to the site, haul truck trips, and construction worker commutes could affect the local roadway network.

Construction workers typically arrive before the morning peak hour and leave before the evening peak hours of the traditional commute time periods. Deliveries of building material (lumber, concrete, asphalt, etc.) would also normally occur outside of the traditional commute time periods. In addition, any truck traffic to the site would follow designated truck routes, and project construction would likely stage any large vehicles (i.e., earth- moving equipment, cranes, etc.) on the site prior to beginning site work and remove such vehicles at project completion. However, detailed information related to the construction schedule during site development, or a construction management plan, is not available. As a result, construction activities could include disruptions to the transportation network near the project site. For example, an unsheltered bus stop for the Tri Delta Transit Route 387 exists on the project site frontage along East 3rd Street, adjacent to the proposed entrance roadway. Construction activities have the potential to interfere with access to the Route 387 bus stop and, therefore, existing transit facilities could be disrupted during project construction.

Based on the above, without proper planning of construction activities, construction traffic and potential street closures could interfere with existing roadway operations, including pedestrian, bicycle, and transit facilities, during the construction phase. Therefore, the proposed project has the potential to conflict with a program, plan, ordinance, or policy addressing the circulation system during construction activities, and a ***significant*** impact could occur.

### Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

*4.5-1* *Prior to grading permit issuance, the project applicant shall prepare a Construction Traffic Plan for review and approval by the City Engineer. As part of the plan, the applicant shall ensure the following:*

- *Truck drivers shall be notified of and required to use the most direct route between the site and SR 4, as determined by the City Engineer;*
- *All ingress and egress shall occur only at the main driveways to the project site and construction activities shall include installation of temporary (or ultimate) traffic signals as determined by the City Engineer;*
- *As part of preparation of the Construction Traffic Plan, the applicant shall determine if access to the Route 387 bus stop on the project site's frontage would be disrupted by construction activities. If the Route 387 bus stop would not be disrupted, then further mitigation is not required. If disruption to the Route 387 bus stop would occur, the bus stop shall be temporarily relocated in such a way that transit services shall not be disrupted, in coordination with Tri Delta Transit and the City Engineer;*
- *Designated travel routes for large vehicles shall be monitored and controlled by flaggers for large construction vehicle ingress and egress;*
- *Warning signs indicating frequent truck entry and exit shall be posted on East 3rd Street and Harbor Street; and*
- *Any debris and mud on nearby streets caused by trucks shall be monitored daily and shall include a street cleaning program.*

*The plan shall indicate how parking for construction workers will be provided during construction. If the project is built in phases, each phase shall be subject to a Traffic Control Plan and oversight by the City Engineer.*

## 4.5-2 Conflict with a program, plan, ordinance or policy addressing the circulation system during operations. Based on the analysis below, the impact is *less than significant*.

As discussed throughout this chapter, LOS is no longer the applicable metric when evaluating transportation impacts of a project. The evaluation of VMT is discussed in

Impact 4.5-3 of this chapter. Therefore, the following discussion focuses on whether the proposed project would result in impacts to existing or planned pedestrian facilities, bicycle facilities, or transit facilities and services within the project area.

## Pedestrian Facilities

As previously described, pedestrian facilities exist on the roadways surrounding the project site. In addition, the proposed project would include the development of new sidewalks along the site's East 3rd Street and Harbor Street frontages. The proposed project would also be required to include City-standard and Americans with Disabilities Act (ADA) compliant sidewalks on all internal roadways throughout the project site. ADA compliant ramps shall be provided at all internal roadway intersections, pedestrian paths shall be identified, and marked crosswalks shall be installed at key uncontrolled pedestrian crossing locations. Thus, adequate pedestrian facilities would be available to accommodate development of the proposed project.

In addition, while not required to reduce an impact under CEQA, the City would require the following pedestrian facility improvement as a condition of project approval:

- The proposed project shall include a pedestrian connection from the southeast corner of the project site that links directly to the East 8th Street/Harbor Street intersection. A striped northbound-southbound pedestrian crosswalk shall be added on the East 8th Street approach to Harbor Street in order to facilitate pedestrian movements.

Based on the above, the proposed project would not conflict with a program, plan, ordinance, or policy addressing pedestrian facilities, and a less-than-significant impact would occur.

## Bicycle Facilities

The project would include the construction of internal roadways with travel lanes ranging from 21 feet to 52 feet in width. Thus, although the project would not include any designated bicycle facilities (lanes, routes, or paths), bicycles would be permitted on all internal roadways. Existing bike lanes are present on the project site's frontage along Harbor Street, as well as along East 8th Street, south of the project site. In addition, as shown in Figure 4.5-2, Class II Buffered Bike lanes are proposed on the project frontage along East 3rd Street. Therefore, bicycle facilities are available for use int eh project vicinity, and implementation of the proposed project would not interfere with any planned facilities. Thus, the proposed project would not conflict with a program, plan, ordinance, or policy addressing bicycle facilities, and a less-than-significant impact would occur.

## Transit Facilities and Services

Public transit in the project vicinity includes a bus stop on East 3rd Street, along the project site frontage. Tri Delta Transit provides a bus route (387), which operates during the weekdays. Additional bus stops are located further south along Harbor Street and include routes which operate throughout the area. Furthermore, the Pittsburg Center BART station is approximately 1.4 miles from the project site. While residents of the proposed project may result in a slight increase in demand on existing transit services in the region, according to the TIA, the project is not expected to result

in increases in ridership on local or regional transit facilities that would exceed their capacity. Additionally, the proposed project would not include features that would conflict with existing or planned transit services.

As discussed under Impact 4.5-1, temporary disruption to the Route 387 bus stop has the potential to occur during project construction activities. However, implementation of Mitigation Measure 4.5-1 would reduce impacts to a less-than-significant level. In addition, the disruption would be temporary, and would only occur during the construction period. Therefore, operations of the proposed project would not conflict with a program, plan, ordinance, or policy addressing transit facilities, and a less-than-significant impact would occur.

### Conclusion

Based on the above, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including pedestrian, bicycle, and transit facilities during operations, and a ***less-than-significant*** impact would occur.

### Mitigation Measure(s)

*None required.*

## 4.5-3 Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). Based on the analysis below and with the implementation of mitigation, the impact is *significant and unavoidable*.

Table 4.5-2 summarizes the results of the VMT analysis prepared for the proposed project.

**Table 4.5-2**
**VMT Analysis Results**

| Land Use | Countywide | | Project |
|---|---|---|---|
| | VMT/ Resident | Threshold | VMT/ Resident |
| Home Based VMT – 2021 | 17.2 | 14.6 | 19.0 |

Note: The applicable threshold is 85 percent of the County average.

***Source: Fehr & Peers, 2022.***

The County-wide home-based VMT per resident was identified to be 17.2. As discussed previously, per CCTA and OPR guidance, residential projects that generate home-based VMT per resident at 15 percent less than the regional baseline average may be considered to have a less-than-significant VMT impact. Therefore, the VMT thresholds applied to the proposed project are 15 percent less than the regional baseline, or 14.6 home-based VMT per resident. Based on the analysis, the proposed project is estimated to generate 19 daily vehicle miles of travel per resident, which exceeds the CCTA VMT threshold of significance.

The results of the VMT analysis indicate that the proposed project would contribute to an increase in home-based VMT per resident, as the proposed project would add a housing development that would require residents to travel longer-than-average distances to meet their daily needs. As such, because the proposed project would generate VMT that exceeds the applicable threshold, the project would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), and a ***significant*** impact could occur.

### Mitigation Measure(s)

Implementation of a Transportation Demand Management (TDM) Plan would reduce project related VMT. However, the effectiveness of TDM Plans depend heavily on the level of implementation. Based on the available evidence, the magnitude of reduction in VMT attributable to Mitigation Measure 4.5-3 would not be sufficient to reduce the impact to a less-than-significant level, and other feasible mitigation measures do not exist. Therefore, the impact would remain *significant and unavoidable*.

