Draft

PHASE I OAKLAND 2045 GENERAL PLAN UPDATE

Environmental Impact Report

Prepared for
City of Oakland

March 2023

ESA

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Acronyms and Other Abbreviations

Acronym or Abbreviation	Definition
dBA	A-weighted decibels
ACE	Accredited Centers of Excellence
AHO	Affordable Housing Overlay
ALUCP	Airport Land Use Compatibility Plan
ALUC	Alameda County Airport Land Use Commission
ACDEH	Alameda County Department of Environmental Health
Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act
ASCE	American Society of Civil Engineers
ARDTP	Archaeological Research Design and Treatment Plan
API	Area of Primary Importance
ASI	Area of Secondary Importance
ACMs	Asbestos- containing materials
AB	Assembly Bill
ABAG	Association of Bay Area Governments
BFE	Base Flood Elevation
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BCDC	Bay Conservation and Development Commission
BMP	Best Management Practice
Btu	British thermal units
CARB	California Air Resources Board
CBIA v. BAAQMD	California Building and Industry Association v. Bay Area Air Quality Management District
CBC	California Building Code
CCR	California Code of Regulations
CDE	California Department of Education
CDFW	California Department of Fish and wildlife
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
Cal/OSHA	California Division of Occupational Safety and Healthy
CESA	California Endangered Species Act
CEC	California Energy Commission
Cal EPA	California Environmental Protection Agency
CEQA	California Environmental Quality Act

Acronym or Abbreviation	Definition
CFGC	California Fish and Game Code
CGS	California Geologic Survey
CHP	California Highway Patrol
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
OES	California Office of Emergency Services
CPUC	California Public Utilities Commission
CRPR	California Rare Plant Ranks
California Register	California Register of Historic Resources
SSC	California Species of Special Concern
CO_2e	Carbon dioxide equivalent
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CFR	Code of Federal Regulations
COLE	Coefficient of linear extensibility
CAV	Community Assistance Visit
CCA	Community Choice Aggregation
CCE	Community choice energy
CNEL	Community noise equivalent level
CUP	Conditional Use Permit
CAFE	Corporate Average Fuel Economy
CPTED	Crime Prevention Through Environmental Design
DNL	Day-night average noise level
dB	Decibels
V_{db}	Decibel notation
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
DHP	Designated Historic Property
DOSH	Division of Occupational Safety and Health
DOSD	Division of Safety Dams
EFZ	Earthquake Fault Zone
EBCE	East Bay Community Energy
EBMUD	East Bay Municipal Utility District
EBPRD	East Bay Regional Park District
EAPs	Emergency Action Plans

Acronym or Abbreviation	Definition
ESLs	Environmental Screening Levels
ECAP	Equitable Climate Action Plan
L_{eq}	Equivalent-continuous sound level
EFH	Essential Fish Habitat
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FRAP	Forest Resource assessment Program
FTA	Federal Transit Administration
GHAD	Geologic Hazard Abatement District
GE	Geotechnical Engineer
GWP	Global warming potential
GHG	Greenhouse Gas
OPR	Governor's Office of Planning and Research
GSAs	Groundwater sustainability agencies
GSP	Groundwater Sustainability Plan
HCP	Habitat Conservation Plan
HMBP	Hazardous Materials Business Plan
Hz	Hertz
HBX	Housing and Business Mix
IGP	Industrial Storm Water General Permit
IBC	International Building Code
LUTE	Land Use and Transportation Element
LPAB	Landmarks Preservation Advisory Board
LBP	Lead-based paint
LEED	Leadership in Energy and Environmental Design
LUST	Leaking underground storage tanks
LED	Light-emitting diode
LRAs	Local Responsibility Areas
M_w	Magnitude
MTC	Metropolitan Transportation Commission
MW	Megawatts
MWh	Megawatt-hours
MBTA	Migratory Bird Treaty Act

Acronym or Abbreviation	Definition
mpg	Miles per gallon
mgd	Millions gallons per day
MRP	Municipal Regional Stormwater NPDES Permit
MS4	Municipal Separate Storm Sewer System Permits
NAHC	National American Heritage Commission
NECPA	National Energy Conservation Policy Act
NFIP	National Federal Insurance Program
NFPA	National Fire Protection Association
NHTSA	National Highway Traffic Safety Administration
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
National Register	National Register of Historic Places
NRCS	National Resources Conservation Service
NAHC	Native American Heritage Commission
NWIC	Northwest Information Center
NOI	Notice of Intent
NOP	Notice of Preparation
OCHS	Oakland Cultural Heritage Survey
OFD	Oakland Fire Department
FDC	Oakland Fire Dispatch Center
OIA	Oakland International Airport
OMC	Oakland Municipal Code
OPRF	Oakland Parks and Recreation Foundation
OPD	Oakland Police Department
OUSD	Oakland Unified School District
OSHA	Occupational Safety and Health Administration
OEHHA	Office of Environmental Health Hazard Assessment
OSCAR	Open Space, Conservation and Recreation Element
PG&E	Pacific Gas and Electric
PPV	Peak particle velocity
PV	Photovoltaic
PEV	Plug-in Electric Vehicle
PCBs	Polychlorinated biphenyls

Acronym or Abbreviation	Definition
Porter-Cologne	Porter-Cologne Water Quality Control Act of 1969
PDHP	Potential Designated Historic Property
PDA	Priority Development Areas
POPOS	Privately Owned Public Spaces
PRC	Public Resources Code
PSPS	Public Safety Power Shutoffs
RECP	Regional Emergency Coordination Plan
RSLs	Regional Screening Levels
RPS	Renewables Portfolio Standard
RCRA	Resource Conservation and Recovery Act
RMS	Root square mean
Bay	San Francisco Bay
RWQCB	San Francisco Bay Regional Water Quality Control Board
SLR	Sea-level rise
Secretary's Standards	Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings
SB	Senate Bill
SDC	Seismic design category
SVP	Society of Vertebrate Paleontology
STLCs	Soluble Threshold Limit Concentrations
SCA	Standard Condition of Approval
SEMS	Standardized Emergency Management System
SHPO	State Historic Preservation Office
SIP	State Implementation Plans
SRAs	State Responsibility Areas
SWRCB	State Water Resources Control Board
SWPPP	Stormwater Pollution Prevention Plan
SGMA	Sustainable Groundwater Management Act
TMDLs	Total Maximum Daily Loads
TTLCs	Total Threshold Limit Concentrations
TLCPs	Toxic Characteristic Leaching Procedure
TPA	Transit Priority Areas
Unified Program	Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

Acronym or Abbreviation	Definition
UBC	Uniform Building Code
UCMP	University of California Museum of Paleontology
USACE	U.S. Army Corps of Engineers
Fed/OSHA	U.S. Department of Labor Occupational Safety and Health Administration
USDOT	U.S. Department of Transportation
USEIA	U.S. Energy Information Administration
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USPS	U.S. Postal Service
VMT	Vehicle miles traveled
VHFHSZs	Very High Fire Hazard Severity Zones
Vdb	Vibration decibels
VT	Virginia Polytechnic Institute and Stat University
WDR	Water Discharge Requirements
WQ	Water Quality
Basin Plan	Water Quality Control Plan
WTP	Water treatment plants
W	Watts
WERC	Western Ecological Research Center
WGCEP	Working Group on California Earthquake Probabilities

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CHAPTER 1
Introduction

This Draft Environmental Impact Report (EIR) has been prepared pursuant to the California Environmental Quality Act (CEQA) and the State *CEQA Guidelines* to analyze potential physical environmental impacts of the proposed City of Oakland Planning Code, Zoning Map, and General Plan text and map amendments implementing its 2023-2031 Housing Element, updates to its Safety Element and its adoption of a new Environmental Justice Element.[1] These actions constitute the Proposed Project that is the subject of this EIR and, along with the recently adopted 2023-2031 Housing Element, constitute the *Phase I Oakland 2045 General Plan Update*. The *Phase II Oakland 2045 General Plan Update* will include the Land Use and Transportation (LUTE) Element; Estuary Policy Plan (the Land Use Element for much of the land below Interstate 880 along the Oakland Estuary); Open Space, Conservation and Recreation (OSCAR) Element; Noise Element; and a new Infrastructure and Facilities Element. A brief overview of the Proposed Project and the environmental review process, and a description of the purpose of this Draft EIR and opportunities for public comment, are provided below, along with an explanation of how this Draft EIR is organized.

1.1 Project Overview

To ensure a path for construction of Oakland's Regional Housing Needs Assessment (RHNA) assigned production target by 2031, the Housing Element Implementation (HEI) component of the Proposed Project analyzed in this Draft EIR would include adoption of Planning Code, Zoning Map, and General Plan text and map amendments to implement goals, policies, and actions related to housing contained in the Housing Element of the City's General Plan. The 2023-2031 Housing Element itself contains an updated housing needs assessment, a housing sites inventory that meets the City's RHNA including a buffer of additional housing development capacity, and a Housing Action Plan (HAP), which is a chapter of the 2023-2031 Housing Element and presents the updated goals, policies, and actions critical to respond to increasing housing pressures in Oakland. While the 2023-2031 Housing Element identifies sites available for housing and constraints that could limit the City's ability to reach its housing goals, the HEI Planning Code amendments include specific proposals to reduce and eliminate those constraints and otherwise incentivize the construction of affordable housing. Most significantly, the HEI proposes to redefine zoning designations and change development standards in zoning districts that have historically served as single-family neighborhoods to allow for missing middle housing development; to create a checklist review objective design review process; to adopt an affordable

[1] The *California Environmental Quality Act* can be found in the California Public Resources Code, Section 21000 et seq. The State *CEQA Guidelines*, formally known as the *Guidelines for California Environmental Quality Act*, can be found in the California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15000 et seq.

housing overlay zone that would provide for ministerial approval and other incentives to qualifying affordable housing developments; and to additionally create a "by right" or ministerial approval process for qualifying housing development located on sites identified in the 2015-2023 Housing Element housing sites inventory. The HEI is described in further detail in Chapter 3, the Project description.

As part of this Proposed Project, the City is preparing a comprehensive update to the Safety Element that builds on the City's 2021- 2026 Local Hazard Mitigation Plan; addresses all State requirements; and serves as a central reference point for the City's efforts to address safety and climate change. The policy development focuses on wildfire, toxic and hazardous materials, seismic risk, flooding, climate change adaptation and resilience, and drought. The Safety Element Update includes actionable strategies for addressing identified critical facility needs and enabling climate-smart development. The City last comprehensively amended its Safety Element in 2012.

The Proposed Project also includes the City's first Environmental Justice (EJ) Element. In response to recent State laws, the City has identified 38 census tracts that are low-income areas and disproportionately impacted by pollution burden. The EJ Element identifies objectives and policies to reduce the unique or compounded health risks in these EJ Communities[2] by including measures to reduce pollution exposure; promote equitable access to public facilities, healthy food, safe and sanitary homes, and physical activity; reduce barriers to inclusive engagement in the public decision-making process; prioritize improvements and programs that address the needs of EJ communities; and identify and reverse systemic funding inequities. Please see Chapter 3, *Project Description*, for more information.

While the Proposed Project does not propose specific private developments, construction would be a reasonably foreseeable future outcome of the update. For the purposes of environmental review, this Draft EIR establishes the *Phase 1 Oakland 2045 General Plan Update Buildout Program* (*Buildout Program*), which represents the maximum feasible housing development that the City has projected can reasonably be expected to occur through 2030. The *Buildout Program* assumes approximately 41,458 new housing units would be developed under the Proposed Project during the projection period ending in 2030, although the actual pace of development will depend on market conditions, property owner interest, and– in the case of affordable housing– available funding and/or other incentives.

1.2 Purpose and Use of this EIR

Consistent with CEQA, this Draft EIR is a public information document that assesses the potential physical environmental impacts that could result from the Project, recommends mitigation measures to lessen or eliminate adverse impacts, and examines feasible alternatives to the Proposed Project. The Draft EIR's key purpose is to inform decision makers at the City of Oakland and other responsible agencies, as well as the public. The City is the Lead Agency for purposes of CEQA, and will review and consider the information contained in this Draft EIR

[2] As described in the *Oakland 2045 Environmental Justice and Equity Baseline,* while State law refers to these communities as "disadvantaged communities," the City of Oakland has opted to use the term "environmental justice communities."

prior to taking action on the Proposed Project. CEQA requires that all State and local government agencies consider the environmental consequences of projects over which they have discretionary authority. This Draft EIR provides information to be used in the planning and decision-making process. It is not the purpose of an EIR to recommend approval or denial of a project. The City has made this Draft EIR available for review and comment, as indicated in the Notice of Availability issued with this document and explained in Section 1.4.2, Public Review of this Draft EIR, below.

1.3 This is a Program EIR

This EIR is a program EIR, as provided for in *CEQA Guidelines* Section 15168, and consistent with Section 15168(b) of the *CEQA Guidelines*, allows the City "to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts." As a program-level EIR, this EIR analyzes potential impacts of the *Phase I Oakland 2045 General Plan Update*, or Proposed Project, by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. This EIR analyzes the potential impacts of the Proposed Project without having site-specific development proposals in hand, and broadly considers proposed sites, their environmental setting, and potential impacts that could stem from their development. Readers will note that the level of detail is different from a project-specific EIR, which generally considers a single, specific proposal on an individual site.

It is important to note that while the law requires the 2023-2031 Housing Element to include an inventory of housing sites, it cannot be said with certainty that development of housing will occur on all of these sites within the projection period, and development is likely to additionally occur on sites not identified in the inventory of housing sites.[3] Further, the zoning proposals in the HEI include changes that apply to a wide variety of zoning districts, which includes parcels not identified in the inventory of housing sites. This EIR considers potential impacts of development that may result from adoption of the HEI, focusing on proposed actions to encourage housing production such as changes in allowable densities, changes in development standards, and adoption of incentives. Of the *Buildout Program's* 41,458 new units, 5,184 are estimated to result from changes in City policy or amendments to the Planning Code and Zoning Map. The balance of 36,274 units could theoretically occur with or without the Proposed Project because it is consistent with existing City policy, Planning Code, and Zoning Map. However, development of these units may be accelerated compared to the theoretical No Project scenario due to programs in the Proposed Project that streamline, incentivize, or remove constraints for housing. Therefore, to capture the potential impact of future development under the Proposed Project, this Draft EIR utilizes the baseline existing conditions described in Chapter 3, *Project Description*; in the Map Atlas (see **Appendix A**); and in Chapter 4 and analyzes the environmental impacts of future development under the Proposed Project through the projection period ending in 2030. Where relevant to the physical environment, the proposed policies, and actions in the Safety Element and EJ Element are used to assess potential environmental impacts of the Proposed Project.

[3] Note the Housing Sites Overlay included as part of the Proposed Project includes a requirement that inventory sites be developed with a residential use.

1.4 Environmental Review Process

1.4.1 Notice of Preparation and EIR Scoping

Pursuant to the requirements of CEQA for the initiation of environmental review, on March 30, 2022, the City sent a Notice of Preparation (NOP) to the State Clearinghouse, responsible and trustee government agencies, organizations, and individuals potentially interested in the *Phase I Oakland 2045 General Plan Update*. The NOP requested that agencies with regulatory authority over any aspect of the proposal describe that authority and identify relevant environmental issues that should be addressed in the Draft EIR. Interested members of the public were also invited to comment. The comment period for the NOP extended from March 30, 2022 to May 5, 2022, during which time, the City accepted written comments on the scope of the Draft EIR. A scoping meeting was held by the City on April 20, 2022, to accept oral comments.

The NOP and the comments received in response to the NOP are included in **Appendix B** of this Draft EIR. As discussed in the NOP and pursuant to the provisions of CEQA, the City did not prepare a CEQA Initial Study prior to preparation of the Draft EIR, because the City determined that it was clear at the time of the issuance of the NOP that a Draft EIR was required (*CEQA Guidelines* Section 15060[d]).