*4.5-3* *Prior to the issuance of residential building permits, the project applicant shall develop a Travel Demand Management Plan (TDM Plan) for the proposed project, including any anticipated phasing, and shall submit the TDM Plan to the City Planning Division for review and approval. The TDM Plan shall identify trip reduction strategies, as well as mechanisms for funding and overseeing the delivery of trip reduction programs and strategies. Trip reduction strategies applicable to the proposed project may include, but are not limited to:*

- *Increase transit accessibility;*
- *Provide traffic calming measures;*
- *Provide carpooling programs;*
- *Implement a car-sharing program;*
- *Provide a transit riders guide;*
- *Provide an online TDM information center;*
- *Increase bicycle and pedestrian facilities/amenities;*
- *Free trial rides on transit services; and*
- *Implement a subsidized or discounted transit program.*

## 4.5-4 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) or result in inadequate emergency access. Based on the analysis below, the impact is *less than significant*.

The proposed project would not include the installation of any sharp curves or dangerous intersections. Given the proposed land uses, the use of incompatible equipment would not occur. For example, farming does not occur in the project vicinity, and, as a result, farming equipment would be unlikely to operate on roadways in the project area. During construction, equipment would be staged on-site. Furthermore, the project site is not located in a central area of the City, and construction on the project site would not be anticipated to result in substantial road closures or otherwise

interfere with citywide vehicle circulation. Nonetheless, as required by Mitigation Measure 4.5-1, a Traffic Control Plan would be implemented during construction, which would ensure that roadway hazards would not occur. As a result, impacts related to hazards and vehicle safety due to a geometric design feature would not occur.

As part of the TIA, an analysis of sight distance was conducted at both planned entrance roadways. The posted speed limit along East 3rd Street is 25 mph, and observed travel speeds along East 3rd Street in the vicinity of the project site range between 20 and 30 mph. Table 201.1 of the Caltrans Highway Design Manual states that the stopping sight distance standard for a design speed of 25 mph is 150 feet. Field observations of existing sight distance at the proposed driveway location on East 3rd Street indicate sight distances of more than 150 feet. Observed travel speeds along Harbor Street in the vicinity of the project site range between 30 and 40 mph, with the posted speed limit being 35 mph. Field observations of existing sight distance at the proposed driveway location on Harbor Street indicate sight distances of more than 250 feet, which would be the required stopping sight distance for a design speed of 35 miles per hour. Thus, adequate sight distance appears to be provided at both new driveway locations proposed by the project, and increased hazards and/or dangerous intersections would not occur with implementation of the proposed project.

Several factors determine whether a project has sufficient access for emergency vehicles, including the following:

a) Number of access points (both public and emergency access only);
b) Width of access points; and
c) Width of internal roadways.

Vehicular access to the project site would be provided by two new roadway connections to the external street network: a 27-foot driveway on East 3rd Street, and a 26-foot driveway on Harbor Street. Both project access points are proposed to have stop sign control on the driveway approaches, with the main street approaches being uncontrolled. The width of the access points would be able to accommodate emergency vehicles, and the number of access points would be sufficient to provide emergency services to the proposed project.

The City of Pittsburg approved an Emergency Operations Plan (EOP) in December 2018 designed to assist the City in responses to disasters, emergency incidents, and pre-planned events. The EOP provides an overview of the City's organization, policies, and approach to all phases of emergency preparedness. The proposed project would not be designed in such a way that it would conflict with the EOP. For example, the proposed project would provide drive aisles with widths to accommodate emergency access vehicles.

Although not required to reduce an impact under CEQA, the TIA included the following recommendations to improve site safety. Thus, the City shall consider the following recommendations as conditions of project approval:

- The final site plan for the proposed project shall be analyzed by the project's Civil Engineer to ensure that adequate sight distance is maintained at all driveways. Objects greater than three feet in height, such as landscaping and

monument signs, shall not be allowed within the sight distance triangles at driveway intersections. The Civil Engineer shall review available speed survey information from the City and adjust required sight distance if necessary.

- The final site plan for the proposed project shall illustrate truck turning templates at project driveways and internal roadways showing that applicable routes of travel provide sufficient space for emergency vehicles, garbage trucks, moving trucks or vans, and automobiles.
- In accordance with City and Contra Costa County Fire District requirements and design standards, shall provide even surface pavement, appropriate signage, delineation, and other features at all emergency access points and internal roadways to accommodate emergency vehicles. Such requirements shall be included as part of the proposed project's final design, and shall seek and obtain approval of the Contra Costa County Fire District.

Based on the above, the proposed development project would not substantially increase hazards due to a geometric feature, or result in inadequate emergency access, and a ***less-than-significant*** impact would occur.

### Mitigation Measure(s)

*None required.*

## Cumulative Impacts and Mitigation Measures

For further detail related to the cumulative setting of the proposed project, refer to Chapter 6, Statutorily Required Sections, of this EIR. The cumulative setting for the foregoing analysis is Contra Costa County, based on the assumptions of the CCTA model.

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

It should be noted that increased traffic volumes on local roadway facilities under cumulative conditions would not substantially alter performance related to pedestrian facilities, bicycle facilities, transit facilities and services, hazards, and emergency vehicle access. Rather, impacts to such facilities under cumulative conditions would be identical to those discussed above under Impacts 4.5-2 and 4.5-3. In addition, construction activities associated with the project would be complete prior to the cumulative analysis year. Therefore, such topics are not discussed further in the cumulative analysis presented herein.

### 4.5-5 Result in cumulative conflicts or inconsistencies with CEQA Guidelines Section 15064.3, subdivision (b). Based on the analysis below, the impact is *cumulatively considerable* and *significant and unavoidable*.

The OPR's Technical Advisory indicates that VMT efficiency metrics, such as VMT per resident, may not be appropriate for CEQA cumulative analysis because they employ

a denominator. Instead, the Technical Advisory recommends that an impact finding from an efficiency-based project-specific VMT analysis (i.e., Existing Plus Project conditions) would imply an identical impact finding for a cumulative VMT analysis.[10] An example provided by OPR explains that a project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would not have a cumulative impact distinct from the project impact. Therefore, in general, the VMT impact analysis for existing plus project conditions included under Impact 4.5-3 would also apply to cumulative plus project conditions.

As previously stated, the proposed project would result in a significant impact if the project were to generate home-based VMT per resident exceeding the threshold of 85 percent of the regional average. Because the proposed project would generate home-based VMT per resident in excess of the County average, the proposed project exceeds the threshold of 85 percent, and a ***cumulatively considerable*** and ***significant*** impact could occur.

## Mitigation Measure(s)

As noted previously, implementation of a TDM plan would reduce the amount of VMT associated with the proposed project, but not to a less-than-significant level. Therefore, the impact would remain *cumulatively considerable* and *significant and unavoidable*.

*4.5-5 Implement Mitigation Measure 4.5-3.*

[10] Governor's Office of Planning and Research. *Technical Advisory on Evaluating Transportation Impacts in CEQA* [pg. 6]. December 2018.

# 5. Alternatives Analysis

# 5. ALTERNATIVES ANALYSIS

## 5.1 INTRODUCTION

The Alternatives Analysis chapter of the EIR includes consideration and discussion of a range of reasonable alternatives to the proposed project, as required per CEQA Guidelines Section 15126.6. Generally, the chapter includes discussions of the following: the purpose of an alternatives analysis; alternatives considered but dismissed; a reasonable range of project alternatives and their associated impacts in comparison to the proposed project's impacts; and the environmentally superior alternative.

## 5.2 PURPOSE OF ALTERNATIVES

The primary intent of the alternatives evaluation in an EIR, as stated in Section 15126.6(a) of the CEQA Guidelines, is to "[…] 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." In the context of CEQA Guidelines Section 21061.1, "feasible" is defined as:

> ...capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.

Section 15126.6(f) of CEQA Guidelines states, "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." Section 15126.6(f) of CEQA Guidelines further states:

> The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determined could feasibly attain most of the basic objectives of the project.

In addition, an EIR is not required to analyze alternatives when the effects of the alternative "cannot be reasonably ascertained and whose implementation is remote and speculative."

The CEQA Guidelines provide the following guidance for discussing alternatives to a proposed project:

- An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives (CEQA Guidelines Section 15126.6[a]).
- Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code [PRC] Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if

these alternatives would impede to some degree the attainment of the project objectives, or would be more costly (CEQA Guidelines Section 15126.6[b]).

- The EIR shall briefly describe the rationale for selecting the alternatives to be discussed. The EIR shall also identify any alternatives that were considered by the Lead Agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the Lead Agency's determination […] Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts (CEQA Guidelines Section 15126.6[c]).
- The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison (CEQA Guidelines Section 15126.6[d]).
- If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed (CEQA Guidelines Section 15126.6[d]).
- The specific alternative of "no project" shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline (CEQA Guidelines Section 15126.6[e][1]).
- If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6[e][2]).

## Project Objectives

Based on the above, reasonable alternatives to the project must be capable of feasibly attaining most of the basic objectives of the project. The following objectives have been submitted by the project applicant:

1. Implement the City's General Plan and Zoning designations by developing the site with a medium-density residential development with live/work units provided along the street frontage that will have the benefit of directing growth to an area that is already developed with existing access to commercial uses, public utilities and services, schools, and transportation systems;
2. Support the City in meeting its Regional Housing Needs Allocation (RHNA) target assigned by the Association of Bay Area Governments (ABAG);
3. Provide high quality residential units that include a mix of lot sizes to accommodate a diverse range of future City residents, including housing that is more affordable;
4. Provide a residential population to support commercial uses within the Old Town area;
5. Create a pedestrian-friendly residential development that maximizes density with accessibility to alternate transportation modes, and integrates pedestrian, bicycle, transit, and outdoor uses to encourage active centers; and
6. Situate a residential development on land located adjacent to existing residential and commercial uses and public utilities and services.

## Impacts Identified in the EIR

In addition to attaining the majority of project objectives, reasonable alternatives to the project must be capable of reducing the magnitude of, or avoiding, identified significant environmental impacts of the proposed project. The proposed project would not result in significant impacts related to several resource areas discussed in this EIR and in the Initial Study prepared for the proposed project. Thus, a comparison of negligible and/or less-than-significant impacts associated with such resource areas as a result of project alternatives versus the proposed project is not provided in this chapter. Rather, this chapter focuses on those resource areas and specific impacts that have been identified within this EIR. A summary of the environmental impacts identified for the proposed project are provided below.

## Significant and Unavoidable

Impacts of the proposed project that have been determined to remain significant and unavoidable, even after implementation of the feasible mitigation measures set forth in this EIR, include the following:

- ***Air Quality and Greenhouse Gas Emissions:*** The EIR determined that implementation of the proposed project could generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. As discussed in further detail below, feasible mitigation to reduce the per capita vehicle miles travelled (VMT) associated with the proposed project to less than 15 percent below regional averages does not exist. As a result, even with implementation of Mitigation Measure 4.2-6(b), the project would not comply with the Bay Area Air Quality Management District's (BAAQMD's) Transportation standards, and the project's incremental contribution to the cumulatively significant effects of GHG emissions and global climate change would remain cumulatively considerable and significant and unavoidable.
- ***Transportation:*** The EIR determined that implementation of the proposed project would result in home-based VMT per resident that would exceed the Contra Costa Transportation Authority's (CCTA's) threshold for residential project VMT of 15 percent less than the existing County average. Because feasible mitigation to reduce the home-based VMT per resident associated with the proposed project to less than 15 percent below the County average does not exist, the proposed project could conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), and the impact would remain significant and unavoidable. In addition, under cumulative conditions, the conclusion would remain applicable and, even with implementation of mitigation, the impact would remain cumulatively considerable and significant and unavoidable.

## Less Than Significant with Mitigation

Significant environmental impacts of the proposed project that have been identified as requiring mitigation measures to ensure that the level of significance is ultimately less than significant include the following:

- ***Air Quality and Greenhouse Gas Emissions:***
  - Expose sensitive receptors to substantial pollutant concentrations.
- ***Cultural and Tribal Cultural Resources:***
  - Cause a substantial adverse change in the significance of a historical resource or a unique archeological resource pursuant to CEQA Guidelines, Section 15064.5

or disturb human remains, including those interred outside of dedicated cemeteries.
    - Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k); or a resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1.
    - Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- ***Geology and Soils:***
    - Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction, or landslides; be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse; or be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code creating substantial direct or indirect risks to life or property.
- ***Hydrology and Water Quality:***
    - Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during project construction or operation.
    - Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: substantially increase the rate or amount of surface runoff in a manner which would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; or create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- ***Transportation:***
    - Conflict with a program, plan, ordinance, or policy addressing the circulation system during construction activities.

## Less Than Significant or No Impact

The proposed project would result in no impact or a less-than-significant impact related to the following topics associated with the resource area indicated:

- ***Air Quality and Greenhouse Gas Emissions:***
    - Conflict with or obstruct implementation of the applicable air quality plan during project construction.
    - Conflict with or obstruct implementation of the applicable air quality plan during project operation.
    - Result in other emissions (such as those leading to odors) affecting a substantial number of people.

  - Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- ***Cultural and Tribal Cultural Resources:***
  - Cause a cumulative loss of cultural resources.
- ***Geology and Soils:***
  - Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, or strong seismic ground shaking.
  - Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater.
  - Cumulative increase in the potential for geological related impacts and hazards.
- ***Hydrology and Water Quality:***
  - Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin or conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.
  - Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows.
  - In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
  - Cumulative impacts related to the violation of water quality standards or waste discharge requirements, groundwater quality, management, and recharge, and impacts resulting from the alteration of existing drainage patterns.
- ***Transportation***
  - Conflict with a program, plan, ordinance or policy addressing the circulation system during operations;
  - Substantially increase hazards to vehicle safety due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
  - Result in inadequate emergency access.

The Initial Study prepared for the proposed project during the scoping period (see Appendix A) includes a detailed environmental checklist addressing a range of technical environmental issues. For each technical environmental issue, the Initial Study identifies the level of impact for the proposed project. The Initial Study identifies the environmental effects as either “no impact,” “less-than-significant,” “less-than-significant with mitigation incorporated,” or “potentially significant.” All remaining issues identified in the Initial Study as less than significant with mitigation or potentially significant are listed below and summarized further in Chapter 4.0, Introduction to the Analysis, of this EIR.

- Aesthetics (All Items);
- Agriculture and Forest Resources (All Items);
- Biological Resources (All Items);
- Energy (All Items);
- Hazards and Hazardous Materials (All Items);

- Land Use and Planning (Item a);
- Mineral Resources (All Items);
- Noise (All Items);
- Population and Housing (All Items);
- Public Services (All Items);
- Recreation (All Items);
- Utilities and Service Systems (All Items); and
- Wildfire (All Items).

## 5.3 SELECTION OF ALTERNATIVES

The requirement that an EIR evaluate alternatives to the proposed project or alternatives to the location of the proposed project is a broad one; the primary intent of the alternatives analysis is to disclose other ways that the objectives of the project could be attained, while reducing the magnitude of, or avoiding, one or more of the significant environmental impacts of the proposed project. Thus, the following alternatives were selected to be evaluated within this EIR.

### Alternatives Considered in the EIR

In light of the requirements of CEQA, the following alternatives to the proposed project were identified and considered:

- No Project Alternative;
- Increased Commercial Alternative;
- Berm Removal Alternative;
- Off-Site Alternative;
- Buildout Consistent with the General Plan Update Alternative;
- All-Industrial Alternative; and
- All-Commercial Alternative.

### Alternatives Dismissed From Further Analysis

Consistent with CEQA, primary consideration was given to alternatives that could reduce significant impacts, while still meeting most of the basic project objectives.

As stated in CEQA Guidelines Section 15126.6(c), among the criteria that may be used to eliminate alternatives from detailed consideration in an EIR are:

(i) failure to meet most of the basic project objectives,
(ii) infeasibility, or
(iii) inability to avoid significant environmental impacts.