Subsequent to publication of the NOP, the City determined that one component of the *Phase I Oakland 2045 General Plan Update*, adoption of the 2023-2031 Housing Element, is exempt from CEQA review pursuant to each as an independent basis: (1) it can be seen with certainty that there is no possibility that adoption that the 2023-2031 Housing Element may have a significant effect on the environment (the "common sense" exemption, *CEQA Guidelines* Section 15061(b)(3)), because the 2023-2031 Housing Element involves policies, programs, and actions to meet the City's regional housing needs allocation that either would not cause a significant effect on the environment or incorporates ongoing, existing actions being taken by the City; (2) the 2023-2031 Housing Element is a planning document that serves to implement the City of Oakland's regional housing needs determination by identifying sites available for construction of housing under existing zoning (*CEQA Guidelines* Section 15283 and California Government Code Section 65584(g); (3) the 2023-2031 Housing Element is a planning study containing actions that will require independent review, environmental determination, and adoption by the Oakland City Council prior to its implementation (*CEQA Guidelines* Section 15262 and California Public Resources Code Sections 21102 and 21150); and (4) the 2023-2031 Housing Element seeks to assure the protection of the environment by reducing greenhouse gas emissions per capita in the City through infill development, which is consistent with research, local and regional planning on the most impactful measures local governments can take in response to climate change (*CEQA Guidelines* Section 15308).

1.4.2 Public Review of this Draft EIR

This Draft EIR is available for public review and comment as set forth in the Notice of Availability and Notice of Completion circulated by the City. During the review and comment

period, written comments (including email) regarding the Draft EIR may be submitted to the City at the address below.

City of Oakland Bureau of Planning
c/o Lakshmi Rajagopalan, AICP, Planner IV
250 Frank H. Ogawa Plaza, Suite 3315
Oakland, CA 94612
generalplan@oaklandca.gov

The Draft EIR, Notice of Availability, and other supporting documents, are available for public review on the City's Oakland 2045 General Plan Update website at: **https://www.oaklandca.gov/topics/general-plan-update, the** City's Current Environmental Review Documents webpage at **https://www.oaklandca.gov/resources/current-environmental-review-ceqa-eir-documents-2011-2022**, and on the State Clearinghouse Website at: **https://ceqanet.opr.ca.gov/2022030800**.

The City of Oakland Planning Commission will hold a public hearing on **April 19, 2023 at 3:00 p.m.**, during which verbal comments on the Draft EIR will be accepted. The meeting will be held in the Council Chambers in City Hall, 1 Frank H. Ogawa Plaza Oakland, CA 94612. For more information about how to participate in this meeting, please visit: **https://www.oaklandca.gov/boards-commissions/planning-commission**.

1.4.3 Final EIR

Following the public review and comment period for the Draft EIR, the City will prepare responses that address all substantive written and oral comments on the Draft EIR's environmental analyses that are received within the specified review period. The City will also identify any clarifying revisions to the Draft EIR that are necessary to address the comments received. When taken together, the responses to comments and the Draft EIR (as amended if necessary) will constitute the Final EIR for the Proposed Project. The City Council (following a recommendation by the City's Planning Commission) will consider certification of the Final EIR prior to making a decision on adoption of the Proposed Project.

1.4.4 Mitigation Monitoring and Reporting Program

Throughout this EIR, mitigation measures are identified where applicable and presented in language that will facilitate preparation of a Mitigation Monitoring and Reporting Program (MMRP). As required under CEQA, a MMRP will be prepared and presented to the City for adoption at the same time they consider approval of the Proposed Project and will identify the timing and roles and responsibilities for implementation of adopted mitigation measures.

1.5 Organization of the Draft EIR

This ***Introduction*** (Chapter 1) presents an overview of the process by which this Draft EIR will be reviewed and used by the decision-makers in their consideration of the Proposed Project.

The ***Summary*** (Chapter 2) includes a brief project description and a summary table that lists the environmental impacts, proposed mitigation measures, and the level of significance after mitigation. Detailed analysis of these impacts and mitigation measures is provided in Chapter 4, *Environmental Setting, Impacts, Standard Conditions of Approval, and Mitigation Measures*. The Summary also provides a summary of the alternatives to the Proposed Project.

The ***Project Description*** (Chapter 3) describes the project location and boundaries; lists the project objectives; and provides a general description of the technical and environmental characteristics of the Proposed Project. This chapter also includes a list of required approvals for the Proposed Project and other agencies that may be responsible for approving aspects of the Proposed Project.

The ***Environmental Setting, Impacts, Standard Conditions of Approval, and Mitigation Measures*** (Chapter 4) contains a description of the environmental setting (existing physical environmental conditions), the regulatory framework, and the environmental impacts (including cumulative impacts) that could result from the Proposed Project. It includes the thresholds of significance used to determine the significance of adverse environmental effects. This chapter also identifies the mitigation measures that would avoid or substantially lessen these significant adverse impacts. The impact discussions disclose the significance of each impact both with and without implementation of mitigation measures.

Alternatives to the Project (Chapter 5) evaluates a range of reasonable alternatives to the Proposed Project and identifies an environmentally superior alternative, consistent with the requirements of CEQA. The alternatives analysis evaluates each alternative's ability to meet the project objectives and its ability to reduce environmental impacts.

Impact Overview and Growth Inducement (Chapter 6) addresses growth-inducing effects, significant irreversible environmental changes, and significant unavoidable environmental effects of the Proposed Project.

Report Preparers (Chapter 7) identifies the authors of the Draft EIR. Persons and documents consulted during preparation of the Draft EIR are listed at the end of each analysis section.

Appendices. The appendices include environmental scoping information and technical reports and data used in the preparation of the Draft EIR. These documents are included on the City's Oakland 2045 General Plan Update website at: **https://www.oaklandca.gov/topics/general-plan-update**, and the City's Current Environmental Review Documents webpage at **https://www.oaklandca.gov/resources/current-environmental-review-ceqa-eir-documents-2011-2022**.

CHAPTER 2
Summary

2.1 Introduction

The City of Oakland (City) has prepared this Draft Environmental Impact Report (Draft EIR) for the City's updates to its Safety Element and its adoption of a new Environmental Justice Element. In addition, this Draft EIR addresses Planning Code, Zoning Map and General Plan text and map amendments, or collectively Housing Element Implementation (HEI) that are several actions contained in the City's recently adopted 2023-2031 Housing Element. These two General Plan elements and the HEI constitute the "Proposed Project" that is the subject of this Draft EIR and, along with the recently adopted 2023-2031 Housing Element, constitute the *Phase I Oakland 2045 General Plan Update*. Pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State *CEQA Guidelines* (California Code of Regulations Title 14, Section 15000 et seq.), this Draft EIR has been prepared to evaluate the anticipated environmental effects of the Proposed Project. The City is the lead agency and the public agency that has the principal responsibility for approving the Proposed Project.

In accordance with Section 15123 of the *CEQA Guidelines*, this chapter provides a brief summary of the Proposed Project and its environmental consequences. This chapter is intended to summarize in a stand-alone section the Proposed Project described in Chapter 3, *Project Description*; the impacts, Standard Conditions of Approval (SCAs), and mitigation measures discussed in Chapter 4, *Environmental Setting, Impacts, Standard Conditions of Approval, and Mitigation Measures*; and the alternatives analysis presented in Chapter 5, *Alternatives to the Proposed Project*.

This Draft EIR is a Program EIR, as provided for in *CEQA Guidelines* Section 15168. Section 15168(a) of the *CEQA Guidelines* states that a Program EIR is appropriate for projects which are "… a series of actions that can be characterized as one large project and are related either:

1. Geographically;
2. A logical part in the chain of contemplated actions;
3. In connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program; or
4. As individual activities carried out under the same authorizing statutory or regulating authority and having generally similar environmental effects which can be mitigated in similar ways."

Section 15168(b) of the CEQA Guidelines further states: "Use of a Program EIR can provide the following advantages. The Program EIR can:

1. Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action;
2. Ensure consideration of cumulative impacts that might be slighted in a case-by-case analysis;
3. Avoid duplicate consideration of basic policy considerations;
4. Allow the Lead Agency to consider broad policy alternative and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts, and
5. Allow reduction in paperwork."

Any future discretionary actions that would be facilitated by adoption of the Proposed Project, particularly those related to the development of housing, would require additional assessment to determine consistency with the analysis provided in this Program EIR. Potential future actions would also be subject to the mitigation measures established in this Program EIR unless superseded by a subsequent environmental document that is required to analyze significant environmental impacts not foreseen in this Program EIR.

2.2 Project Summary

2.2.1 Project Location

Oakland is located on the eastern shore San Francisco Bay (Bay). The City is the county seat of Alameda County and the geographic center of the Bay Area. The City is physically defined by the Bay and Oakland Estuary on the southwest, the crest of the Berkeley-Oakland Hills on the northeast and east, and the city boundaries of Berkeley, Emeryville, Piedmont and San Leandro. San Francisco is located west, across the San Francisco–Oakland Bay Bridge (Bay Bridge). Alameda is located southwest, across the Estuary. The City's General Plan Area (Plan Area) encompasses an area of 78 square miles of land and water. There are no unincorporated areas within the City's sphere of influence.

Certain parts of the Plan Area fall under the additional authority of other jurisdictions and agencies aside from the City of Oakland. The Port of Oakland is given responsibility by the Oakland City Charter to own, develop and manage lands along the Oakland Estuary, including but not limited to the Oakland International Airport, within the specified area of Port jurisdiction. The land within the Port jurisdiction is subject, like the rest of the City, to the Oakland General Plan and is included within the City's General Plan Area. Additionally, the San Francisco Bay Conservation and Development Commission (BCDC) oversees areas that lie within a 100-foot 'Shoreline Band' surrounding the San Francisco Bay, ensuring development within this area is consistent with the San Francisco Bay Plan and the San Francisco Bay Area Seaport Plan. The United States Army Corps of Engineers (USACE) governs the federally owned Inner Harbor Tidal Canal, which is the narrow waterway that extends southeasterly from the east end of the Oakland Estuary for approximately 1.5 miles to the mouth of the San Leandro Bay.

2.2.2 Project Description

2.2.2.1 Background

State law requires a City to have and maintain a general plan with specific contents to provide a vision for the City's future and inform local decisions about land use and development, including issues such as circulation, conservation, and safety. State law requires specific topics or "elements," including land use, circulation, housing, conservation, open space, noise, safety, and environmental justice. The current City of Oakland General Plan elements were last updated and adopted at different times between 1996 and 2023.

2.2.2.2 Housing Element Implementation (HEI)

To ensure a path for construction of Oakland's Regional Housing Needs Assessment (RHNA) assigned production target by 2031, the Housing Element Implementation (HEI) component of the Proposed Project analyzed in this Draft EIR would include adoption of Planning Code, Zoning Map, and General Plan text and map amendments to implement goals, policies, and actions related to housing contained in the Housing Element of the City's General Plan. The 2023-2031 Housing Element itself, adopted on January 31, 2023, contains an updated housing needs assessment, a housing sites inventory that meets the City's RHNA including a buffer of additional housing development capacity, and a Housing Action Plan (HAP), which is a chapter of the 2023-2031 Housing Element and presents the updated goals, policies, and actions critical to respond to increasing housing pressures in Oakland. The HAP includes five goals, 17 policies, and 120 actions intended to address a wide range of housing issues confronting the City of Oakland, including the following overarching goals:

- Protect Oakland Residents from Displacement and Prevent Homelessness
- Preserve and Improve Existing Affordable Housing Stock
- Expand Affordable Housing Opportunities
- Address Homelessness and Expand Resources for the Unhoused
- Promote Neighborhood Stability and Health

While the 2023-2031 Housing Element identifies sites available for housing and constraints that could limit the City's ability to reach its housing goals, the HEI Planning Code amendments include specific proposals to reduce and eliminate those constraints and otherwise incentivize the construction of affordable housing. Most significantly, the HEI proposes to redefine zoning designations and change development standards in zoning districts that have historically served as single-family neighborhoods to allow for missing middle housing development; to create a checklist review objective design review process; to adopt an affordable housing overlay zone that would provide for ministerial approval and other incentives to qualifying affordable housing developments; and to additionally create a "by right" or ministerial approval process for qualifying housing development located on sites identified in the 2015-2023 Housing Element housing sites inventory.[1] The General Plan text and map amendments include conforming

[1] Missing middle Housing is a range of house-scale buildings with multiple units (e.g., duplexes, triplexes, fourplexes, cottage courts, and multiplexes) that are compatible in scale and form with detached single-family homes and are located in a walkable neighborhood. More information is available at missingmiddlehousing.com.

changes to ensure that the policies, allowed uses, and allowed densities included in the Planning Code and Zoning Map are consistent with General Plan designations and policies.

2.2.2.3 Safety Element Update

The Safety Element Update presents a framework for minimizing risks posed by natural and human-caused hazards that may impact health and welfare. The City's Safety Element, adopted in 2004 and comprehensively amended in 2012, must be updated every eight years concurrent with the Housing Element update. As part of this Proposed Project, the City is preparing a comprehensive update to the Safety Element that builds on the City's 2021- 2026 Local Hazard Mitigation Plan; addresses all State requirements including requirements of Assembly Bill 747 (2019) and Senate Bill 99 (2019) regarding evacuation routes as well as Senate Bill 379 (2016) requiring inclusion of climate adaptation and resiliency strategies; and serves as a central reference point for the City's efforts to address safety and climate change. The policy development focuses on wildfire, toxic and hazardous materials, seismic risk, flooding, climate change adaptation and resilience, and drought. The Safety Element Update includes actionable strategies for addressing identified critical facility needs and enabling climate-smart development.

2.2.2.4 Environmental Justice Element

Senate Bill 1000, also referred to as the 2016 Planning for Healthy Communities Act, requires that cities with "disadvantaged communities" or "Environmental Justice Communities (EJ Communities)" adopt environmental justice policies or an Environmental Justice Element as part of its General Plan.[2] Specifically, SB 1000 requires general plans to "identify objectives and policies to reduce the unique or compounded health risks in disadvantaged communities". The Proposed Project includes the City's first Environmental Justice (EJ) Element with the purpose of addressing the unique or compounded health risks in EJ Communities within the City of Oakland. Building on issues identified in the *Oakland 2045 Environmental Justice and Racial Equity Baseline*, the EJ Element measures include, but are not limited to, measures to improve air quality; and measures to promote public facilities, food access, safe and sanitary homes, and physical activity. In addition, the element serves to promote civic engagement in the public decision-making process and prioritize improvements and programs that address the needs of these communities.

While the Proposed Project does not propose specific private developments, construction would be a reasonably foreseeable future outcome of its adoption. For the purposes of environmental review, this Draft EIR establishes the *Phase 1 Oakland 2045 General Plan Update Buildout Program* (*Buildout Program*), which represents the maximum feasible housing development that the City has projected can reasonably be expected to occur through 2030. The *Buildout Program* assumes approximately 41,458 new housing units would be developed under the Proposed Project during the projection period ending in 2030, although the actual pace of development will depend

[2] As described in the *Oakland 2045 Environmental Justice and Racial Equity Baseline,* while State law refers to these as "disadvantaged communities," the City of Oakland has opted to use the term "Environmental Justice Communities" or "EJ Communities."

on market conditions, property owner interest, and– in the case of affordable housing– available funding and/or other incentives.

2.2.3 Project Objectives

CEQA Guidelines Section 15124(b) requires the description of the project in an EIR to state the objectives sought by the project.

> "*A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.*"

The primary objectives of the Proposed Project include the following:

- Remove regulatory development constraints and provide development incentives so that the City can meet the housing needs of all Oaklanders for the 6th Housing Element cycle;
- Reduce racial segregation and disparities in housing opportunities and outcomes;
- Replace segregated living patterns with truly integrated and balanced living patterns, and transform racially and ethnically concentrated areas of poverty into areas of opportunity;
- Encourage a diversity of housing types such as flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and accessory dwelling units in currently single-family-dominated neighborhoods, and along corridors, transit-proximate areas, and high resource neighborhoods and remove constraints on the development of housing;
- Create and preserve affordable housing restricted for extremely low, very low, low, and/or moderate-income households;
- Minimize risks posed by natural and human-caused hazards that may impact residents' health and welfare by protecting residents, workers, and visitors from seismic and geologic hazards, fire hazards, hazardous materials, flooding, and other potential hazards that risk life and property;
- Reduce pollution exposure, including the improvement of air quality;
- Promote equitable access to public facilities, healthy food, safe and sanitary homes, and physical activity;
- Reduce barriers to inclusive engagement and participation in the public decision-making process; and
- Prioritize improvements and programs that address the needs of Environmental Justice Communities.