Regarding item (ii), infeasibility, 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). Not one of these factors establishes a fixed limit on the scope of reasonable alternatives.

Five alternatives were considered but dismissed from detail analysis in this EIR, as discussed below.

## Berm Removal Alternative

The Berm Removal Alternative would consist of the removal of the on-site berms to eliminate public concerns regarding the presence of asbestos-containing material on the project site. Removal of the berms would involve the excavation of the berms, removal of the engineered textile that caps the asbestos-containing material, and, finally, removal of the asbestos-containing material itself. On-site development would subsequently be expanded to fill in the areas currently occupied by the berms, and, as a result, the Alternative would include the development of additional residential units than what is proposed under the current project.

Implementation of the Berm Removal Alternative would differ from the proposed project in relation to both project construction and operation. As stated above, the Berm Removal Alternative would include the excavation of the existing on-site berms. Such excavation would result in a longer construction period as compared to the proposed project, and would therefore result in greater emissions of toxic air contaminants (TAC) and GHGs. In addition, the excavation of the berms would create more ground disturbance, which could result in greater impacts to cultural and tribal cultural resources, geology and soils, and hydrology and water quality. Under the Alternative, operations would be similar to that of the proposed project, although more residential units could be accommodated on the same site. While operation of additional residential units would not change the project's VMT per capita, the inclusion of more residents on-site would lead to an increase in total project-side VMT, exacerbating impacts related to transportation, and thus, mobile-sourced GHG emissions. Therefore, both construction-related and operational impacts of the Berm Removal Alternative would exceed those of the proposed project.

In addition, excavation of the asbestos-containing material within the berms could lead to exposure of sensitive receptors to hazardous material. Under the proposed project, the berms would not be disturbed and, thus, exposure to hazardous materials was not determined to be a significant impact of the proposed project. The Department of Toxic Substances Control (DTSC) has approved the project site for residential development in the site's current condition, and monitors the berms to ensure that the presence of asbestos-containing material does not become a hazard. Reopening of a closed hazardous site, as would occur under the Berm Removal Alternative, could lead to the release of hazardous materials and TACs, creating a new potentially significant environmental impact that would not occur under the proposed project. In addition, the removal of the on-site berms would be economically infeasible, costing an estimated $17,820,540.00 to complete.[1]

The Berm Removal Alternative would generally meet all of the project objectives. Because a greater amount residential units would be developed, the Berm Removal Alternative would support the City in meeting its RHNA target more than the proposed project, thus fulfilling Objective #2 to a greater extent than the proposed project. However, because the Alternative would not avoid any significant environmental effects, and was determined to be economically infeasible, the Alternative is hereby dismissed from further review.

## Off-Site Alternative

The Off-Site Alternative would involve the construction of the proposed project on an alternative location within the City. Development of the same number of residential and live/work units would

[1] Integral Communities. *Rough-Order of Magnitude Pricing for Soil Remediation, 420 East 3rd Street, Pittsburg, CA.* August 25, 2022.

result in transportation and GHG impacts that would be similar, or potentially greater, than the proposed project, depending on site accessibility to the greater transportation network.

The Off-Site Alternative would result in an equal disturbance area and, therefore, similar physical environmental impacts. Additionally, the proposed project may not be consistent with the Pittsburg General Plan land use designation for the alternative site, and land use and planning impacts could potentially be greater than those that would occur under the proposed project. Similarly, an Off-Site Alternative location could currently contain protected wetlands, sensitive natural habitat, or housing that would be removed to accommodate the project. Accordingly, the Alternative could result in potentially greater impacts related to biological resources and population and housing. Overall, development of the project at an alternative location in the City of Pittsburg would be expected to result in the same impacts, or worse, when compared to the proposed project.

It is noted that alternative sites would likely not include asbestos-containing berms. However, because the proposed project would not disturb the on-site berms, no significant impacts would occur related to the release of asbestos-containing materials. Therefore, development of the project on an alternative site would not avoid or lessen any identified impacts of the project related to hazardous materials.

The CEQA Guidelines Section 15126.6(b) requires that only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR. Because development of the project at off-site locations would result in similar or potential greater environmental impacts as compared to the proposed project, the Off-Site Alternative has been dismissed from further consideration.

### Buildout Consistent with the General Plan Update Alternative

The City of Pittsburg is currently developing an update to the City's General Plan. Although not yet adopted, the General Plan Update includes changes to the land use designations throughout the City, including the northernmost portion of the project site. The Buildout Consistent with the General Plan Update Alternative would entail buildout of the project site consistent with the land use designation that is planned for the site in the General Plan Update. Because the General Plan Update has not yet been adopted by the City, the Buildout Consistent with the General Plan Update Alternative would require a General Plan Amendment to change the site's current land use designation to match the designation proposed under the General Plan Update. The General Plan Amendment would change the land use designation of the northernmost portion of the site from Downtown Commercial to Mixed Use (Downtown). Therefore, implementation of the Buildout Consistent with the General Plan Update Alternative would require an additional entitlement beyond the scope of the proposed project. Additionally, the Downtown Commercial and Mixed Use (Downtown) land use designations allow similar development types and, as a result, the Buildout Consistent with the General Plan Update Alternative would generally consist of the same development as the proposed project.

Implementation of the Buildout Consistent with the General Plan Update Alternative would result in similar environmental impacts as compared to the proposed project because the area of disturbance would remain the same as the proposed project. In addition, the land use designation of the majority of the site would not change. As such, the severity of impacts associated with air quality and GHG emissions, cultural and tribal cultural resources, geology and soils, hydrology and water quality, and transportation (specifically VMT) are not expected to substantially differ from the proposed project.

Because the Buildout Consistent with the General Plan Update Alternative would not avoid any significant environmental effects, the Alternative is hereby dismissed from further review.

### All-Industrial Alternative/All-Commercial Alternative

The All-Industrial Alternative would involve the development of the project site entirely with industrial uses. Similarly, the All-Commercial Alternative would involve the development of the project site entirely with commercial uses.

Both the All-Industrial Alternative and the All-Commercial Alternative would result in an equal disturbance area as the proposed project, and, therefore, the severity of impacts associated with cultural and tribal cultural resources, geology and soils, and hydrology and water quality are not expected to substantially differ from the proposed project. Assuming a similar development intensity would occur under the alternatives as would occur under the proposed project, construction-related air quality and GHG emissions are anticipated to be similar. Transportation impacts associated with VMT, as well as associated mobile-sourced GHG emissions, would likely be reduced in the All-Industrial and increased in the All-Commercial Alternative as compared to the proposed project due to the different vehicle trip generation rates per each land use.

However, both alternatives would not be consistent with the Pittsburg General Plan land use or zoning designations for the site, and, therefore, would require approval of a General Plan Amendment and Rezone of the project site. Senate Bill (SB) 330 prohibits local jurisdictions from downzoning residentially-zoned parcels unless an equivalent amount of land is upzoned elsewhere within the City's boundaries. As a result, because the alternatives would rezone and develop the site with non-residential uses, other undeveloped land within the City would be required to be rezoned either as residential, or at a higher density residential than the existing zoning, to account for the loss of potential housing within the project site.

Because the All-Industrial Alternative and the All-Commercial Alternative would not avoid any significant environmental effects, and would involve the approval of additional discretionary actions beyond what is required of the proposed project, the Alternatives are hereby dismissed from further review.

## 5.4 ALTERNATIVES CONSIDERED IN THIS EIR

Two alternatives were developed based on input from City of Pittsburg staff and the technical analysis performed to identify the significant environmental effects of the proposed project. The following alternatives are considered potentially feasible alternatives to the project, and are evaluated in further detail in this section:

A. No Project Alternative; and
B. Increased Commercial Alternative.

Each of the project alternatives is described in detail below, with a corresponding analysis of each alternative's consistency with the project objectives and evaluation of impacts to the existing environment in comparison to the proposed project's identified impacts. While an effort has been made to include quantitative data for certain analytical topics, where possible, qualitative comparisons of the various alternatives to the project are primarily provided. Such an approach to the analysis is appropriate as evidenced by CEQA Guidelines Section 15126.6(d), which states that the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed. The analysis evaluates impacts that would occur

with the alternatives relative to the significant impacts identified for the proposed project. When comparing the potential impacts resulting from implementation of the foregoing alternatives, the following terminology is used:

- "Fewer" = Less than Proposed Project;
- "Similar" = Similar to Proposed Project; and
- "Greater" = Greater than Proposed Project.