2.3 Environmental Impacts and Mitigation Measures

In accordance with *CEQA* G*uidelines* Section 15123(b)(1), an EIR must provide a summary of the impacts, mitigation measures and significant impacts after mitigation for a proposed project. This information is presented in the various subsections within Chapter 4, *Environmental Setting, Impacts, Standard Conditions of Approval, and Mitigation Measures* of this Draft EIR and summarized in **Table 2-1** at the end of this chapter.

2.3.1 Significant and Unavoidable Impacts

The Project would result in the following significant and unavoidable impacts:

Aesthetics, Wind, and Shadow Impact AES-4: Adoption of the Proposed Project and future development under the Proposed Project could result in substantial new shadow that would shade solar collectors, passive solar heaters, public open space, or historic resources, or otherwise result in inadequate provision of adequate light. *(Significant and Unavoidable)*

Aesthetics, Wind, and Shadow Impact AES-6: Adoption of the Proposed Project could create winds that exceed 36 mph for more than one hour during daylight hours during the year. *(Significant and Unavoidable)*

Aesthetics, Wind, and Shadow Impact AES-7: Future development under the Proposed Project, combined with cumulative development, could result in significant cumulative impacts to aesthetics, wind, and shadow *(Conservatively Significant and Unavoidable)*

Air Quality Impact AIR-3: Future development under the Proposed Project could result in average daily emissions that would exceed the City's construction significance thresholds of 54 pounds per day of ROG, NOx, or PM2.5 or 82 pounds per day of PM10; operational of future development under the Proposed Project could result in operational average daily emissions of more than 54 pounds per day of ROG, NOx, or PM2.5 or 82 pounds per day of PM10; or result in maximum annual emissions of 10 tons per year of ROG, NOx, or PM2.5 or 15 tons per year of PM10. (Criteria 5 and 6) *(Significant and Unavoidable)*

Air Quality Impact AIR-5: Adoption of the Proposed Project could result in exposure of future on-site sensitive receptors to substantial levels of toxic air contaminants (TACs). (Criteria 3 and 9) *(Significant and Unavoidable)*

Air Quality Impact AIR-6: Construction and operation of future development under the Proposed Project would result in emissions of fine particulate matter (PM2.5) and TACs that could result in exposure of sensitive receptors to substantial pollutant concentrations. (Criteria 8a, 8b, 8c, and 9) *(Significant and Unavoidable)*

Air Quality Impact AIR-8: Future development under the Proposed Project, in conjunction with cumulative sources, could result in exposure of sensitive receptors to substantial levels of fine particulate matter (PM2.5) and TACs under cumulative conditions. (Criteria 8d, 8e, 8f, and 9) *(Significant and Unavoidable)*

Cultural Resources Impact CUL-1: Future development under the Proposed Project could cause a substantial adverse change in the significance of a historic architectural resource pursuant to CEQA Guidelines Section 15064.5. *(Significant and Unavoidable)*

Cultural Resources Impact CUL-4: Future development under the Proposed Project, combined with cumulative development, could result in cumulatively considerable impacts for historic architectural resources. *(Significant and Unavoidable)*

Hazards and Hazardous Materials Impact HAZ-6: Adoption of the Proposed Project could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. *(Significant and Unavoidable)*

Hazards and Hazardous Materials Impact HAZ-9: Adoption of the Proposed Project, combined with cumulative development, could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. *(Significant and Unavoidable)*

Wildfire Impact WLD-1: Adoption of the Proposed Project could substantially impair an adopted emergency response plan or emergency evacuation plan. (Criterion 1) *(Significant and Unavoidable)*

Wildfire Impact WLD-5: Adoption of the Proposed Project, combined with cumulative development, could result in significant cumulative impacts related to wildfire. *(Significant and Unavoidable)*

2.4 Summary of Alternatives

Chapter 5, *Alternatives to the Proposed Project*, analyzes a range of reasonable alternatives to the Proposed Project, including the No Project Alternative (Alternative 1), the No Affordable Housing Overlay Buffer Zone on parcels in the Very High Fire Hazard Severity Zone Alternative (Alternative 2), and the No Missing Middle Alternative (Alternative 3). The analysis of the alternatives, including a comparison of alternatives to the Proposed Project, is presented in Chapter 5, which provides a summary of impact levels within the environmental topic areas. Overall, the analysis shows that although the No Project Alternative would result in reduced environmental effects when compared with the Proposed Project, it would not benefit from the mitigation measures presented in this Draft EIR and thus would result in more severe significant impacts in many topic areas. The No Project Alternative would not reduce any of the Proposed Project's significant and unavoidable impacts to a less than significant level and would meet only some of the basic objectives of the Proposed Project. Alternatives 2 and 3 would not increase the severity of significant impacts but would neither avoid nor substantially lessen the significant effects of the Proposed Project. These alternatives would meet some of the Proposed Project objectives (more than the No Project Alternative) and would meet some objectives more effectively than others.

Based on the evaluation in Chapter 5, the No Project Alternative would be environmentally superior to the Proposed Project. However, the No Project Alternative would meet only some of the basic objectives of the Proposed Project and would run counter to the requirements of State Law. *CEQA Guidelines* require that a second alternative be identified when the "No Project" alternative is the environmentally superior alternative (*CEQA Guidelines*, Section 15126.6(e)). As described in Chapter 5, the No Affordable Housing Overlay Buffer Zone Alternative 2 would result in approximately 250 fewer affordable units in the Oakland Hills when compared with the Proposed Project *Buildout Program*, and the No Missing Middle Alternative would result in

approximately 1,500 fewer medium density units in the single-family neighborhoods when compared with the Proposed Project *Buildout Program.* With a less development, the No Missing Middle Alternative is estimated to result in less severe hazards and wildfire impacts compared the Proposed Project and Alternative 2. Both Alternative 2 and 3 result in largely the same impacts for other environmental topics. Therefore, the City has identified the No Missing Middle Alternative as the Environmentally Superior Alternative for the purpose of this analysis.

2.5 Notice of Preparation

Pursuant to the requirements of CEQA for the initiation of environmental review, on March 30, 2022, the City sent a Notice of Preparation (NOP) to the State Clearinghouse, responsible and trustee government agencies, organizations, and individuals potentially interested in the *Phase I Oakland 2045 General Plan Update*. The NOP requested that agencies with regulatory authority over any aspect of the proposal describe that authority and identify relevant environmental issues that should be addressed in the Draft EIR. Interested members of the public were also invited to comment. The 35-day comment period for the NOP extended from March 30, 2022 to May 5, 2022, during which time, the City accepted written comments on the scope of the Draft EIR. A scoping meeting was held by the City on April 20, 2022, to accept oral comments. The NOP and the comments received in response to the NOP are included in **Appendix B** of this Draft EIR.

2.6 Areas of Controversy Raised in Scoping Comments

Section 15123(b)(2) of the *CEQA Guidelines* requires that an EIR summary identify areas of controversy known to the lead agency, including those issues raised by other agencies and the public. Comments received on the NOP for this Draft EIR have included concerns regarding hazards and hazardous materials, transportation and circulation, tribal cultural resources, and utilities and service systems. As a result, these issues are potential areas of controversy.

2.7 Issues to be Resolved

Section 15123(b)(3) of the *CEQA Guidelines* requires that an EIR present the issues to be resolved, including the choice among alternatives and whether or how to mitigate identified significant effects. The major issues to be resolved for the Proposed Project include decisions by City of Oakland, as the Lead Agency, as to whether:

- This Draft EIR adequately describes the Proposed Project;
- This Draft EIR adequately describes the environmental impacts of the Proposed Project;
- Recommended SCAs should be incorporated or modified;
- Recommended mitigation measures should be adopted or modified;
- Additional mitigation measures need to be applied to the Proposed Project;

- Feasible alternatives exist that would more fully achieve the objectives of the Proposed Project and reduce significant environmental impacts; and
- Significant and unavoidable impacts would occur if the Proposed Project is adopted and implemented.

TABLE 2-1
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.1 Aesthetics, Shadow, and Wind		
Impact AES-1: Adoption of the Proposed Project would not have a substantial adverse effect on a public scenic vista or substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, located within a state or locally designated scenic highway. (Criteria 1 and 2) *(Less than Significant)*	**SCA 18: Landscape Plan** ***a. Landscape Plan Required*** Requirement: The project applicant shall submit a final Landscape Plan for City review and approval that is consistent with the approved Landscape Plan. The Landscape Plan shall be included with the set of drawings submitted for the construction-related permit and shall comply with the landscape requirements of Chapter 17.124 of the Planning Code. ***b. Landscape Installation*** Requirement: The project applicant shall implement the approved Landscape Plan unless a bond, cash deposit, letter of credit or other equivalent instrument acceptable to the Director of City Planning, is provided. The financial instrument shall equal the greater of $2,500 or the estimated cost of implementing the Landscape Plan based on a licensed contractor's bid. ***c. Landscape Maintenance*** Requirement: All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. The property owner shall be responsible for maintaining planting in adjacent public rights-of-way. All required fences, walls, and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced. **SCA 83: Underground Utilities** Requirement: The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.	Less Than Significant
Impact AES-2: Adoption of the Proposed Project would not substantially degrade the existing visual character or quality of the site and its surroundings. (Criterion 3) *(Less than Significant)*	**SCA 18: Landscape Plan.** See above.	Less Than Significant
Impact AES-3: Adoption of the Proposed Project would not create a new source of substantial light or glare which could substantially and adversely affect day or nighttime views in the area. (Criterion 4) *(Less than Significant)*	**SCA 19: Lighting** Requirement: Proposed new exterior lighting fixtures shall be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.1 Aesthetics, Shadow, and Wind (cont.)		
Impact AES-4: Adoption of the Proposed Project and future development under the Proposed Project could result in substantial new shadow that would shade solar collectors, passive solar heaters, public open space, or historic resources, or otherwise result in inadequate provision of adequate light. (Criterion 5 through 9) *(Significant and Unavoidable)*	**SCA 18: Landscape Plan.** See above. **Mitigation Measure AES-1:** To minimize and/or avoid impacts related to shadows associated with new development under the Proposed Project cast upon solar collectors, passive solar heaters, public open space, or historic resources as described below, the City shall adopt a new application requirement or SCA that requires project sponsors with proposed projects with a height of 50 feet or greater (measured to the top of building roof at any point) to provide **one** of the following: a. The project sponsor shall provide an annotated aerial photo specifying the project site location, applicable building height, and potential shadow path demonstrating that none of the following resources are within the shadow path: i. A building with documented use of passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors; ii. A public or quasi-public park, lawn, garden or other open space as documented in the City of Oakland Planning and Zoning Map; or iii. A building or structure that meets the definition of "historical resources" contained in Section 15064.5 of the *CEQA Guidelines,* as documented in the City of Oakland Planning and Zoning Map, and that contains sunlight-sensitive character defining features; - OR - b. The project sponsor shall prepare a site-specific shadow study. A shadow study shall address the following: i. For buildings using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors; the shadow study shall evaluate if the new project shadow would affect the productivity of the solar units (in terms of how much of the year solar collectors are shaded and what portion of the solar units are shaded), and provide support to determination of whether or not the new project shadow would substantially impair the function of the affected building(s). ii. For public or quasi-public parks, lawn, garden or open spaces, the shadow study shall evaluate how the new project shadow would impact the beneficial use (in terms of how much of the year and what portion of the year the resource is shaded), and provide support to determine whether or not the new project shadow would substantially impair the beneficial use of any public or quasi-public park, lawn, garden, or open space. iii. For Historical Resources, as defined by CEQA Guidelines Section 15064.5(a), that contain a sunlight-sensitive character defining feature; the shadow study shall evaluate how the new project shadow would affect the building or structure, and provide support to a determine whether or not the new project shadow would materially impair the resource's historic significance by materially altering those physical characteristics of the resource that convey its historical significance and that justify its inclusion on or eligibility for listing in the National	Significant and Unavoidable

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.1 Aesthetics, Shadow, and Wind (cont.)		
Impact AES-4 (cont.)	Register of Historic Places, California Register of Historical Resources, Local Register of historical resources, or a historical resource survey form (DPR Form 523) with a rating of 1-5. The shadow study shall be carried out by a professional who meets the Secretary of Interior's Standards of Historic Properties and Guidelines for Preserving, Rehabilitation, Restoring and Reconstructing Historic Buildings (SOIS) for Architectural History (NPS, 1995). The shadow study shall consider the SOIS, which require the preservation of character defining features which convey a building's historical significance and offers guidance about appropriate and compatible alterations to such structures. The results of the shadow study shall be submitted as a Historic Architectural Assessment Report to the City of Oakland. Once the report is reviewed and approved by the City, a copy of the report shall be submitted to the Northwest Information Center (NWIC) at Sonoma State University, an information center affiliated with the State of California Office of Historic Preservation (OHP). If the shadow study provides support to determine that the new project shadow would not adversely affect the resources as described above, no further study would be required. If the shadow study provides support to determine that the proposed project building design would adversely affect the resources as described above, the project sponsor shall modify the building design and placement and provide a revised shadow study to support the determination that the revised new project shadow would minimize and/or avoid shadow effects adversely affecting the resources as described above.	
Impact AES-5: Adoption of the Proposed Project would not require an exception (variance) to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code, and the exception causes a fundamental conflict with policies and regulations in the General Plan, Planning Code, and Uniform Building Code addressing the provision of adequate light related to appropriate uses. (Criterion 9) *(Less than Significant)*	None required.	Less Than Significant
Impact AES-6: Adoption of the Proposed Project could create winds that exceed 36 mph for more than one hour during daylight hours during the year. (Criterion 10) *(Significant and Unavoidable)*	**Mitigation Measure AES-2:** To avoid impacts related to wind hazards associated with new development under the Proposed Project, the City shall adopt a new application requirement or SCA that requires project sponsors to complete a site-specific wind analysis when individual projects are proposed. This shall be required for proposed projects with a height of 100 feet or greater (measured to the top of building roof at any point) and one of the following conditions exist: • The project is located adjacent to a substantial water body (i.e., Oakland Estuary, Lake Merritt or San Francisco Bay); or • The project is located in Downtown. (Downtown is defined in the Land Use and Transportation Element of the General Plan (page 67) as the area generally bounded by West Grand Avenue to the north, Lake Merritt and Channel Park to the east, the Oakland Estuary to the south and I-980/Brush Street to the west.)	Significant and Unavoidable