When the term "fewer" is used, the reader should not necessarily equate this to elimination of significant impacts identified for the proposed project. For example, in many cases, an alternative would reduce the relative intensity of a significant impact identified for the proposed project, but the impact would still be expected to remain significant under the alternative, thereby requiring mitigation. In other cases, the use of the term "fewer" may mean the actual elimination of an impact identified for the proposed project altogether. Similarly, use of the term "greater" does not necessarily imply that an alternative would require additional mitigation beyond what has been required for the proposed project. To the extent possible, this analysis will distinguish between the two implications of the comparative words "fewer" and "greater".

See Table 5-1 at the end of this chapter for a comparison of the environmental impacts resulting from the considered alternatives and the proposed project.

## A. No Project Alternative

The following section includes an overview providing background related to this alternative, a description of this alternative, an evaluation of the alternative's consistency with project objectives, and an impact comparison analysis.

### Overview

CEQA requires the evaluation of the comparative impacts of the "No Project" alternative (CEQA Guidelines Section 15126.6[e]). Analysis of the no project alternative shall:

> "… discuss […] existing conditions […] as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services." (*Id.*, subd. [e][2]) "If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the 'no project' alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in the property's existing state versus environmental effects that would occur if the project were approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this 'no project' consequence should be discussed. In certain instances, the no project alternative means 'no build,' wherein the existing environmental setting is maintained. However, where failure to proceed with the project would not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment." (*Id.*, subd. [e][3][B]).

### Description of Alternative

For the purposes of this analysis, the No Project Alternative uses, as a baseline, the existing conditions of the project site such that development of commercial and residential uses on the site would not occur. The project site would remain as is: undeveloped and occupied by scattered

trees and ruderal grasses, as well as a 3.46-acre berm area that runs north-to-south along the eastern boundary of the project site.

## Consistency with Project Objectives

Under the No Project Alternative, the project site would remain undeveloped. Thus, the No Project Alternative would not implement the City's General Plan and Zoning designations by developing the site (Objective #1), support the City in meeting its RHNA target (Objective #2), or provide high quality residential units that include a mix of lot sizes or more affordable housing (Objective #3). In addition, the Alternative would not provide a residential population to support commercial uses within the Old Town area (Object #4), create a pedestrian-friendly residential development (Objective #5), or situate a residential development on land located adjacent to existing residential and commercial uses and public utilities and services (Objective #6). Thus, none of the identified objectives would be fulfilled.

## Impacts of Alternative

The following provides a discussion evaluating the impacts of this alternative on baseline conditions as compared to the impacts of the proposed project on baseline conditions for each impact area addressed within this EIR.

### *Air Quality and Greenhouse Gas Emissions*

Under the No Project Alternative, the project site would remain as is, and development of the project site with residential and live/work units would not occur. As such, construction-related emissions associated with implementing the proposed project, as well as emissions resulting from operations of the proposed land uses, would not occur. Thus, Mitigation Measure 4.1-3, 4.1-6(a) and 4.1-6(b) would not be required. The significant and unavoidable impact related to GHG emissions would not occur. Therefore, the No Project Alternative would result in no impact related to air quality and GHG emissions.

### *Cultural and Tribal Cultural Resources*

Because land disturbance would not occur under the No Project Alternative, the Alternative would not have the potential to result in impacts to cultural, tribal cultural, or paleontological resources. Mitigation Measures 4.2-1(a), 4.2-1(b), 4.2-2, and 4.2-3 would not be required. Overall, the impacts identified for the proposed project related to cultural and tribal cultural resources would not occur under the No Project Alternative.

### *Geology and Soils*

Because the project site would remain undeveloped, the Alternative would not have the potential to result in development that would be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse, or be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code. Thus, Mitigation Measure 4.3-2 would not be required. Overall, no impacts related to geology and soils would occur under the No Project Alternative.

### *Hydrology and Water Quality*

The No Project Alternative would not include any ground disturbance or otherwise alter existing site conditions and, thus, would not have the potential to result in construction or operational impacts related to water quality, changes in drainage patterns, or increases in stormwater runoff

rates. Thus, Mitigation Measures 4.4-1(a) through 4.4-1(c), and 4.4-3 would not be required. Overall, no impacts related to hydrology and water quality would occur under the No Project Alternative.

### *Transportation*

Under the No Project Alternative, the project site would remain undeveloped. Therefore, Mitigation Measure 4.5-1, which addresses impacts related to conflicts with a circulation system during construction activities, and Mitigation Measure 4.5-3, which addresses impacts related to VMT, would not be required. The Alternative would not result in the introduction of new residences or commercial uses and associated improvements to the project site, which would, in turn, preclude new VMT associated with the residences and commercial uses. Therefore, the Alternative would result in no impact related to transportation.

## B. Increased Commercial Alternative

The following section includes a description of this alternative, an evaluation of the alternative's consistency with project objectives, and an impact comparison analysis.

### Description of Alternative

The Increased Commercial Alternative would involve buildout of the project site similar to the proposed project, except the development of the northernmost portion of the project site would be solely commercial. Rather than construct the 20 proposed live/work duplexes, the site's frontage along East 3rd Street would be developed with local-serving commercial uses to the maximum allowed 1.0 floor to area ratio (FAR) for non-residential uses under the existing Downtown Commercial land use designation. In compliance with the Downtown Commercial land use requirements, the commercial uses would be developed in such a way to ensure that a pedestrian-oriented environment is created. Under the Increased Commercial Alternative, development of the remainder of the project site would be identical to the proposed project. Access routes and the internal roadway would remain as proposed under the Increased Commercial Alternative.

### Consistency with Project Objectives

Although the Increased Commercial Alternative would include residential development, because the live/work duplexes would be replaced with commercial uses, the Alternative would fulfill Objectives #1 through #3, but to a lesser extent than the proposed project. The Alternative would generally fulfill Objectives #4 through #6.

### Impacts of Alternative

The following provides a discussion evaluating the impacts of this alternative on baseline conditions as compared to the impacts of the proposed project on baseline conditions for each of the impact areas addressed within this EIR.

### *Air Quality and Greenhouse Gas Emissions*

The Increased Commercial Alternative would decrease the number of dwelling units and increase the square footage of commercial uses constructed on the project site, as compared to the proposed project. As a result, the impacts resulting from construction of the Alternative, including impacts associated with TAC and GHG emissions, would generally remain the same as the proposed project. The Increased Commercial Alternative would require grading of the same disturbance area as the proposed project, and would require the construction of a similar amount

of building space. Therefore, Mitigation Measure 4.1-3 would still be required. In addition, the Alternative would still have the potential to conflict with the BAAQMD's applicable GHG thresholds, which relate to the prohibition of natural gas appliances and plumbing, the inclusion of electric vehicle requirements, and the reduction of project-generated VMT by 15 percent below the regional average. Because the Increased Commercial Alternative would lead to a reduction in VMT, as discussed further below, mobile source GHG emissions would also be reduced. However, Mitigation Measures 4.1-6(a) and 4.1-6(b) would likely still be required, and the significant and unavoidable impact could still occur. However, the severity of the significant and unavoidable impact related to GHGs could be reduced. Therefore, the Alternative's impacts related to GHGs would be fewer as compared to the proposed project.

### *Cultural and Tribal Cultural Resources*

The Increased Commercial Alternative would require grading of the same disturbance area as the proposed project, and would require the construction of a similar amount of building space. Therefore, the Alternative would still have the potential to result in impacts to cultural, tribal cultural, or paleontological resources. Mitigation Measures 4.2-1(a), 4.2-1(b), 4.2-2, and 4.2-3 would still be required. Overall, the impacts identified for the proposed project related to cultural and tribal cultural resources would be similar under the Increased Commercial Alternative as compared to the proposed project.