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.1 Aesthetics, Shadow, and Wind (cont.)		
Impact AES-6 (cont.)	If a wind analysis is required, it shall be conducted by a qualified wind consultant approved by the Oakland Department of Planning & Building. The consultant shall conduct an analysis of the proposed building using a model that represents the proposed building in the context of then-existing conditions to reflect actual building designs known at the time. The testing shall include test points deemed appropriate by the consultant and agreed upon by the Oakland Department of Planning & Building to determine the wind performance of the building, such as building entrances and sidewalks, and the consultant's report shall be submitted to the Oakland Department of Planning & Building. If the wind analysis demonstrates that the building design would not create a net increase in hazardous wind hours or locations, compared to then-existing conditions, no further review would be required. If the wind analysis determines that the building's design would increase the hours of wind hazard (36 mph for one hour of the year) or the number of test points subject to hazardous winds, compared to then-existing conditions, the wind consultant shall notify the City and the project sponsor. The project sponsor shall work with the wind consultant to identify feasible mitigation strategies, including design changes (e.g., setbacks, rounded/chamfered building corners, stepped facades, landscaping and/or installation of canopies along building frontages), to eliminate increased hours of wind hazards. Such mitigation strategies shall be tested and presented in a wind report to demonstrate a reduction in wind hazards, defined as wind speeds of or exceeding the 36-mph wind hazard criterion for a single hour of the year, as compared to the then-existing conditions; but in no event shall the proposed building(s) result in increases in the number of hours or number of locations of hazard exceedances compared to then-existing conditions. The proposed building(s) shall be wind-tunnel-tested using a model that represents the proposed building in the context of then-existing conditions, updated to reflect the mitigation strategies.	
Impact AES-7: Future development under the Proposed Project, combined with cumulative development, could result in significant cumulative impacts to aesthetics, wind, and shadow *(Conservatively Significant and Unavoidable)*	**SCA 19: Lighting.** See above.	Significant and Unavoidable
4.2 Air Quality		
Impact AIR-1: Adoption of the Proposed Project would not conflict with or obstruct implementation of the applicable air quality plan. (Criteria 1 and 2) *(Less than Significant)*	**SCA 20: Dust Controls – Construction Related** Requirement: The project applicant shall implement all of the following applicable dust control measures during construction of the project: a) Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.2 Air Quality (cont.)		
Impact AIR-1 (cont.)	b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer). c) 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. d) Limit vehicle speeds on unpaved roads to 15 miles per hour. e) All demolition activities (if any) shall be suspended when average wind speeds exceed 20 miles per hour. f) All trucks and equipment, including tires, shall be washed off prior to leaving the site. g) Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel. *[Enhanced Controls: All "Basic" controls listed above plus the following controls if the project involves: Extensive site preparation (i.e., the construction site is four acres or more in size); or Extensive soil transport (i.e., 10,000 or more cubic yards of soil import/export).]* h) Apply and maintain vegetative ground cover (e.g., hydroseed) or non-toxic soil stabilizers to disturbed areas of soil that will be inactive for more than one month. Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.). i) Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust off-site. Their duties shall include holidays and weekend periods when work may not be in progress. j) When working at a site, install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of the site, to minimize wind-blown dust. Windbreaks must have a maximum 50 percent air porosity. k) Post a publicly visible large on-site sign that includes the contact name and phone number for the project complaint manager responsible for responding to dust complaints and the telephone numbers of the City's Code Enforcement unit and the Bay Area Air Quality Management District. When contacted, the project complaint manager shall respond and take corrective action within 48 hours. l) All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. **SCA 21: Criteria Air Pollutant Controls – Construction Related** Requirement: The project applicant shall implement all of the following applicable basic control measures for criteria air pollutants during construction of the project as applicable: a) Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.2 Air Quality (cont.)		
Impact AIR-1 (cont.)	b) Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off- Road Diesel Regulations"). c) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Equipment check documentation should be kept at the construction site and be available for review by the City and the Bay Area Air Quality District as needed. d) Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall only be used if grid electricity is not available and propane or natural gas generators cannot meet the electrical demand. e) Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings. f) All equipment to be used on the construction site shall comply with the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") and upon request by the City (and the Air District if specifically requested), the project applicant shall provide written documentation that fleet requirements have been met. ***Enhanced Controls*** *a) Criteria Air Pollutant Reduction Measures* Requirement: The project applicant shall retain a qualified air quality consultant to identify criteria air pollutant reduction measures to reduce the project's average daily emissions below 54 pounds per day of ROG, NOx, or PM2.5 or 82 pounds per day of PM10. Quantified emissions and identified reduction measures shall be submitted to the City (and the Air District if specifically requested) for review and approval prior to the issuance of building permits and the approved criteria air pollutant reduction measures shall be implemented during construction. *b) Construction Emissions Minimization Plan* Requirement: The project applicant shall prepare a Construction Emissions Minimization Plan (Emissions Plan) for all identified criteria air pollutant reduction measures. The Emissions Plan shall be submitted to the City (and the Air District if specifically requested) for review and approval prior to the issuance of building permits. The Emissions Plan shall include the following: i. An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, and engine serial number. For all Verified Diesel Emissions Control Strategies (VDECS), the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.2 Air Quality (cont.)		
Impact AIR-1 (cont.)	ii. A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract. **SCA 22: Diesel Particulate Matter Controls – Construction Related** ***a) Diesel Particulate Matter Reduction Measures*** Requirement: The project applicant shall implement appropriate measures during construction to reduce potential health risks to sensitive receptors due to exposure to diesel particulate matter (DPM) from construction emissions. The project applicant shall choose one of the following methods: i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with current guidance from the California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment to determine the health risk to sensitive receptors exposed to DPM from project construction emissions. The HRA shall be submitted to the City (and the Air District if specifically requested) for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then DPM reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, DPM reduction measures shall be identified to reduce the health risk to acceptable levels as set forth under subsection b below. Identified DPM reduction measures shall be submitted to the City for review and approval prior to the issuance of building permits and the approved DPM reduction measures shall be implemented during construction. -OR- ii. All off-road diesel equipment shall be equipped with the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement) as certified by CARB. The equipment shall be properly maintained and tuned in accordance with manufacturer specifications. This shall be verified through an equipment inventory submittal and Certification Statement that the Contractor agrees to compliance and acknowledges that a significant violation of this requirement shall constitute a material breach of contract. ***b) Construction Emissions Minimization Plan (if required by above)*** Requirement: The project applicant shall prepare a Construction Emissions Minimization Plan (Emissions Plan) for all identified DPM reduction measures (if any). The Emissions Plan shall be submitted to the City (and the Bay Area Air Quality Management District if specifically requested) for review and approval prior to the issuance of building permits. The Emissions Plan shall include the following: i. An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, and engine serial number. For all VDECS, the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.2 Air Quality (cont.)		
Impact AIR-1 (cont.)	ii. A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract. **SCA 23: Exposure to Air Pollution (Toxic Air Contaminants)** – The project involves any of the following sensitive land uses: ▪ Residential uses (new dwelling units, excluding secondary units); or ▪ New or expanded schools, daycare centers, parks, nursing homes, or medical facilities; and – The project is located within 1,000 feet (or other distance as specified below) or one or more of the following sources of air pollution: ▪ Freeway; ▪ Roadway with significant traffic (at least 10,000 vehicles per day); ▪ Rail line (except BART) with over 30 trains per day; ▪ Distribution center that accommodates more than 100 trucks per day, more than 40 trucks with operating Transportation Refrigeration Units (TRUs) per day, or where the TRU nit operations exceed 300 hours per week; ▪ Major rail or truck yard (such as the Union Pacific rail yard adjacent to the Port of Oakland); ▪ Ferry terminal; ▪ Stationary pollutant source requiring a permit from BAAQMD (such as a diesel generator); ▪ Within 0.5 miles of the Port of Oakland or Oakland Airport; ▪ Within 300 feet of a gas station; or ▪ Within 300 feet of a dry cleaner with a machine using PERC (or within 500 feet of a dry cleaner with two or more machines using PERC); and – The project exceeds the health risk screening criteria after a screening analysis is conducted in accordance with the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines. ***a) Health Risk Reduction Measures*** Requirement: The Project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to exposure of toxic air contaminants. The project applicant shall choose one of the following methods: i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk of exposure of project residents/occupants/users to air pollutants. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes that the health	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.2 Air Quality (cont.)		
Impact AIR-1 (cont.)	risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. The approved risk reduction measures shall be implemented during construction and/or operations as applicable. -OR- ii. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City: – Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 [insert MERV-16 for projects located in the West Oakland Specific Plan area] or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required. – Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph). – Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible. – The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall be located as far away as feasible from a loading dock or where trucks concentrate to deliver goods. – Sensitive receptors shall be located on the upper-floors of buildings, if feasible. – Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (Pinus nigra var. maritima), Cypress (X Cupressocyparis leylandii), Hybrid poplar (Populus deltoids X trichocarpa), and Redwood (Sequoia sempervirens). – Sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible. – Existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible. – Emissions from diesel trucks shall be reduced through implementing the following measures, if feasible: ▪ Installing electrical hook-ups for diesel trucks at loading docks. ▪ Requiring trucks to use Transportation Refrigeration Units (TRUs) that meet Tier 4 emission standards.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.2 Air Quality (cont.)		
Impact AIR-1 (cont.)	▪ Requiring truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels. ▪ Prohibiting trucks from idling for more than two minutes. ▪ Establishing truck routes to avoid sensitive receptors in the project. A truck route program, along with truck calming, parking, and delivery restrictions, shall be implemented. ***b) Maintenance of Health Risk Reduction Measures*** Requirement: The project applicant shall maintain, repair, and/or replace installed health risk reduction measures, including but not limited to the HVAC system (if applicable), on an ongoing and as-needed basis. Prior to occupancy, the project applicant shall prepare and then distribute to the building manager/operator an operation and maintenance manual for the HVAC system and filter including the maintenance and replacement schedule for the filter. **SCA 24: Stationary Sources of Air Pollution (Toxic Air Contaminants)** Requirement: The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to on-site stationary sources of toxic air contaminants. The project applicant shall choose one of the following methods: a) The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk associated with proposed stationary sources of pollution in the project. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. -OR- b) The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the city for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City: i. Installation of non-diesel fueled generator, if feasible; or ii. Installation of diesel generators with an EPA-certified Tier 4 engine or engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy, if feasible **SCA 41: Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist.** See Section 4.7, Greenhouse Gas Emissions, below. **SCA 42: Greenhouse Gas (GHG) Reduction Plan.** See Section 4.7, Greenhouse Gas Emissions, below.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.2 Air Quality (cont.)		
Impact AIR-1 (cont.)	**SCA 77: Plug-In Electric Vehicle (PEV) Charging Infrastructure.** See Section 4.15, Transportation and Circulation, below. **SCA 78: Transportation and Parking Demand Management.** See Section 4.15, Transportation and Circulation, below.	
Impact AIR-2: Adoption of the Proposed Project would not result in a cumulatively considerable net increase of any criteria air pollutant for which the Plan Area region is in nonattainment under and applicable federal or State air quality standard. (Criteria 1 and 2) *(Less than Significant)*	None required.	Less Than Significant
Impact AIR-3: Future development under the Proposed Project could result in average daily emissions that would exceed the City's construction significance thresholds of 54 pounds per day of ROG, NOx, or PM2.5 or 82 pounds per day of PM10; operational of future development under the Proposed Project could result in operational average daily emissions of more than 54 pounds per day of ROG, NOx, or PM2.5 or 82 pounds per day of PM10; or result in maximum annual emissions of 10 tons per year of ROG, NOx, or PM2.5 or 15 tons per year of PM10. (Criteria 5 and 6) *(Significant and Unavoidable)*	**SCA 20: Dust Controls – Construction Related.** See above. **SCA 21: Criteria Air Pollutant Controls – Construction Related.** See above. **SCA 22: Diesel Particulate Matter Controls – Construction Related.** See above. **Mitigation Measure AIR-1: Text Changes to SCA 21, Criteria Air Pollutant Controls – Construction Related.** ***21. Criteria Air Pollutant Controls - Construction and Operational Related*** *[Enhanced Controls: All "Basic" controls listed above plus the following controls ~~if the project involves: Construction activities with average daily emissions exceeding the CEQA thresholds for construction activity, currently 54 pounds per day of ROG, NOx, or PM2.5 or 82 pounds per day of PM10. In most cases, criteria pollutants from construction will not require SCA measures, but analysis must be performed to determine applicability for projects that exceed 100,000 square feet of non-residential development or 200 residential dwelling unit).~~]* *g) Criteria Air Pollutant Reduction Measures* Requirement: Project applicants proposing projects that exceed BAAQMD screening levels (as amended to specify projects that include extensive demolition i.e., demolition greater than 100,000 square feet of building space) ~~The project applicant~~ shall retain a qualified air quality consultant to prepare a project-level criteria air pollutant assessment of construction and operational emissions at the time the project is proposed. The project-level assessment shall either include a comparison of the project with other similar projects where a quantitative analysis has been conducted or shall provide a project-specific criteria air pollutant analysis to determine whether the project exceeds the City's criteria air pollutant thresholds. In the event that a project-specific analysis finds that the project could result in criteria air pollutant emissions that exceed City significance thresholds (54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10}), the project applicant shall identify criteria air pollutant reduction measures to reduce the project's average daily emissions below these thresholds~~54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10}~~. The following emission	Significant and Unavoidable

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.2 Air Quality (cont.)		
Impact AIR-3 (cont.)	reduction measures shall be implemented to the degree necessary to reduce emissions to levels below the significance thresholds. Additional measures shall be implemented if necessary. Quantified emissions and identified reduction measures shall be submitted to the City (and the Air District if specifically requested) for review and approval prior to the issuance of building permits and the approved criteria air pollutant reduction measures shall be implemented during construction. ***i. Clean Construction Equipment*** a) Where access to grid-powered electricity is reasonably available, portable diesel engines shall be prohibited and electric engines shall be used for concrete/industrial saws, sweepers/scrubbers, aerial lifts, welders, air compressors, fixed cranes, forklifts, cement and mortar mixers, pressure washers, and pumps. b) Diesel off-road equipment shall have engines that meet the Tier 4 Final off-road emission standards, as certified by CARB, as required to reduce the emissions to less than the thresholds of significance shown in Table 2-1 of BAAQMD CEQA Guidelines (BAAQMD 2017b). This requirement shall be verified through submittal of an equipment inventory that includes the following information: (1) Type of Equipment, (2) Engine Year and Age, (3) Number of Years Since Rebuild of Engine (if applicable), (4) Type of Fuel Used, (5) Engine HP, (6) Engine Certification (tier rating), (7) Verified Diesel Emission Control Strategy (VDECS) information if applicable, and other related equipment data. A Certification Statement is also required to be made by the Contractor as documentation of compliance and for future review by the air district as necessary. The Certification Statement must state that the Contractor agrees to comply and acknowledges that a violation of this requirement shall constitute a material breach of contract. c) Any other best available technology that reduces emissions offered at the time that future projects are reviewed may be included in the construction emissions minimization plan (e.g., alternative fuel sources, etc.). d) Exceptions to requirements a), b), and c) above may be granted if the project sponsor has submitted information providing evidence that meeting the requirement (1) is technically not feasible, (2) would not produce desired emissions reductions due to expected operating modes, or (3) there is a compelling emergency need to use equipment that to not meet the engine standards and the sponsor has submitted documentation that the requirements of this exception provision apply. In seeking an exception, the project sponsor shall demonstrate that the project will use the cleanest piece of construction equipment available and feasible and strive to meet a performance standard of average construction emissions of ROG, NO_x, $PM_{2.5}$ below 54 lbs/day, and PM_{10} emissions below 82 lbs/day.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.2 Air Quality (cont.)		
Impact AIR-3 (cont.)	***ii. Super-Compliant VOC Architectural Coatings during Construction.*** The Project sponsor shall use super-compliant VOC architectural coatings during construction for all interior and exterior spaces and shall include this requirement on plans submitted for review by the City's building official. "Super-Compliant" refers to paints that meet the more stringent regulatory limits in South Coast Air Quality Management District rule 1113 which requires a limit of 10 grams VOC per liter.[1] ***iii. Use Low and Super-compliant VOC Architectural Coatings in Maintaining Buildings.*** Subsequent projects shall use super-compliant VOC architectural coatings in maintaining buildings. "Super-Compliant" refers to paints that meet the more stringent regulatory limits in South Coast Air Quality Management District rule 1113, which requires a limit of 10 grams VOC per liter.[2] ***iv. Promote Use of Green Consumer Products.*** To reduce ROG emissions associated with the Project, the Project Sponsor and/or future developer(s) shall provide education for residential tenants concerning green consumer products. The Project sponsor and/or future developer(s) shall develop electronic correspondence to be distributed by email annually and upon any new lease signing to residential tenants of each building on the Project site that encourages the purchase of consumer products that generate lower than typical VOC emissions. The correspondence shall encourage environmentally preferable purchasing. ***v. Best Available Control Technology for Projects with Diesel Backup Generators and Fire Pumps.*** The Project sponsor shall implement the following measures. These features shall be submitted to the City for review and approval and be included on the Project drawings submitted for the construction-related permit or on other documentation submitted to the City: a) Pursuant to SCA 24, non-diesel fueled generators shall be installed to replace diesel-fueled generators if feasible. Alternative fuels used in generators, such as biodiesel, renewable diesel, natural gas, or other biofuels or other non-diesel emergency power systems, must be demonstrated to reduce criteria pollutant emissions compared to diesel fuel. b) Pursuant to SCA 24, all new diesel backup generators shall have engines that meet or exceed CARB Tier 4 off-road Compression Ignition Engine Standards (title 13, CCR, section 2423). If CARB adopts future emissions standards that exceed the Tier 4 requirement, the emissions standards resulting in the lowest criteria pollutant emissions shall apply.	

1 http://www.aqmd.gov/home/regulations/compliance/architectural-coatings/super-compliant-coatings
2 http://www.aqmd.gov/home/regulations/compliance/architectural-coatings/super-compliant-coatings

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.2 Air Quality (cont.)		
Impact AIR-3 (cont.)	c) All new diesel backup generators shall have an annual maintenance testing limit of 20 hours, subject to any further restrictions as may be imposed by BAAQMD in its permitting process. d) For each new diesel backup generator permit submitted to BAAQMD for the Project, the Project sponsor shall submit the anticipated location and engine specifications to the City for review and approval prior to issuance of a permit for the generator from the City of Oakland Department of Building Inspection. Once operational, all diesel backup generators shall be maintained in good working order for the life of the equipment and any future replacement of the diesel backup generators shall be required to be consistent with these emissions specifications. The operator of the facility at which the generator is located shall be required to maintain records of the testing schedule for each diesel backup generator for the life of that diesel backup generator and to provide this information for review to the planning department within three months of requesting such information. ***vi. Electric Vehicle Charging*** Prior to the issuance of the building's final certificate of occupancy, the project applicant shall demonstrate that the project is designed to comply with EV requirements in the most recently adopted version of CALGreen Tier 2 at the time of project-specific CEQA review. The installation of all EV charging equipment shall be included on the project drawings submitted for the construction-related permit(s) or on other documentation submitted to the City. ***vii. Additional Operational Emission Reduction Measures*** Subsequent projects that do not meet the screening criteria and exceed the applicable criteria air pollutant thresholds of significance shall implement the following additional measures to reduce operational criteria air pollutant emissions: a) Prohibit TRUs from operating at loading docks for more than 30 minutes by posting signs at each loading dock presenting this TRU limit. b) All newly constructed loading docks that can accommodate trucks with TRUs shall be equipped with electric vehicle (EV) charging equipment for heavy-duty trucks. This measure does not apply to temporary street parking for loading or unloading. c) Require that all future tenants have a plan to convert their vehicle fleet(s) to zero emission vehicles (ZEVs) no later than 2040. This would be a condition of all leases at the project site. d) Other measures that become available and are shown to effectively reduce criteria air pollutant emissions on site or off site if emission reductions are realized within the air basin. Measures to reduce emissions on site are preferable to off-site emissions reductions.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.2 Air Quality (cont.)		
Impact AIR-3 (cont.)	*h) Construction Emissions Minimization Plan* Requirement: For projects that involve construction activities with average daily emissions exceeding the CEQA thresholds for construction activity, currently 54 pounds per day of ROG, NOx, or $PM_{2.5}$ or 82 pounds per day of PM_{10}, ~~T~~the project applicant shall prepare a Construction Emissions Minimization Plan (Emissions Plan) for all identified criteria air pollutant reduction measures. The Emissions Plan shall be submitted to the City (and the Air District if specifically requested) for review and approval prior to the issuance of building permits. The Emissions Plan shall include the following: …	
Impact AIR-4: Traffic associated with adoption of the Proposed Project would not contribute to carbon monoxide (CO) concentrations exceeding the California Ambient Air Quality Standards (CAAQS) of nine parts per million (ppm) averaged over eight hours and 20 ppm for one hour. (Criterion 7) *(Less than Significant)*	**SCA 23: Exposure to Air Pollution (Toxic Air Contaminants).** See above. **Mitigation Measure AIR-2: Text Changes to SCA 23, Reduce Exposure to Air Pollution – Toxic Air Contaminants.** *(As also modified by Mitigation Measure AIR-4 in double underline.)* i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements and in accordance with Bay Area Air Quality Management District (BAAQMD) CEQA guidance for HRAs to determine the health risk of exposure of project residents/occupants/users to air pollutants and the exposure of existing off-site sensitive receptors to project-generated TAC emissions. The HRA shall be based on project-specific activity data. Estimated project-level health risks shall be compared to the City's health risk significance thresholds for projects. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below ~~acceptable levels~~ the City's health risk significance thresholds for projects, then health risk reduction measures are not required. If the HRA concludes that the health risk exceeds ~~acceptable levels~~ the City's health risk significance thresholds for projects, health risk reduction measures shall be identified to reduce the health risk to ~~acceptable levels~~ below the City's health risk significance thresholds. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. The approved risk reduction measures shall be implemented during construction and/or operations as applicable. ii. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City: • Installation of mechanical ventilation systems ~~air filtration~~ to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. ~~Air filter devices shall be rated MERV-1613 [insert MERV-16 for projects located in the West Oakland Specific Plan area] or higher~~ Mechanical ventilation systems shall be capable of achieving the protection from particulate matter ($PM_{2.5}$) equivalent to that associated with a MERV-16 filtration (as defined by American Society of Heating, Refrigerating and Air-Conditioning Engineers [ASHRAE] standard 52.2). As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.2 Air Quality (cont.)		
Impact AIR-5: Adoption of the Proposed Project could result in exposure of future on-site sensitive receptors to substantial levels of toxic air contaminants (TACs). (Criteria 3 and 9) *(Significant and Unavoidable)*	None required.	Significant and Unavoidable
Impact AIR-6: Construction and operation of future development under the Proposed Project would result in emissions of fine particulate matter (PM2.5) and TACs that could result in exposure of sensitive receptors to substantial pollutant concentrations. (Criteria 8a, 8b, 8c, and 9) *(Significant and Unavoidable)*	**SCA 22: Diesel Particulate Matter Controls – Construction Related.** See above. **SCA 23: Exposure to Air Pollution (Toxic Air Contaminants).** See above. **SCA 24: Stationary Sources of Air Pollution (Toxic Air Contaminants).** See above. **SCA 25: Truck-Related Risk Reduction Measures (Toxic Air Contaminants)** ***a) Truck Loading Docks*** Requirement: The project applicant shall locate proposed truck loading docks as far from nearby sensitive receptors as feasible. ***b) Truck Fleet Emissions Standards*** Requirement: The project applicant shall comply with all applicable California Air Resources Board (CARB) requirements to control emissions from diesel engines and demonstrate compliance to the satisfaction of the City. Methods to comply include, but are not limited to, new clean diesel trucks, higher-tier diesel engine trucks with added Particulate Matter (PM) filters, hybrid trucks, alternative energy trucks, or other methods that achieve the applicable CARB emission standard. Compliance with this requirement shall be verified through CARB's Verification Procedures for In-Use Strategies to Control Emissions from Diesel Engines. **SCA 26: Asbestos in Structures** Requirement: The project applicant shall comply with all applicable laws and regulations regarding demolition and renovation of Asbestos Containing Materials (ACM), including but not limited to California Code of Regulations, Title 8; California Business and Professions Code, Division 3; California Health and Safety Code sections 25915-25919.7; and Bay Area Air Quality Management District, Regulation 11, Rule 2, as may be amended. Evidence of compliance shall be submitted to the City upon request. **SCA 27: Naturally-Occurring Asbestos** Requirement: The project applicant shall comply with all applicable laws and regulations regarding construction in areas of naturally-occurring asbestos, including but not limited to, the Bay Area Air Quality Management District's (BAAQMD) Asbestos Airborne Toxic Control Measures for Construction, Grading, Quarrying, and Surface Mining Operations (implementing California Code of Regulations, section 93105, as may be amended) requiring preparation and implementation of an Asbestos Dust Mitigation Plan to minimize public exposure to naturally occurring asbestos. Evidence of compliance shall be submitted to the City upon request.	Significant and Unavoidable

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.2 Air Quality (cont.)		
Impact AIR-6 (cont.)	**Mitigation Measure AIR-3: Text Changes to SCA 22, Diesel Particulate Matter Controls-Construction Related.** Requirement: The project applicant shall implement appropriate measures during construction to reduce potential health risks to sensitive receptors due to exposure to diesel particulate matter (DPM) and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) from construction ~~emissions~~ activities. **The project applicant shall choose one** of the following methods: i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with current guidance from the California Air Resources Board (CARB), the ~~and~~ Office of Environmental Health and Hazard Assessment, and Bay Area Air Quality Management District (BAAQMD) to determine the health risk to sensitive receptors exposed to DPM and $PM_{2.5}$ from project construction emissions. The HRA shall be based on project-specific construction schedule, equipment, and activity data. Estimated project-level health risks shall be compared to the City's health risk significance thresholds for projects. The HRA shall be submitted to the City (and the Air District if specifically requested) for review and approval. If the HRA concludes that the health risk is at or below ~~acceptable levels~~ the City's health risk significance thresholds for projects, then DPM and $PM_{2.5}$ reduction measures are not required. If the HRA concludes that the health risk exceeds ~~acceptable levels~~ the City's health risk significance thresholds for projects, DPM and $PM_{2.5}$ reduction measures shall be identified to reduce the health risk to ~~acceptable levels~~ below the City's health risk significance thresholds as set forth under subsection b below. Identified DPM and $PM_{2.5}$ reduction measures shall be submitted to the City for review and approval prior to the issuance of building permits and the approved DPM and $PM_{2.5}$ reduction measures shall be implemented during construction. -or- ii. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City: • All off-road diesel equipment shall be equipped with the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement) as certified by CARB. The equipment shall be properly maintained and tuned in accordance with manufacturer specifications. This shall be verified through an equipment inventory submittal and Certification Statement that the Contractor agrees to compliance and acknowledges that a significant violation of this requirement shall constitute a material breach of contract. • Where access to grid-powered electricity is reasonably available, portable diesel engines shall be prohibited and electric engines shall be used for concrete/industrial saws, sweepers/scrubbers, aerial lifts, welders, air compressors, fixed cranes, forklifts, cement and mortar mixers, pressure washers, and pumps.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.2 Air Quality (cont.)		
Impact AIR-6 (cont.)	• Any other best available technology that reduces emissions offered at the time that future projects are reviewed may be included in the construction emissions minimization plan (e.g., alternative fuel sources, etc.). **Mitigation Measure AIR-4: Text Changes to SCA 23, Reduce Exposure to Air Pollution – Toxic Air Contaminants.** *(As also modified by Mitigation Measure AIR-2 in double underline/strikeout.)* i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements and in accordance with Bay Area Air Quality Management District (BAAQMD) CEQA guidance for HRAs to determine the health risk of exposure of project residents/occupants/users to air pollutants and the exposure of existing off-site sensitive receptors to project-generated TAC emissions. The HRA shall be based on project-specific activity data. Estimated project-level health risks shall be compared to the City's health risk significance thresholds for projects. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below ~~acceptable levels~~ the City's health risk significance thresholds for projects, then health risk reduction measures are not required. If the HRA concludes that the health risk exceeds ~~acceptable levels~~ the City's health risk significance thresholds for projects, health risk reduction measures shall be identified to reduce the health risk to ~~acceptable levels~~ below the City's health risk significance thresholds. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. The approved risk reduction measures shall be implemented during construction and/or operations as applicable. **Mitigation Measure AIR-5: Text Changes to SCA 24, Stationary Sources of Air Pollution (Toxic Air Contaminants).** a. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements and in accordance with Bay Area Air Quality Management District (BAAQMD) CEQA guidance for HRAs to determine the health risk associated with proposed stationary sources of pollution in the project. The HRA shall be based on project-specific activity data. Estimated project-level health risks shall be compared to the City's health risk significance thresholds for projects. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below ~~acceptable levels~~ the City's health risk significance thresholds for projects, then health risk reduction measures are not required. If the HRA concludes the health risk exceeds ~~acceptable levels~~ the City's health risk significance thresholds for projects, health risk reduction measures shall be identified to reduce the health risk to ~~acceptable levels~~ the City's health risk significance thresholds for projects. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. The approved risk reduction measures shall be implemented during construction and/or operations as applicable.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.2 Air Quality (cont.)		
Impact AIR-6 (cont.)	The City shall revise the items under section b. of SCA 24, Stationary Sources of Air Pollution (Toxic Air Contaminants), as follows: a. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City: i. Installation of non-diesel fueled generators, if feasible, or; ii. Installation of diesel generators with an EPA-certified Tier 4 engine or engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy, if feasible. <u>If CARB adopts future emissions standards that exceed the Tier 4 requirement, the emissions standards resulting in the lowest DPM emissions shall apply.</u> iii. <u>All new diesel backup generators shall have an annual maintenance testing limit of 20 hours, subject to any further restrictions as may be imposed by BAAQMD in its permitting process.</u> iv. <u>All diesel backup generator exhaust shall be vented on the rooftops of each building where the generators are located. This could be achieved by either placing the diesel backup generators themselves on the rooftops, or by constructing exhaust stacks from the diesel backup generator locations to the rooftops. Alternatively, the generators or exhaust stacks could be located in areas where the Project sponsor can quantitatively demonstrate that these locations would not result in health risks that exceed those associated with rooftop placement for both existing offsite and future onsite sensitive receptors.</u> v. <u>For each new diesel backup generator permit submitted to BAAQMD for the Project, the Project sponsor shall submit the anticipated location and engine specifications to the City for review and approval prior to issuance of a permit for the generator from the City of Oakland Department of Building Inspection. Once operational, all diesel backup generators shall be maintained in good working order for the life of the equipment and any future replacement of the diesel backup generators shall be required to be consistent with these emissions specifications. The operator of the facility at which the generator is located shall be required to maintain records of the testing schedule for each diesel backup generator for the life of that diesel backup generator and to provide this information for review to the planning department within three months of requesting such information.</u> **Mitigation Measure AIR-6: Text Changes to SCA 25, Truck-Related Risk Reduction Measures (Toxic Air Contaminants).** ***a. Diesel Truck Emission Reduction Measures*** <u>Requirement: The Project sponsor shall incorporate the following health risk reduction measures into the Project design and construction contracts (as applicable) in order to reduce the potential health risk due to exposure to toxic air contaminants. These features shall be submitted to the City for review and approval and be included on the Project drawings submitted for the construction-</u>	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.2 Air Quality (cont.)		
Impact AIR-6 (cont.)	related permit or on other documentation submitted to the City. Emissions from Project-related diesel trucks shall be reduced through implementing the following measures, if feasible: i. Prohibit TRUs from operating at loading docks for more than 30 minutes by posting signs at each loading dock presenting this TRU limit. ii. All newly constructed loading docks that can accommodate trucks with TRUs shall be equipped with electric vehicle (EV) charging equipment for heavy-duty trucks. This measure does not apply to temporary street parking for loading or unloading. iii. Require that all future tenants have a plan to convert their vehicle fleet(s) to zero emission vehicles (ZEVs) no later than 2040. This would be a condition of all leases at the project site. iv. Requiring truck-intensive tenants to use advanced exhaust technology (e.g., hybrid) or alternative fuels. v. Other measures that become available and are shown to effectively reduce criteria air pollutant emissions on site or off site if emission reductions are realized within the air basin. Measures to reduce emissions on site are preferable to off-site emissions reductions. vi. The project sponsor shall develop a Truck Route Plan that establishes operational truck routes to avoid sensitive receptors as identified in the environmental review analysis completed for the project. The purpose of the Truck Route Plan is to route trucks on streets that are located as far from offsite sensitive receptors as possible, while still maintaining the operational goals of the project. The Truck Route Plan must include route restrictions, truck calming, truck parking, and truck delivery restrictions to minimize exposure of nearby sensitive receptors to truck exhaust and fugitive particulate emissions. Prior to the commencement of operational activities, the project sponsor shall certify (1) compliance with the Truck Route Plan, and (2) all applicable requirements of the Truck Route Plan have been incorporated into tenant contract specifications.	
Impact AIR-7: Adoption of the Proposed Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. (Criteria 4 and 10) *(Less than Significant)*	None required.	Less Than Significant
Impact AIR-8: Future development under the Proposed Project, in conjunction with cumulative sources, could result in exposure of sensitive receptors to substantial levels of fine particulate matter (PM2.5) and TACs under cumulative conditions. (Criteria 8d, 8e, 8f, and 9) *(Significant and Unavoidable)*	**SCA 22: Diesel Particulate Matter Controls – Construction Related.** See above. **SCA 23: Exposure to Air Pollution (Toxic Air Contaminants).** See above. **SCA 24: Stationary Sources of Air Pollution (Toxic Air Contaminants).** See above. **SCA 25: Truck-Related Risk Reduction Measures (Toxic Air Contaminants).** See above. **SCA 26: Asbestos in Structures.** See above. **Mitigation Measure AIR-2: Text Changes to SCA 23, Reduce Exposure to Air Pollution – Toxic Air Contaminants.** See above.	Significant and Unavoidable