### *Geology and Soils*

The Increased Commercial Alternative would still have the potential to result in development that would be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse, or be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code. Thus, Mitigation Measure 4.3-2 would still be required. Overall, impacts related to geology and soils would be similar under the Increased Commercial Alternative as compared to the proposed project.

### *Hydrology and Water Quality*

Given that the Increased Commercial Alternative would require grading of the same disturbance area as the proposed project, and would require the construction of a similar amount of building space, the Alternative would have the potential to result in construction and operational impacts related to water quality, changes in drainage patterns, and increases in stormwater runoff rates. Thus, Mitigation Measures 4.4-1(a) through 4.4-1(c) and 4.4-3 would still be required. Overall, impacts related to hydrology and water quality would be similar under the Increased Commercial Alternative as compared to the proposed project.

### *Transportation*

In order to avoid impacts related to the circulation system during construction activities, Mitigation Measure 4.5-1 would still be required. Because the Increased Commercial Alternative would decrease the number of dwelling units constructed on the project site as compared to the proposed project, the Alternative would generate fewer trips and, thus, would generate less project-wide total VMT than the proposed project. The fact that the Increased Commercial Alternative would also include commercial uses designed to accommodate pedestrians would further reduce the number of trips generated by future residents on the project site. In addition, because the commercial portion of the Increased Commercial Alternative would not exceed 50,000 square feet in size, according to the Governor's Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA, the commercial component

of the Increased Commercial Alternative would be assumed to cause a less-than-significant impact related to VMT.[2] In addition, the VMT per capita associated with the residential component of the Alternative may be reduced due to the proximity of the commercial development. Nonetheless, Mitigation Measure 4.5-3 would likely still be required for the Increased Commercial Alternative, but the severity of the significant and unavoidable impact related to transportation could be reduced. Therefore, the Alternative's impacts related to transportation would be fewer as compared to the proposed project.

## 5.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. The environmentally superior alternative is generally the alternative that would be expected to generate the least amount of significant impacts. Identification of the environmentally superior alternative is an informational procedure and the alternative selected may not be the alternative that best meets the goals or needs of the City. Section 15126(e)(2) of the CEQA Guidelines requires that an environmentally superior alternative be designated and states, "If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." All of the significant impacts identified for the proposed project would not occur or would be fewer under the No Project Alternative. Thus, the No Project Alternative would be considered the environmentally superior alternative. However, given that a 'no project' alternative shall not be selected as the environmentally superior alternative, the No Project Alternative may not be chosen as the environmentally superior alternative, and the environmentally superior alternative among the other alternatives should be chosen.

The Increased Commercial Alternative would result in fewer impacts related to air quality and GHG emissions and transportation as compared to the proposed project; however, the significant and unavoidable impacts would still be expected to occur. All other impacts under the Increased Commercial Alternative would be similar to the proposed project. In addition, because the live/work duplexes would be replaced with commercial uses, the Alternative would fulfill Objectives #1 through #3, but to a lesser extent than the proposed project, and the Alternative would generally fulfill Objectives #4 through #6.

Pursuant to Section 15126(e)(2) of the CEQA Guidelines, because No Project Alternative cannot be selected as the environmentally superior alternative, the Increased Commercial Alternative would be considered the environmentally superior alternative to the proposed project.

[2] State of California Governor's Office of Planning and Research. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.

**Table 5-1**
**Comparison of Environmental Impacts for Project Alternatives**

| Resource Area | Proposed Project | No Project Alternative | Increased Commercial Alternative |
|---|---|---|---|
| Air Quality and Greenhouse Gas Emissions | Less-Than-Significant with Mitigation and Significant and Unavoidable | None | Fewer* |
| Cultural and Tribal Cultural Resources | Less-Than-Significant with Mitigation | None | Similar |
| Geology and Soils | Less-Than-Significant with Mitigation | None | Similar |
| Hydrology and Water Quality | Less-Than-Significant with Mitigation | None | Similar |
| Transportation | Less-Than-Significant and Less-Than-Significant with Mitigation and Significant and Unavoidable | None | Fewer* |
| | **Total Fewer:** | **5** | **2** |
| | **Total Similar:** | **0** | **3** |
| | **Total Greater** | **0** | **0** |

Note: No Impact = "None;" Less than Proposed Project = "Fewer;" Similar to Proposed Project = "Similar;" and Greater than Proposed Project = "Greater."

* Significant and Unavoidable impact(s) determined for the proposed project would still be expected to occur under the Alternative.

# 6. Statutorily Required Sections

# 6. STATUTORILY REQUIRED SECTIONS

## 6.1 INTRODUCTION

The Statutorily Required Sections chapter of the EIR includes discussions regarding those topics that are required to be included in an EIR, pursuant to CEQA Guidelines, Section 15126.2. The chapter includes a discussion of the proposed project's potential to result in growth-inducing impacts; the cumulative setting analyzed in this EIR; significant irreversible environmental changes; and significant and unavoidable impacts caused by the proposed project.

## 6.2 GROWTH-INDUCING IMPACTS

State CEQA Guidelines Section 15126.2(e) requires an EIR to evaluate the potential growth-inducing impacts of a proposed project. Specifically, an EIR must discuss the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Growth can be induced in a number of ways, including the elimination of obstacles to growth, or by encouraging and/or facilitating other activities that could induce growth. Examples of projects likely to have 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 office complexes in areas that are currently only sparsely developed or are undeveloped.

The CEQA Guidelines are clear that while an analysis of growth-inducing effects is required, it should not be assumed that induced growth is necessarily significant or adverse. This analysis examines the following potential growth-inducing impacts related to implementation of the proposed project and assesses whether these effects are significant and adverse (see CEQA Guidelines, Section 15126.2[e]):

1. Foster population and economic growth and construction of housing.
2. Eliminate obstacles to population growth.
3. Affect service levels, facility capacity, or infrastructure demand.
4. Encourage or facilitate other activities that could significantly affect the environment.

### Foster Population and Economic Growth and Construction of Housing

As discussed in Section XIV, Population and Housing, of the Initial Study prepared for the proposed project (attached as Appendix A to this EIR), the proposed 227-unit residential development would increase the available housing within the project vicinity, which would be expected to increase population in the area. Using the U.S. Census Bureau's 3.33 persons per household estimate for the City of Pittsburg's average household size in 2021, the project is expected to accommodate approximately 756 new residents (3.33 persons/unit X 227 dwelling units). The City of Pittsburg General Plan designates the majority of the project site as Downtown Medium Density Residential, with which the proposed project would be consistent. In addition, the northernmost portion of the project site, in which the proposed 20 mixed-use duplexes would be constructed, is designated as Downtown Commercial, which permits upper-story residential and mixed commercial/residential ground-floor uses. Therefore, the City has previously anticipated development of the site with residential uses as part of buildout of the General Plan

planning area and evaluated potential impacts associated with such uses in the General Plan EIR. Given that the proposed project is consistent with the site's land use designations, development of the proposed project would not result in a population increase beyond what was previously anticipated by the City's General Plan or impacts not previously identified in the General Plan EIR.

Furthermore, the project site is zoned Pedestrian Commercial (CP) and Downtown Medium Density Residential – Limited Overlay (RMD-O) District. Although the project would require a Rezone of the RMD-O to decrease the minimum lot size from 2,200 square feet (sf) to 1,980 sf while keeping the average lot size at 2,200 sf (as required by Pittsburg City Council Ordinance 07-1284), residential uses are permitted within the RMD-O district. Additionally, residential uses are permitted within the CP zoning district. Thus, an increase in population through development of the site in accordance with the existing zoning districts would not result in unplanned population growth.

Furthermore, while the project would include installation of new utility lines to provide water supply, sewer service, and stormwater conveyance, the project's on-site infrastructure would be sized to accommodate only the proposed 227-unit residential development. Therefore, utility improvements constructed as part of the proposed project would not directly or indirectly facilitate future construction of additional housing in the project vicinity. Based on the above, the proposed project would not foster population growth that is significant or adverse.