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.2 Air Quality (cont.)		
Impact AIR-8 (cont.)	**Mitigation Measure AIR-3: Text Changes to SCA 22, Reduce Exposure to Air Pollution – Toxic Air Contaminants.** See above. **Mitigation Measure AIR-4: Text Changes to SCA 23, Reduce Exposure to Air Pollution – Toxic Air Contaminants.** See above. **Mitigation Measure AIR-5: Text Changes to SCA 24, Stationary Sources of Air Pollution (Toxic Air Contaminants).** See above. **Mitigation Measure AIR-6: Text Changes to SCA 25, Truck-Related Risk Reduction Measures (Toxic Air Contaminants).** See above.	
Impact AIR-9: Adoption of the Proposed Project, in combination with cumulative projects, would not combine with other sources of odors that would adversely affect a substantial number of people. (Criteria 4 and 10) *(Less than Significant)*	None required.	Less Than Significant
4.3 Biological Resources		
Impact BIO-1: Adoption of the Proposed Project could have a substantial adverse effect, either directly, indirectly, or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS (special-status plant species, nesting birds, roosting bats, Alameda whipsnake). (Criterion 1) (*Less than Significant with Mitigation*)	**SCA 29: Tree Removal During Bird Breeding Season.** Requirement: To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of birds shall not occur during the bird breeding season of February 1 to August 15 (or during December 15 to August 15 for trees located in or near marsh, wetland, or aquatic habitats). If tree removal must occur during the bird breeding season, all trees to be removed shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to the start of work and shall be submitted to the City for review and approval. If the survey indicates the potential presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the California Department of Fish and Wildlife, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest. **SCA 31: Alameda Whipsnake Protection Measures.** ***a. Pre-Construction Survey Required*** Requirement: The project applicant shall hire a qualified biologist to conduct an Alameda whipsnake survey to identify the potential presence of Alameda whipsnakes at the project site. If the presence of Alameda whipsnakes is confirmed, the whipsnakes shall be captured and relocated away from the construction area by a qualified biologist in accordance with all applicable regulations and guidelines. The biologist shall submit the results of the survey (and capture/relocation if applicable) to the City for review and approval.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.3 Biological Resources (cont.)		
Impact BIO-1 (cont.)	***b. Information and Protocols for Construction Workers*** Requirement: The biologist from section (a) above shall instruct the project superintendent and the construction crews (primarily the clearing, demolition, and foundation crews) of the potential presence, status, and identification of Alameda whipsnakes. The biologist shall also establish a set of protocols for use during construction concerning the steps to take if a whipsnake is seen on the project site, including who to contact, to ensure that whipsnakes are not harmed or killed. The project applicant shall submit evidence of compliance with these requirements to the City for review and approval. ***c. Alameda Whipsnake Exclusion Fence*** Requirement: Unless alternative (equivalent or more effective) measures are recommended by the biologist, the project applicant shall install a solid fence to prevent whipsnakes from entering the work site. The snake exclusion fence shall be constructed as follows: i. Plywood sheets at least three feet in height, above ground. Heavy duty geotextile fabric approved by the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife may also be used for the snake exclusion fence; ii. Buried four to six inches into the ground; iii. Soil back-filled against the plywood fence to create a solid barrier at the ground; iv. Plywood sheets maintained in an upright position with wooden or masonry stakes; v. Ends of each plywood sheet overlapped to ensure a continuous barrier; and vi. Work site or construction area shall be completely enclosed by the exclusion fence or approved traps shall be installed at the ends of exclusion fence segments to allow capture and relocation of Alameda whipsnake away from the construction area by a qualified biologist. The location and design of the proposed exclusion fence shall be submitted for review and approval by the City and be included on plans for all construction-related permits. ***d. Alameda Whipsnake Protection During Construction*** Requirement: The project applicant shall comply with the requirements in the above sections during construction activities. The approved protocol from section (b) above shall be followed in the event Alameda whipsnakes are encountered. The snake exclusion fence from section (c) above shall be installed and remain in place throughout the construction period. All construction activities and equipment/materials/debris storage shall take place on the project-side of the exclusion fence. **Mitigation Measure BIO-1: Avoid and Minimize Impacts on Special-Status Plant Species.** To avoid and minimize impacts on special-status plant species, the City shall revise its development application form and adopt a new SCA that shall apply to residential development proposed on or adjacent to an undeveloped parcel(s) containing a contiguous vegetated area of one acre or more in size, located northeast of Highway 13 and Interstate 580, southeast of its intersection with State Highway 13 within the City of Oakland.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.3 Biological Resources (cont.)		
Impact BIO-1 (cont.)	The review process created through the revised application and SCA shall require the following measures: • Prior to and within 12 months of the start of construction, including clearing and grubbing, and grading, a qualified biologist shall conduct a properly timed special-status plant survey during the blooming period for pallid manzanita, western leatherwood, Presidio clarkia, Tiburon buckwheat, and most beautiful jewel flower within the species' suitable habitat within the project work limits. The survey will follow the CDFW *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* (CDFW, 2018a) and will determine the potential presence and distribution of sensitive natural communities. • If the survey concludes that special-status plant species are present within the project work limits, the biologist shall establish an adequate buffer area for each plant population to exclude activities that directly remove or alter the habitat of, or result in indirect adverse impacts on, the special-status plant species. • As necessary, all necessary approvals from USFWS/CDFW will be obtained for any impacts to special-status plant species protected under FESA or CESA. When Required: Prior to the start of construction; During construction; Ongoing as specified in the condition Initial Approval: Bureau of Planning Monitoring/Inspection: Bureau of Building **Mitigation Measure BIO-2: Avoid and Minimize Impacts on Nesting Birds.** To avoid and minimize impacts on nesting birds, the City shall adopt a new SCA that shall apply to residential development proposed on parcels located northeast of Highway 13 and Interstate 580 southeast of its intersection with State Highway 13 within the City of Oakland AND at least one of the following: a) Parcels containing structures that have been unoccupied / vacant for 12 months or more; or b) Parcels within 200 feet of a substantial vegetated area (generally contiguous one acre in size or larger) The SCA shall require the following measures: a) If construction begins during the nesting season (February 1 to August 15), a pre-construction survey for nesting raptors and other migratory birds shall be conducted by a qualified biologist within 7 days prior to the onset of construction, to identify any active nests. The surveys shall be submitted to the City for review and approval. i. For qualifying projects containing structures that have been unoccupied / vacant for 12 months or more, surveys shall be performed for the project site to locate any active passerine (e.g., songbird) or raptor (bird of prey) nests.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.3 Biological Resources (cont.)		
Impact BIO-1 (cont.)	ii. For qualifying projects within 200 feet of a substantial vegetated area, surveys shall be performed within 50 feet to locate any active passerine (e.g., songbird) nests and within 200 feet to locate any active raptor (bird of prey) nests. b) If no active nests are identified during the survey period, or if development is initiated during the non-breeding season (August 16 to January 31), construction may proceed with no restrictions. c) If the survey indicates the potential presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the California Department of Fish and Wildlife, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest. d) Any birds that begin nesting amid construction activities shall be assumed to be habituated to construction-related or similar noise and disturbance levels and no work exclusion zones shall be established around active nests in these cases. e) Any work that must occur within established no-disturbance buffers around active nests shall be monitored by a qualified biologist. If adverse effects in response to project work within the buffer are observed and could compromise the nest's success, work within the no-disturbance buffer shall halt until the nest occupants have fledged. When Required: Prior to start of construction. Initial Approval: Bureau of Planning Monitoring/Inspection: Bureau of Building **Mitigation Measure BIO-3: Avoid and Minimize Impacts on Special-Status Roosting Bats in Buildings.** To avoid and minimize impacts on special-status roosting bat species, the City shall adopt a new SCA that shall apply to development involving full demolition or relocation of structures that are vacant and/or abandoned and have been vacant and/or abandoned for 14 days or more during the preceding maternity season (April 15 – August 15). The SCA shall require the following measures: Requirement: The project applicant shall retain a qualified biologist (as defined by CDFW[3]) who is experienced with bat surveying techniques, behavior, and roosting habitat. The retained biologist shall conduct a pre-construction habitat assessment of the project area (focusing on buildings to be demolished or relocated) to identify potential bat habitat and/or signs of potentially active roost sites. Should the pre-construction habitat assessment not identify potential bat habitat and or signs of potentially active roost sites, no further action is required.	

[3] CDFW defines credentials of a qualified biologist within permits or authorizations issued for a project. Typical qualifications include a minimum of four years of academic training leading to a degree and a minimum of 2 years of experience conducting surveys for each species that may be present within the project area.

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.3 Biological Resources (cont.)		
Impact BIO-1 (cont.)	Should the pre-construction habitat assessment identify potential bat habitat and/or signs of potentially active roost sites within the project area (e.g., guano, urine staining, dead bats, etc.), the project applicant shall be required to implement the following measures: a) For projects starting demolition during the non-sensitive periods (August 16 – October 14, and March 2 – April 14), work shall be done under the supervision of a qualified biologist with restrictions such as: i. Potential bat roosting habitat or active roosts shall be disturbed only under clear weather conditions when precipitation is not forecast for three days, average wind speeds are less than 15 miles per hour, and when nighttime temperatures are at least 45 degrees Fahrenheit. ii. When appropriate, buildings shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost, likely in the evening. Under no circumstances shall active maternity roosts be disturbed until the roost disbands at the completion of the maternity roosting season or otherwise becomes inactive, as determined by the qualified biologist. – or – b) For projects starting demolition during one of the sensitive periods (maternity season/April 15 – August 15 or period of winter torpor/October 15 – March 1), the project applicant shall be required to implement the following measures: i. To the extent feasible, construction activities in areas identified as potential roosting habitat during the habitat assessment shall not occur during bat maternity roosting season and period of winter torpor (April 15 to August 15, and October 15 to March 1, respectively). ii. If avoidance of the bat maternity roosting season and period of winter torpor, defined above, is infeasible, the qualified biologist shall conduct pre-construction surveys of potential bat roost sites identified during the initial habitat assessment. The survey shall be submitted to the City for review and approval. iii. If no signs of potentially active roost sites are identified, no further action is required. iv. If active bat roosts or evidence of roosting is identified during pre-construction surveys, the qualified biologist shall determine, if possible, the type of roost and species. A no-disturbance buffer shall be established around roost sites either through the seasonal avoidance windows of April 15 to August 15 and October 15 to March 1, or until the qualified biologist determines the roosts are no longer active. The size of the no-disturbance buffer would be determined by the qualified biologist and would depend on the species present, roost type, existing screening around the roost site (such as dense vegetation or a building), as well as the type of construction activity that would occur around the roost site. v. Any work that must occur within established no-disturbance buffers shall be done under the supervision by a qualified biologist with restrictions such as:	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.3 Biological Resources (cont.)		
Impact BIO-1 (cont.)	a) Potential bat roosting habitat or active roosts shall be disturbed only under clear weather conditions when precipitation is not forecast for three days and when daytime temperatures are at least 50 degrees Fahrenheit. b) When appropriate, buildings shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost, likely in the evening and after bats have emerged from the roost to forage. Under no circumstances shall active maternity roosts be disturbed until the roost disbands at the completion of the maternity roosting season or otherwise becomes inactive, as determined by the qualified biologist. c) If adverse effects in response to project work within the no-disturbance buffers are observed, work within the no-disturbance buffer shall halt until the roost disbands. **Mitigation Measure BIO-4: Avoid and Minimize Impacts on Special-Status Roosting Bats in Trees.** To avoid and minimize impacts on special-status roosting bat species, the City shall adopt a new SCA that shall apply to residential development requiring a tree permit per the City's Tree Protection Ordinance (OMC Chap. 12.36). The SCA shall require the following measures: a) A qualified biologist (as defined by CDFW[4]) who is experienced with bat surveying techniques (including auditory sampling methods), behavior, and roosting habitat shall conduct a pre-construction habitat assessment of the subject tree to characterize potential bat habitat and identify potentially active roost sites. b) Trees with potential bat roosting habitat or active bat roost sites shall follow a two-step removal process which shall occur outside of the bat maternity roosting season and period of winter torpor (April 15 to August 15, and October 15 to March 1). c) On the first day and under supervision of the qualified biologist, tree branches and limbs not containing cavities or fissures in which bats could roost shall be cut using chainsaws or other handheld equipment. d) On the following day and under the supervision of the qualified biologist, the remainder of the tree may be trimmed or removed, either using chainsaws or other equipment (e.g., excavator or backhoe). e) All felled trees shall remain on the ground for at least 24 hours prior to chipping, off-site removal, or other processing to allow any bats to escape, or be inspected once felled by the qualified biologist to ensure no bats remain within the tree and/or branches. The tree will be removed on or after the third day. When Required: Prior to start of building demolition or tree removal.	

[4] CDFW defines credentials of a qualified biologist within permits or authorizations issued for a project. Typical qualifications include a minimum of four years of academic training leading to a degree and a minimum of 2 years of experience conducting surveys for each species that may be present within the project area.

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.3 Biological Resources (cont.)		
Impact BIO-1 (cont.)	Initial Approval: Bureau of Planning Monitoring/Inspection: Bureau of Building **Mitigation Measure BIO-5: Text changes to SCA 31, Alameda Whipsnake Protection Measures.** Add the following. e. Mitigation for Impacts to Alameda Whipsnake Habitat Requirement: To restore Alameda whipsnake critical habitat impacted by the project, the applicant shall have a qualified biologist experienced in identifying Alameda Whipsnake critical habitat conduct a preconstruction baseline survey of the project site, from which they shall then prepare and submit a Revegetation Plan (Plan) for review and approval by USFWS and if necessary CDFW, pursuant to regulatory agency permitting requirements. The Plan shall include detailed specifications for minimizing the introduction of invasive weeds and restoring all temporarily disturbed areas. The Plan shall include mitigation in accordance with USFWS and if necessary CDFW requirements to address permanent impacts to Alameda whipsnake critical habitat. The applicant or its designee shall ensure successful implementation of the Plan. As part of the preparation of the Vegetation Management Plan (VMP), as required by SCA 47, the VMP shall quantify the area of Alameda Whipsnake critical habitat that will be disturbed by implementing the VMP. The VMP shall be submitted to USFWS and if necessary CDFW. When Required: Prior to the start of ground disturbing activities, including clearing and grubbing, associated with construction; During construction; Ongoing as specified in the Revegetation Plan Initial Approval: Bureau of Building Monitoring/Inspection: Bureau of Building	
Impact BIO-2: Adoption of the Proposed Project could have a substantial adverse effect on riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations, or by CDFW or USFWS. (Criteria 1 and 2). *(Less than Significant with Mitigation)*	**SCA 58: Creek Protection Plan.** ***a. Creek Protection Plan Required*** Requirement: The project applicant shall submit a Creek Protection Plan for review and approval by the City. The Plan shall be included with the set of project drawings submitted to the City for site improvements and shall incorporate the contents required under section 13.16.150 of the Oakland Municipal Code including Best Management Practices (“BMPs”) during construction and after construction to protect the creek. Required BMPs are identified below in sections (b), (c), and (d). ***b. Construction BMPs*** Requirement: The Creek Protection Plan shall incorporate all applicable erosion, sedimentation, debris, and pollution control BMPs to protect the creek during construction. The measures shall include, but are not limited to, the following: i. On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the creek.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.3 Biological Resources (cont.)		
Impact BIO-2 (cont.)	ii. The project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent biodegradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected. iii. Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible. iv. All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be repacked and native vegetation planted. v. Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the City at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding. vi. Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains. vii. Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek. viii. Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the creek or storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site. ix. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed at least on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution. x. Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work. xi. Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, or storm drains.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.3 Biological Resources (cont.)		
Impact BIO-2 (cont.)	xii. All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board (RWQCB). xiii. Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to construction (or both sides of the creek if applicable) at the maximum practical distance from the creek centerline. This area shall not be disturbed during construction without prior approval of the City. ***c. Post-Construction BMPs*** Requirement: The project shall not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains. The Creek Protection Plan shall include site design measures to reduce the amount of impervious surface to maximum extent practicable. New drain outfalls shall include energy dissipation to slow the velocity of the water at the point of outflow to maximize infiltration and minimize erosion. ***d. Creek Landscaping*** Requirement: The project applicant shall include final landscaping details for the site on the Creek Protection Plan, or on a Landscape Plan, for review and approval by the City. Landscaping information shall include a planting schedule, detailing plant types and locations, and a system to ensure adequate irrigation of plantings for at least one growing season. Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival. ***e. Creek Protection Plan Implementation*** Requirement: The project applicant shall implement the approved Creek Protection Plan during and after construction. During construction, all erosion, sedimentation, debris, and pollution control measures shall be monitored regularly by the project applicant. The City may require that a qualified consultant (paid for by the project applicant) inspect the control measures and submit a written report of the adequacy of the control measures to the City. If measures are deemed inadequate, the project applicant. **Mitigation Measure BIO-1: Avoid and Minimize Impacts on Special-Status Plant Species.** See above.	
Impact BIO-3: Adoption of the Proposed Project would not have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (Criterion 3) *(Less than Significant)*	None required.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.3 Biological Resources (cont.)		
Impact BIO-4: Adoption of the Proposed Project could interfere substantially with the movement of a native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. (Criterion 4) *(Less than Significant with Mitigation)*	**SCA 28: Bird Collision Reduction Measures** Requirement: The project applicant shall submit a Bird Collision Reduction Plan for City review and approval to reduce potential bird collisions to the maximum feasible extent. The Plan shall include all of the following mandatory measures, as well as applicable and specific project Best Management Practice (BMP) strategies to reduce bird strike impacts to the maximum feasible extent. The project applicant shall implement the approved Plan. Mandatory measures include all of the following: i. For large buildings subject to federal aviation safety regulations, install minimum intensity white strobe lighting with three second flash instead of solid red or rotating lights. ii. Minimize the number of and co-locate rooftop-antennas and other rooftop structures. iii. Monopole structures or antennas shall not include guy wires. iv. Avoid the use of mirrors in landscape design. v. Avoid placement of bird-friendly attractants (i.e., landscaped areas, vegetated roofs, water features) near glass unless shielded by architectural features taller than the attractant that incorporate bird friendly treatments no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule), as explained below. vi. Apply bird-friendly glazing treatments to no less than 90 percent of all windows and glass between the ground and 60 feet above ground or to the height of existing adjacent landscape or the height of the proposed landscape. Examples of bird-friendly glazing treatments include the following: – Use opaque glass in window panes instead of reflective glass. – Uniformly cover the interior or exterior of clear glass surface with patterns (e.g., dots, stripes, decals, images, abstract patterns). Patterns can be etched, fritted, or on films and shall have a density of no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule). – Install paned glass with fenestration patterns with vertical and horizontal mullions no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule). – Install external screens over non-reflective glass (as close to the glass as possible) for birds to perceive windows as solid objects. – Install UV-pattern reflective glass, laminated glass with a patterned UV-reflective coating, or UV-absorbing and UV-reflecting film on the glass since most birds can see ultraviolet light, which is invisible to humans. – Install decorative grilles, screens, netting, or louvers, with openings no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule). – Install awnings, overhangs, sunshades, or light shelves directly adjacent to clear glass which is recessed on all sides. – Install opaque window film or window film with a pattern/design which also adheres to the “two-by-four” rule for coverage.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.3 Biological Resources (cont.)		
Impact BIO-4 (cont.)	vii. Reduce light pollution. Examples include the following: – Extinguish night-time architectural illumination treatments during bird migration season (February 15 to May 15 and August 15 to November 30). – Install time switch control devices or occupancy sensors on non-emergency interior lights that can be programmed to turn off during non-work hours and between 11:00 p.m. and sunrise. – Reduce perimeter lighting whenever possible. – Install full cut-off, shielded, or directional lighting to minimize light spillage, glare, or light trespass. – Do not use beams of lights during the spring (February 15 to May 15) or fall (August 15 to November 30) migration. viii. Develop and implement a building operation and management manual that promotes bird safety. Example measures in the manual include the following: – Donation of discovered dead bird specimens to an authorized bird conservation organization or museums (e.g., UC Berkeley Museum of Vertebrate Zoology) to aid in species identification and to benefit scientific study, as per all federal, state and local laws. – Distribution of educational materials on bird-safe practices for the building occupants. Contact Golden Gate Audubon Society or American Bird Conservancy for materials. – Asking employees to turn off task lighting at their work stations and draw office blinds, shades, curtains, or other window coverings at end of work day. – Install interior blinds, shades, or other window coverings in windows above the ground floor visible from the exterior as part of the construction contract, lease agreement, or CC&Rs. – Schedule nightly maintenance during the day or to conclude before 11 p.m., if possible. **SCA 29: Tree Removal During Bird Breeding Season.** See above. **Mitigation Measure BIO-1: Avoid and Minimize Impacts on Special-Status Plant Species.** See above. **Mitigation Measure BIO-2: Avoid and Minimize Impacts on Nesting Birds.** See above.	
Impact BIO-5: Adoption of the Proposed Project could conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Criterion 5) *(Less than Significant with Mitigation Measures)*	**SCA 28: Bird Collision Reduction Measures.** See above. **SCA 29: Tree Removal During Bird Breeding Season.** See above. **SCA 30: Tree Permit** ***a. Tree Permit Required*** Requirement: Pursuant to the City's Tree Protection Ordinance (OMC Chapter 12.36), the project applicant shall obtain a tree permit and abide by the conditions of that permit.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.3 Biological Resources (cont.)		
Impact BIO-5 (cont.)	***b. Tree Protection During Construction*** Requirement: Adequate protection shall be provided during the construction period for any trees which are to remain standing, including the following, plus any recommendations of an arborist: i. Before the start of any clearing, excavation, construction, or other work on the site, every protected tree deemed to be potentially endangered by said site work shall be securely fenced off at a distance from the base of the tree to be determined by the project's consulting arborist. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris which will avoid injury to any protected tree. ii. Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall be incorporated to allow the roots to breathe and obtain water and nutrients. Any excavation, cutting, filling, or compaction of the existing ground surface within the protected perimeter shall be minimized. No change in existing ground level shall occur within a distance to be determined by the project's consulting arborist from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree. iii. No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the project's consulting arborist from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within a distance from the base of any protected trees to be determined by the project's consulting arborist. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree. No sign, other than a tag showing the botanical classification, shall be attached to any protected tree. iv. Periodically during construction, the leaves of protected trees shall be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration. v. If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Department and the project's consulting arborist shall make a recommendation to the City Tree Reviewer as to whether the damaged tree can be preserved. If, in the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall require replacement of any tree removed with another tree or trees on the same site deemed adequate by the Tree Reviewer to compensate for the loss of the tree that is removed. vi. All debris created as a result of any tree removal work shall be removed by the project applicant from the property within two weeks of debris creation, and such debris shall be properly disposed of by the project applicant in accordance with all applicable laws, ordinances, and regulations.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.3 Biological Resources (cont.)		
Impact BIO-5 (cont.)	***c. Tree Replacement Plantings*** Requirement: Replacement plantings shall be required for tree removals for the purposes of erosion control, groundwater replenishment, visual screening, wildlife habitat, and preventing excessive loss of shade, in accordance with the following criteria: i. No tree replacement shall be required for the removal of nonnative species, for the removal of trees which is required for the benefit of remaining trees, or where insufficient planting area exists for a mature tree of the species being considered. ii. Replacement tree species shall consist of Sequoia sempervirens (Coast Redwood), Quercus agrifolia (Coast Live Oak), Arbutus menziesii (Madrone), Aesculus californica (California Buckeye), Umbellularia californica (California Bay Laurel), or other tree species acceptable to the Tree Division. iii. Replacement trees shall be at least twenty-four (24) inch box size, unless a smaller size is recommended by the arborist, except that three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate. iv. Minimum planting areas must be available on site as follows: – For Sequoia sempervirens, three hundred fifteen (315) square feet per tree; – For other species listed, seven hundred (700) square feet per tree. v. In the event that replacement trees are required but cannot be planted due to site constraints, an in-lieu fee in accordance with the City's Master Fee Schedule may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians. vi. The project applicant shall install the plantings and maintain the plantings until established. The Tree Reviewer of the Tree Division of the Public Works Department may require a landscape plan showing the replacement plantings and the method of irrigation. Any replacement plantings which fail to become established within one year of planting shall be replanted at the project applicant's expense. **SCA 31: Alameda Whipsnake Protection Measures.** See above. **SCA 58: Creek Protection Plan.** See above. **Mitigation Measure BIO-1: Avoid and Minimize Impacts on Special-Status Plant Species.** See above. **Mitigation Measure BIO-2: Avoid and Minimize Impacts on Nesting Birds.** See above. **Mitigation Measure BIO-3: Avoid and Minimize Impacts on Special-Status Roosting Bats in Buildings.** See above.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.3 Biological Resources (cont.)		
Impact BIO-5 (cont.)	**Mitigation Measure BIO-4: Avoid and Minimize Impacts on Special-Status Roosting Bats in Trees.** See above. **Mitigation Measure BIO-5: Text changes to SCA 31, Alameda Whipsnake Protection Measures.** See above.	
Impact BIO-6: Future development under the Proposed Project, combined with cumulative development, could result in significant cumulative impacts to biological resources. *(Less than Significant with Mitigation)*	**SCA 28: Bird Collision Reduction Measures.** See above. **SCA 29: Tree Removal During Bird Breeding Season.** See above. **SCA 30: Tree Permit.** See above. **SCA 31: Alameda Whipsnake Protection Measures.** See above. **SCA 58: Creek Protection Plan.** See above. **Mitigation Measure BIO-1: Avoid and Minimize Impacts on Special-Status Plant Species.** See above. **Mitigation Measure BIO-2: Avoid and Minimize Impacts on Nesting Birds.** See above. **Mitigation Measure BIO-3: Avoid and Minimize Impacts on Special-Status Roosting Bats in Buildings.** See above. **Mitigation Measure BIO-4: Avoid and Minimize Impacts on Special-Status Roosting Bats in Trees.** See above. **Mitigation Measure BIO-5: Text changes to SCA 31, Alameda Whipsnake Protection Measures.** See above.	Less Than Significant
4.4 Cultural Resources		
Impact CUL-1: Future development under the Proposed Project could cause a substantial adverse change in the significance of a historic architectural resource pursuant to CEQA Guidelines Section 15064.5. (Criterion 1) *(Significant and Unavoidable)*	**SCA 35: Property Relocation** Requirement: Pursuant to Policy 3.7 of the Historic Preservation Element of the Oakland General Plan, the project applicant shall make a good faith effort to relocate the historic resource to a site acceptable to the City. A good faith effort includes, at a minimum, all of the following: a) Advertising the availability of the building by: (1) posting of large visible signs (such as banners, at a minimum of 3' x 6' size or larger) at the site; (2) placement of advertisements in Bay Area news media acceptable to the City; and (3) contacting neighborhood associations and for-profit and not-for-profit housing and preservation organizations; b) Maintaining a log of all the good faith efforts and submitting that along with photos of the subject building showing the large signs (banners) to the City; c) Maintaining the signs and advertising in place for a minimum of 90 days; and d) Making the building available at no or nominal cost (the amount to be reviewed by the Oakland Cultural Heritage Survey) until removal is necessary for construction of a replacement project, but in no case for less than a period of 90 days after such advertisement.	Significant and Unavoidable