In regard to economic growth, as discussed above, the 20 northernmost lots, which generally front East 3rd Street, would be developed with mixed-use live/work duplexes. The ground floor unit of each duplex would provide approximately 420 sf of commercial space and/or private work space, which could result in long-term employment growth in the area. However, the Downtown Commercial land use designation allows for upper-story residential and mixed commercial/residential ground-floor uses. As such, the proposed mixed-use live/work duplexes would be consistent with the uses permitted by the Downtown Commercial designation. Therefore, development of the Downtown Commercial portion of the project site with the proposed uses would be consistent with what the City's General Plan previously anticipated for the site and was previously evaluated in the General Plan EIR. In addition, considering the relatively small size of commercial space afforded to each unit, which could be used for private purposes by any number of the proposed duplexes, the project would not result in economic growth comparable in scale to that of a new, major employment center. Thus, long-term economic growth generated by the mixed-use live/work duplexes would not be significant or adverse.

Additionally, the proposed residences would provide short-term employment opportunities in the form of jobs associated with construction activities. Such jobs would likely be filled from the local employee base. However, with the possible exception of a few household and landscape maintenance jobs, permanent jobs would not be created by the proposed single-family residences. Therefore, development of the project site with residential uses would not result in long-term employment growth in the area.

Overall, all physical environmental effects of the proposed project, including the proposed residences, utility improvements, and landscaping, have been addressed throughout this EIR and the Initial Study prepared for the proposed project. Based on the above information, the proposed project would not be anticipated to foster population and economic growth and construction of housing that is significant or adverse.

## Eliminate Obstacles to Population Growth

The elimination of either physical or regulatory obstacles to growth is considered to be a growth-inducing effect. A physical obstacle to growth typically involves the lack of public service infrastructure. The extension of public service infrastructure, including roadways, water mains, and sewer lines, into areas that are not currently provided with these services, would be expected to support new development. Similarly, the elimination or change to a regulatory obstacle, including existing growth and development policies, could result in new growth.

Development of the proposed project would include construction of new on-site water lines, which would connect to the existing 16-inch water lines located within Harbor Street and East 3rd Street; installation of new sewer lines that would convey approximately 65 percent of the wastewater generated from the site to the existing 18-inch sewer line in East 3rd Street and approximately 35 percent of the wastewater generated from the site to the existing 16-inch sewer line in Harbor Street; and a new on-site storm drain system that would collect runoff and convey flows to bioretention areas that would provide treatment before discharging to the existing 48-inch storm drain line in Harbor Street. The growth associated with the aforementioned improvements has already been anticipated and evaluated in the City's General Plan EIR. In addition, the utility infrastructure proposed for the project site would be sized to specifically serve the proposed 227-unit residential development. Therefore, construction of the proposed on-site utility improvements would not eliminate a physical obstacle that would create a growth-inducing effect.

The proposed project would also include a new 27-foot-wide driveway located off of East 3rd Street from the north and a new 26-foot-wide driveway located off of Harbor Street from the east. In regard to parking, the project site would include 83 on-street parking spaces, and each home would include a two-car garage, resulting in 454 new parking spaces, overall. The project would also include new curb, gutter, sidewalk, and landscaping along Harbor Street and East 3rd Street. All internal roadways would be designed in accordance with applicable roadway standards set forth by the City of Pittsburg Standard Details. Furthermore, the roadway improvements would specifically serve the proposed 227-unit residential development. Therefore, construction of the proposed on-site road improvements would not eliminate a physical obstacle that would create a growth-inducing effect.

Finally, with regard to the possibility of the project eliminating or changing a regulatory obstacle that would pave the way for new growth, the project would not include such discretionary actions or approvals. As discussed, the project would require a Rezone to modify the existing RMD-O zoning designation. However, the Rezone would decrease the minimum lot size within the Limited Overlay district while maintaining the average lot size, as well as amend requirements pertaining to setbacks, lot coverage, and density. Any future rezones to add the Limited Overlay throughout the City would require project-specific environmental review. As such, the Rezone would not alter the RMD-O in such a manner that could result in new and unplanned growth. Furthermore, the Vesting Tentative Map and Design Review approvals required as part of the proposed project would be in accordance with regulations set forth by Pittsburg Municipal Code Chapters 17.20 and 18.36. As such, the discretionary approvals required by the proposed project would abide by existing regulations, and not eliminate or change regulations.

Based on the above information, the proposed project would not eliminate a physical or regulatory obstacle that would, as a result, create a growth-inducing effect.

### Affect Service Levels, Facility Capacity, or Infrastructure Demand

Increases in population that would occur as a result of a project could significantly strain existing community service facilities, requiring construction of new facilities that could cause significant environmental impacts. As discussed in Section XV, Public Services, of the Initial Study, increased demands for fire and police protection services attributable to the proposed project would not necessitate the construction of new or expanded facilities that could cause significant environmental impacts. In addition, as discussed in Section XIX, Utilities and Service Systems, of the Initial Study, wastewater generated by the proposed project could be accommodated by existing wastewater treatment facilities and planned infrastructure associated with the Delta Diablo Wastewater Treatment Plant, and, pursuant to the Contra Costa Water District Urban Water Management Plan, sufficient water supplies would be available to serve development facilitated by buildout of the General Plan planning area in normal, single dry, and multiple dry years, including buildout of the project site with the proposed uses. Both the Potrero Hills Landfill and the Keller Landfill, which would serve the proposed project, have adequate capacity to manage the solid waste generated as a result of the project. Furthermore, mitigation measures set forth in Chapter 4.4, Hydrology and Water Quality, of this EIR, would ensure that the proposed project would not create or contribute runoff water that would exceed the capacity of the City's storm drain system.

Based on the above, the proposed project would not increase population such that service levels, facility capacity, or infrastructure demand would require construction of new facilities that could cause significant environmental impacts.

### Encourage or Facilitate other Activities That Could Significantly Affect the Environment

This EIR and the accompanying Initial Study provide a comprehensive assessment of the potential for environmental impacts associated with implementation of the proposed project. Please refer to Chapters 4.1 through 4.5 of this EIR and the Initial Study (see Appendix A of this EIR), which comprehensively address the potential for impacts from urban development on the project site. Furthermore, development on this infill site would not encourage other development or activities that could significantly affect the environment.

## 6.3 CUMULATIVE IMPACTS

CEQA Guidelines, Section 15130 requires that an EIR discuss the cumulative and long-term effects of the proposed project that would adversely affect the environment. "Cumulative impacts" are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines, Section 15355). "[I]ndividual effects may be changes resulting from a single project or a number of separate projects" (CEQA Guidelines, Section 15355, subd. [a]). "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (CEQA Guidelines, Section 15355, subd. [b]).

The need for cumulative impact assessment reflects the fact that, although a project may cause an "individually limited" or "individually minor" incremental impact that, by itself, is not significant, the increment may be "cumulatively considerable," and, thus, significant, when viewed together with environmental changes anticipated from past, present, and probable future projects (CEQA Guidelines, Section 15064, subd. [h(1)], Section 15065, subd. [c], and Section 15355, subd. [b]).

Accordingly, particular impacts may be less than significant on a project-specific basis but significant on a cumulative basis if their small incremental contribution, viewed against the larger backdrop, is cumulatively considerable. However, it should be noted that CEQA Guidelines, Section 15064, Subdivision (h)(5) states, "[…] the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable." Therefore, even where cumulative impacts are significant, any level of incremental contribution is not necessarily deemed cumulatively considerable.

Section 15130(b) of CEQA Guidelines indicates that the level of detail of the cumulative analysis need not be as great as for the project impact analyses, but that analysis should reflect the severity of the impacts and their likelihood of occurrence, and that the analysis should be focused, practical, and reasonable. To be adequate, a discussion of cumulative effects must include the following elements:

> (1) Either (a) a list of past, present and probable future projects, including, if necessary, those outside the agency's control, or (b) a summary of projections contained in an adopted general plan or related planning document, or in a prior certified EIR, which described or evaluated regional or area-wide conditions contributing to the cumulative impact, provide that such documents are reference and made available for public inspection at a specified location;
>
> (2) A summary of the individual projects' environmental effects, with specific reference to additional information and stating where such information is available; and
>
> (3) A reasonable analysis of all of the relevant projects' cumulative impacts, with an examination of reasonable, feasible options for mitigating or avoiding the project's contribution to such effects (Section 15130[b]).

For some projects, the only feasible mitigation measures will involve the adoption of ordinances or regulations, rather than the imposition of conditions on a project-by-project basis (Section 15130[c]). Section 15130(a)(3) states that an EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable, and thus not significant, if a project is required to implement or fund the project's fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

Pursuant to CEQA Guidelines Section 15130, a discussion of cumulative impacts is provided within each of the technical chapters of this EIR.

## Cumulative Setting

The Lead Agency should define the relevant geographic area of inquiry for each impact category (id., Section 15130, subd. [b][3]), and should then identify the universe of "past, present, and probable future projects producing related or cumulative impacts" relevant to the various categories, either through the preparation of a "list" of such projects or through the use of "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact" (id., subd. [b][1]).

As discussed above, two approaches exist for identifying cumulative projects and their associated impacts. The "list" approach identifies individual projects known to be occurring or proposed in the surrounding area in order to identify potential cumulative impacts. The "projection" approach

uses a summary of projections in adopted General Plans or related planning documents to identify potential cumulative impacts. The majority of the cumulative analysis in this EIR is based upon the buildout projections included in the City of Pittsburg General Plan.

Some situations exist where the geographic setting differs for the various resource areas. Examples include hydrology, for which the cumulative geographic setting is generally limited to the Kirker Creek watershed. Another example is global climate change, which is, by nature, a cumulative impact. Emissions of greenhouse gases (GHG) contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change (e.g., sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental impacts). A single project could not generate enough GHG emissions to contribute noticeably to a change in the global average temperature. However, the combination of GHG emissions from a project in combination with other past, present, and future projects could contribute substantially to the world-wide phenomenon of global climate change and the associated environmental impacts. Although the geographical context for global climate change is the Earth, for analysis purposes under CEQA, and due to the regulatory context pertaining to GHG emissions and global climate change applicable to the proposed project, the geographical context for global climate change in this EIR is limited to the State of California.

Cumulative impacts are analyzed in each of the technical chapters of this EIR, where the specific cumulative setting for each resource area is presented along with the cumulative impact discussion in the relevant resource area section of the EIR.

## Summary of Cumulative Impacts

The following offers a summary of the cumulative impact analysis included in this EIR.

In Chapter 4.1, Air Quality and Greenhouse Gas Emissions, of this EIR, Impact 4.1-5 evaluates the potential for the project to result in a cumulatively considerable increase in a criteria pollutant for which the project region is in non-attainment. As presented therein, with implementation of Mitigation Measure 4.1-1, a less-than-cumulatively considerable impact would occur. With regard to GHG emissions, as evaluated under Impact 4.1-6, the project applicant has not yet committed to the prohibition of natural gas infrastructure in the project design, which could conflict with criterion a. of the Bay Area Air Quality Management District's (BAAQMD) Buildings and Transportation criteria. In addition, because the proposed project is expected to generate approximately 19.0 VMT per resident per day, the project would be inconsistent with criterion c. Because the proposed project could conflict with the BAAQMD's applicable thresholds of significance for GHG emissions, Mitigation Measure 4.1-6(a) requires the proposed project to prohibit the installation of natural gas infrastructure in the proposed structures, and Mitigation Measure 4.1-6(b) requires implementation of Mitigation Measures 4.5-3, which necessitates that the project applicant develop a Travel Demand Management Plan (TDM Plan) to reduce trips. However, based on available evidence, incorporation of a TDM Plan would not reduce project-generated VMT such that the proposed project would be below the threshold of significance. Consequently, even with implementation of the aforementioned mitigation measures, the project's incremental contribution to the cumulatively significant effects of GHG emissions and global climate change would remain cumulatively considerable and significant and unavoidable.

As discussed in Chapter 4.2, Cultural and Tribal Cultural Resources, of this EIR, cultural resources are generally site- and project-specific. Therefore, under Impact 4.2-4, the cumulative

impact of the proposed project on cultural and tribal cultural resources was determined to be less than significant.

Similarly, as described in Chapter 4.3, Geology and Soils, geologic concerns tend to occur on a site- and project-specific level, and cumulative impacts are not expected. Therefore, under Impact 4.3-4, the cumulative impact of the proposed project as it relates to geological resources was determined to be less than significant.

Chapter 4.4, Hydrology and Water Quality, of this EIR includes an evaluation of cumulative impacts under Impact 4.4-6. As discussed therein, given the existing regulations in place governing water quality, implementation of the proposed project in combination with cumulative development within the greater Kirker Creek watershed would not result in cumulatively considerable impacts related to stormwater quality, groundwater, or drainage patterns. Overall, the potential cumulative impact associated with the proposed project was determined to be less than significant.

As discussed in Chapter 4.5, Transportation, of this EIR, the VMT impact analysis for existing conditions with project buildout included under Impact 4.5-3 would also apply to cumulative conditions, which are evaluated under Impact 4.5-5. The proposed project's home-based VMT per resident would exceed the County average VMT per resident and, thus, would exceed the applicable threshold of 85 percent of the regional average. To address the significant impact, Mitigation Measure 4.5-5 requires implementation of Mitigation Measure 4.5-3, which necessitates that the project applicant develop a TDM Plan to reduce vehicle trips. However, as discussed, because incorporation of a TDM Plan would not reduce project-generated VMT such that the proposed project would be below the threshold of significance, the impact would remain cumulatively considerable and significant and unavoidable.

Pursuant to CEQA Guidelines Section 15128, the remaining environmental issue areas identified by Appendix G of the CEQA Guidelines were addressed in the Initial Study prepared for the proposed project (see Appendix A). Issue areas discussed in the Initial Study were determined to have a less-than-significant impact or no impact, and were not discussed further in this EIR. Thus, the proposed project's contribution to cumulative impacts concerning the remaining issue areas have been determined not to be significant.

## 6.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Pursuant to CEQA Guidelines Section 15126.2(c), this EIR is required to include consideration of significant irreversible environmental changes that would be caused by the proposed project, should the project be implemented. An impact would be determined to be a significant and irreversible change in the environment if:

- Buildout of the project area could involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of development could generally commit future generations to similar uses (e.g., a highway provides access to a previously remote area);
- Development of the proposed project could involve uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing and eventual development of the project could result in an unjustified consumption of resources (e.g., the wasteful use of energy).

The proposed project would likely result in, or contribute to, the following significant irreversible environmental changes:

- Conversion of predominantly vacant land to a built-out residential community, thus precluding alternative land uses in the future;
- Irreversible consumption of construction materials, such as lumber, associated with the proposed residences;
- Irreversible consumption of goods and services, such as fire, police, and school services, associated with the future population; and
- Irreversible consumption of energy and natural resources, such as water and electricity, associated with the future residents.

## 6.5 SIGNIFICANT AND UNAVOIDABLE IMPACTS

According to CEQA Guidelines, an EIR must include a description of those impacts identified as significant and unavoidable should the proposed action be implemented (CEQA Guidelines Section 15126.2[b]). Such impacts would be considered unavoidable when the determination is made that either mitigation is not feasible or only partial mitigation is feasible such that the impact is not reduced to a level that is less than significant.

Based on the analysis provided in Chapters 4.1 through 4.5 of this EIR, the below listed impacts were determined to be significant and unavoidable. All other impacts identified in this EIR could be eliminated or reduced to a less-than-significant level by mitigations imposed by the City. The final determination of the significance of impacts and the feasibility of mitigation measures would be made by the City as part of the City's certification action.

### 4.1-6 Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

### 4.5-3 Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

### 4.5-5 Result in cumulative conflicts or inconsistencies with CEQA Guidelines Section 15064.3, subdivision (b).

# 7. REFERENCES

# 7. REFERENCES

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