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.4 Cultural Resources		
Impact CUL-1 (cont.)	**SCA 70: Vibration Impacts on Adjacent Structures or Vibration-Sensitive Activities** Requirement: The project applicant shall submit a Vibration Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities located adjacent to the project site or within an established boundary from the project site. The Vibration Analysis shall identify design means and methods of construction that shall be utilized in order to not exceed the thresholds. The applicant shall implement the recommendations during construction. **Mitigation Measure CUL-1: Identify Architectural Historic Resources.** To facilitate the protection of architectural historic resources, the City shall create a ministerial process involving a screening assessment incorporated into the City of Oakland basic application for development review to determine when a building or structure is an eligible historic resource. The screening assessment shall be reviewed and approved by a City of Oakland Preservation Planner. Once the process is established, the City shall require discretionary review for the issuance of demolition permits of eligible historic resources unless, consistent with City regulations: rehabilitation is not feasible; demolition is necessary to protect health, safety, and/or welfare; or the benefit of demolition outweighs the loss of the structure.	
Impact CUL-2: Future development under the Proposed Project could cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. (Criterion 2) *(Less than Significant with Mitigation)*	**SCA 32: Archaeological and Paleontological Resources – Discovery During Construction** Requirement: Pursuant to *CEQA Guidelines* Section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented. In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.4 Cultural Resources (cont.)		
Impact CUL-2 (cont.)	specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense. In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant. **SCA 33: Archaeologically Sensitive Areas – Pre-Construction Measures** Requirement: The project applicant shall implement either Provision A (Intensive Pre- Construction Study) or Provision B (Construction ALERT Sheet) concerning archaeological resources. ***Provision A: Intensive Pre-Construction Study.*** The project applicant shall retain a qualified archaeologist to conduct a site-specific, intensive archaeological resources study for review and approval by the City prior to soil-disturbing activities occurring on the project site. The purpose of the site-specific, intensive archaeological resources study is to identify early the potential presence of history-period archaeological resources on the project site. At a minimum, the study shall include: a) Subsurface presence/absence studies of the project site. Field studies may include, but are not limited to, auguring and other common methods used to identify the presence of archaeological resources. b) A report disseminating the results of this research. c) Recommendations for any additional measures that could be necessary to mitigate any adverse impacts to recorded and/or inadvertently discovered cultural resources. If the results of the study indicate a high potential presence of historic-period archaeological resources on the project site, or a potential resource is discovered, the project applicant shall hire a qualified archaeologist to monitor any ground disturbing activities on the project site during construction and prepare an ALERT sheet pursuant to Provision B below that details what could potentially be found at the project site. Archaeological monitoring would include briefing construction personnel about the type of artifacts that may be present (as referenced in the ALERT sheet, required per Provision B below) and the procedures to follow if any artifacts are encountered, field recording and sampling in accordance with the Secretary of Interior's Standards and Guidelines for Archaeological Documentation, notifying the appropriate officials if human remains or cultural resources are discovered, and preparing a report to document negative findings after construction is completed if no archaeological resources are discovered during construction.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.4 Cultural Resources (cont.)		
Impact CUL-2 (cont.)	***Provision B: Construction ALERT Sheet.*** The project applicant shall prepare a construction "ALERT" sheet developed by a qualified archaeologist for review and approval by the City prior to soil-disturbing activities occurring on the project site. The ALERT sheet shall contain, at a minimum, visuals that depict each type of artifact that could be encountered on the project site. Training by the qualified archaeologist shall be provided to the project's prime contractor, any project subcontractor firms (including demolition, excavation, grading, foundation, and pile driving), and utility firms involved in soil-disturbing activities within the project site. The ALERT sheet shall state, in addition to the basic archaeological resource protection measures contained in other standard conditions of approval, all work must stop and the City's Environmental Review Officer contacted in the event of discovery of the following cultural materials: concentrations of shellfish remains; evidence of fire (ashes, charcoal, burnt earth, fire- cracked rocks); concentrations of bones; recognizable Native American artifacts (arrowheads, shell beads, stone mortars [bowls], humanly shaped rock); building foundation remains; trash pits, privies (outhouse holes); floor remains; wells; concentrations of bottles, broken dishes, shoes, buttons, cut animal bones, hardware, household items, barrels, etc.; thick layers of burned building debris (charcoal, nails, fused glass, burned plaster, burned dishes); wood structural remains (building, ship, wharf); clay roof/floor tiles; stone walls or footings; or gravestones. Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, and supervisory personnel. The ALERT sheet shall also be posted in a visible location at the project site. **Mitigation Measure CUL-2: Text changes to SCA 33: Archaeological and Paleontological Resources – Discovery During Construction.** Requirement: The project applicant shall implement ~~either~~ Provision A (Intensive Pre- Construction Study) ~~or~~ and Provision B (Construction ALERT Sheet) concerning archaeological resources. If Native American archaeological resources are identified or suspected in a project site, the City shall consult with a Native American representative(s) registered with the Native American Heritage Commission that is traditionally and culturally affiliated with the geographic area as described in Public Resources Code Section 21080.3.	
Impact CUL-3: Future development under the Proposed Project would not disturb human remains, including those interred outside of formal cemeteries. (Criterion 3) *(Less than Significant)*	**SCA 34: Human Remains – Discovery During Construction** Requirement: Pursuant to CEQA Guidelines Section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the project applicant.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.4 Cultural Resources (cont.)		
Impact CUL-4: Future development under the Proposed Project, combined with cumulative development, could result in cumulatively considerable impacts for historic architectural resources. *(Significant and Unavoidable)*	**SCA 35: Property Relocation.** See above. **SCA 70: Vibration Impacts on Adjacent Structures or Vibration-Sensitive Activities.** See above. **Mitigation Measure CUL-1: Identify Architectural Historic Resources.** See above	Significant and Unavoidable
Impact CUL-5: Adoption of the Proposed Project, combined with cumulative development, could result in less than significant cumulative impacts for archaeological resources and human remains. *(Less than Significant with Mitigation)*	**SCA 32: Archaeological and Paleontological Resources – Discovery During Construction.** See above. **SCA 33: Archaeologically Sensitive Areas – Pre-Construction Measures.** See above. **SCA 34: Human Remains – Discovery During Construction.** See above. **Mitigation Measure CUL-2: Text changes to SCA 33: Archaeological and Paleontological Resources – Discovery During Construction.** See above.	Less Than Significant
4.5 Energy		
Impact ENE-1: Adoption of the Proposed Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources during project construction and operation or conflict with or obstruct a State or local plan for renewable energy or energy efficiency. (Criteria 1 and 2) *(Less than Significant)*	None required.	Less Than Significant
Impact ENE-2: Adoption of the Proposed Project, combined with cumulative development, would not result in energy use that would be considered wasteful and unnecessary or conflict with or obstruct a State or local plan for renewable energy or energy efficiency under cumulative conditions. *(Less than Significant)*	None required.	Less Than Significant
4.6 Geology, Soils, and Paleontological Resources		
Impact GEO-1: Adoption of the Proposed Project would not expose people or structures to substantial risk of loss, injury, or death involving: rupture of a known earthquake fault, strong seismic ground shaking; seismic-related ground failure, including liquefaction, lateral spreading, subsidence, or collapse. (Criteria 1a through 1c) *(Less than Significant)*	**SCA 36: Construction-Related Permit(s).** Requirement: The Project applicant shall obtain all required construction-related permits/approvals from the City. The Project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction. **SCA 37: Soils Report.** Requirement: The project applicant shall submit a soils report prepared by a registered geotechnical engineer for City review and approval. The soils report shall contain, at a minimum, field test results and observations regarding the nature, distribution and strength of existing soils, and recommendations for appropriate grading practices and project design. The project applicant shall implement the recommendations contained in the approved report during project design and construction.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.6 Geology, Soils, and Paleontological Resources (cont.)		
Impact GEO-1 (cont.)	**SCA 38: Earthquake Fault Zone.** Requirement: The project applicant shall submit a site-specific fault location investigation, as defined in California Geological Survey Note 49 (as amended), prepared by a certified engineering geologist for City review and approval containing at a minimum the results of subsurface investigations, locations of hazardous faults adjacent to the project site, recommended setback distances of proposed structures from hazardous faults, and additional recommended measures to accommodate warping and distributive deformation associated with faulting (e.g., strengthened foundations, engineering design, flexible utility connections). The project applicant shall implement the recommendations contained in the approved report during project design and construction. **SCA 39: Seismic Hazards Zone (Landslide/Liquefaction).** The Project applicant shall comply with the following restrictions: Requirement: The Project applicant shall submit a site-specific geotechnical report, consistent with California Geological Survey Special Publication 117 (as amended), prepared by a registered geotechnical engineer for City review and approval containing at a minimum a description of the geological and geotechnical conditions at the site, and evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The Project applicant shall implement the recommendations contained in the approved report during project design and construction.	
Impact GEO-2: Adoption of the Proposed Project would not expose people or structures to substantial risk of loss, injury, or death involving landslides. (Criterion 1d) *(Less than Significant)*	**SCA 36: Construction Related Permits.** See above. **SCA 37: Soils Report.** See above. **SCA 38: Earthquake Fault Zone.** See above. **SCA 39: Seismic Hazards Zone.** See above.	Less Than Significant
Impact GEO-3: Adoption of the Proposed Project would not result in substantial soil erosion or loss of topsoil, creating substantial risks to life, property, or creeks/waterways. (Criterion 2) *(Less than Significant)*	**SCA 48: Erosion and Sedimentation Control Measures for Construction.** See Section 4.9, Hydrology and Water Quality, below. **SCA 49: Erosion and Sedimentation Control Plan for Construction.** See Section 4.9, Hydrology and Water Quality, below. **SCA 50: State Construction General Permit.** See Section 4.9, Hydrology and Water Quality, below. **SCA 51: Drainage Plan for Post-Construction Stormwater Runoff on Hillside Properties.** See Section 4.9, Hydrology and Water Quality, below. **SCA 52: Site Design Measures to Reduce Stormwater Runoff.** See Section 4.9, Hydrology and Water Quality, below. **SCA 53: Source Control Measures to Limit Stormwater Pollution.** See Section 4.9, Hydrology and Water Quality, below.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.6 Geology, Soils, and Paleontological Resources (cont.)		
Impact GEO-3 (cont.)	**SCA 54: NPDES C.3 Stormwater Requirements for Regulated Projects.** See Section 4.9, Hydrology and Water Quality, below. **SCA 55: NPDES C.3 Stormwater Requirements for Small Projects.** See Section 4.9, Hydrology and Water Quality, below.	
Impact GEO-4: Adoption of the Proposed Project would not be located on expansive soil creating substantial risks to life or property. (Criterion 3) *(Less than Significant)*	**SCA 36: Construction Related Permits.** See above. **SCA 37: Soils Report.** See above. **SCA 38: Earthquake Fault Zone.** See above. **SCA 39: Seismic Hazards Zone.** See above.	Less Than Significant
Impact GEO-5: Adoption of the Proposed Project would not be located above a well, pit, swamp, mound, tank vault, or unmarked sewer line, creating substantial risks to life or property. (Criterion 4) *(Less than Significant)*	**SCA 36: Construction Related Permits.** See above. **SCA 37: Soils Report.** See above. **SCA 38: Earthquake Fault Zone.** See above. **SCA 39: Seismic Hazards Zone.** See above.	Less Than Significant
Impact GEO-6: Adoption of the Proposed Project would not directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature. (Criterion 7) *(Less than Significant)*	**SCA 32, Archaeological and Paleontological Resources.** See Section 4.4 Cultural Resources, above.	Less Than Significant
Impact GEO-7: Adoption of the Proposed Project, combined with cumulative development, would not result in significant cumulative impacts to geology, soils, and paleontological resources. *(Less than Significant)*	**SCA 32: Archaeological and Paleontological Resources.** See Section 4.4 Cultural Resources, above. **SCA 36: Construction Related Permits.** See above. **SCA 37: Soils Report.** See above. **SCA 38: Earthquake Fault Zone.** See above. **SCA 39: Seismic Hazards Zone.** See above. **SCA 48: Erosion and Sedimentation Control Measures for Construction.** See Section 4.9, Hydrology and Water Quality, below. **SCA 49: Erosion and Sedimentation Control Plan for Construction.** See Section 4.9, Hydrology and Water Quality, below. **SCA 50: State Construction General Permit.** See Section 4.9, Hydrology and Water Quality, below. **SCA 51: Drainage Plan for Post-Construction Stormwater Runoff on Hillside Properties.** See Section 4.9, Hydrology and Water Quality, below. **SCA 52: Site Design Measures to Reduce Stormwater Runoff.** See Section 4.9, Hydrology and Water Quality, below.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.6 Geology, Soils, and Paleontological Resources (cont.)		
Impact GEO-7 (cont.)	**SCA 53: Source Control Measures to Limit Stormwater Pollution.** See Section 4.9, Hydrology and Water Quality, below. **SCA 54: NPDES C.3 Stormwater Requirements for Regulated Projects.** See Section 4.9, Hydrology and Water Quality, below. **SCA 55: NPDES C.3 Stormwater Requirements for Small Projects.** See Section 4.9, Hydrology and Water Quality, below.	
4.7 Greenhouse Gas Emissions		
Impact GHG-1: Adoption of the Proposed Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. (Criterion 1) *(Less than Significant with Mitigation)*	**SCA 21 (Criteria Air Pollutant Controls – Construction Related).** See Section 4.1. Air Quality, above. **SCA 22 (Diesel Particulate Matter Controls – Construction Related).** See Section 4.1. Air Quality, above. **SCA 23 (Exposure to Air Pollution (Toxic Air Contaminants).** See Section 4.1. Air Quality, above. **SCA 24 (Stationary Sources of Air Pollution (Toxic Air Contaminants).** See Section 4.1. Air Quality, above. **SCA 41: Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist.** Requirement: The project applicant shall implement all the measures in the Equitable Climate Action Plan (ECAP) Consistency Checklist that was submitted during the Planning entitlement phase. a. For physical ECAP Consistency Checklist measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits. b. For physical ECAP Consistency Checklist measures to be incorporated into the design of the project, the measures shall be implemented during construction. c. For ECAP Consistency Checklist measures that are operational but not otherwise covered by these SCAs, including but not limited to the requirement for transit passes or additional Transportation Demand Management measures, the applicant shall provide notice of these measures to employees and/or residents and post these requirements in a public place such as a lobby or work area accessible to the employees and/or residents. **SCA 42: Greenhouse Gas (GHG) Reduction Plan.** This requirement applies to projects which: (a) involve a land use development (i.e., a project that does not require a permit from the Bay Area Air Quality Management District [BAAQMD] to operate), and (b) does not commit to all of the GHG emissions reductions strategies described on the ECAP Consistency Checklist (SCA 41 above), as originally adopted by the Planning Commission on December 16, 2020 and as may be amended administratively from time to time.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.7 Greenhouse Gas Emissions (cont.)		
Impact GHG-1 (cont.)	***a. Greenhouse Gas (GHG) Reduction Plan Required*** Requirement: The project applicant shall retain a qualified air quality consultant to develop a Greenhouse Gas (GHG) Reduction Plan for City review and approval and shall implement the approved GHG Reduction Plan. The goal of the GHG Reduction Plan shall be to increase energy efficiency and to reduce GHG emissions to at least the amount that would be achieved by committing to all of the emissions reductions strategies identified on the ECAP Consistency Checklist as the City's project-level implementation of its Equitable Climate Action Plan (adopted in 2020), which calls for reducing city-wide GHG emissions by 56 percent below 2005 levels by 2030 and 83 percent by 2050. The GHG Reduction Plan shall include, at a minimum, (a) a detailed quantified GHG emissions inventory for the project taking into consideration energy efficiencies included as part of the project (including proposed mitigation measures, project design features, those strategies being implemented and other City requirements), (b) for each ECAP Consistency Checklist strategy that the project will not meet, a quantified calculation of the additional GHG emission reductions that would have occurred had it implemented the GHG emissions reduction measure consistent with the ECAP Consistency Checklist, (c) a quantified strategy for achieving an GHG emission reduction equivalent to the reduction that would have resulted from complying with the ECAP Consistency Checklist strategy, and (d) requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. If the project is to be constructed in phases, the GHG Reduction Plan shall provide GHG emission scenarios by phase. Potential additional GHG reduction measures to be considered include, but are not be limited to, measures recommended in BAAQMD's latest CEQA Air Quality Guidelines, the California Air Resources Board Scoping Plan (December 2008, as may be revised), the California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures (August 2010, as may be revised), the California Attorney General's website, and Reference Guides on Leadership in Energy and Environmental Design (LEED) published by the U.S. Green Building Council. The types of allowable GHG reduction measures include the following (listed in order of City preference): (1) physical design features; (2) operational features; and (3) the payment of fees to fund GHG-reducing programs (i.e., the purchase of "carbon credits") as explained below. The allowable locations of the GHG reduction measures include the following (listed in order of City preference): (1) the project site; (2) off-site within the City of Oakland; (3) off-site within the San Francisco Bay Area Air Basin; then (4) off-site within the State of California. As with preferred locations for the implementation of all GHG reductions measures, the preference for carbon credit purchases include those that can be achieved as follows (listed in order of City preference): (1) within the City of Oakland; (2) within the San Francisco Bay Area Air Basin; then (3) within the State of California. The cost of carbon credit purchases shall be based on current market value at the time purchased and shall be based on the project's net difference operational emissions estimated in the GHG Reduction Plan for the project as compared to the Checklist baseline.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.7 Greenhouse Gas Emissions (cont.)		
Impact GHG-1 (cont.)	For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits. ***b. GHG Reduction Plan Implementation During Construction*** Requirement: The project applicant shall implement the GHG Reduction Plan during construction of the project. For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be implemented during construction. For physical GHG reduction measures to be incorporated into off-site projects, the project applicant shall obtain all necessary permits/approvals and the measures shall be included on drawings and submitted to the City Planning Director or his/her designee for review and approval. These off-site improvements shall be installed prior to completion of the subject project (or prior to completion of the project phase for phased projects). For GHG reduction measures involving the purchase of carbon credits, evidence of the payment/purchase shall be submitted to the City for review and approval prior to completion of the project (or prior to completion of the project phase, for phased projects). ***c. GHG Reduction Plan Implementation After Construction*** Requirement: The project applicant shall implement the GHG Reduction Plan after construction of the project (or at the completion of the project phase for phased projects). For operational GHG reduction measures to be incorporated into the project or off-site projects, the measures shall be implemented on an indefinite and ongoing basis. The project applicant shall satisfy the following requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. The GHG Reduction Plan requires regular periodic evaluation over the life of the project (generally estimated to be at least 40 years) to determine how the Plan is achieving required GHG emissions reductions over time, as well as the efficacy of the specific additional GHG reduction measures identified in the Plan. – *Annual Report*. Implementation of the GHG reduction measures and related requirements shall be ensured through compliance with Conditions of Approval adopted for the project. Generally, starting two years after the City issues the first Certificate of Occupancy for the project, the project applicant shall prepare each year of the useful life of the project an Annual GHG Emissions Reduction Report (“Annual Report”), for review and approval by the City Planning Director or his/her designee. The Annual Report shall be submitted to an independent reviewer of the City’s choosing, to be paid for by the project applicant. The Annual Report shall summarize the project’s implementation of GHG reduction measures over the preceding year, intended upcoming changes, compliance with the conditions of the Plan, and include a brief summary of the previous year’s Annual Report results (starting the second year). The Annual Report shall include a comparison of annual project emissions to the Checklist baseline emissions reported in the GHG Plan. The GHG Reduction Plan shall be considered fully attained when project emissions are less than the Checklist baseline, as confirmed by the City through an established monitoring program. Monitoring and reporting activities will continue at the City’s discretion, as discussed below.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.7 Greenhouse Gas Emissions (cont.)		
Impact GHG-1 (cont.)	– *Corrective Procedure.* If the third Annual Report, or any report thereafter, indicates that, in spite of the implementation of the GHG Reduction Plan, the project is not achieving the GHG reduction goal, the project applicant shall prepare a report for City review and approval, which proposes additional or revised GHG measures to better achieve the GHG emissions reduction goals, including without limitation, a discussion on the feasibility and effectiveness of the menu of other additional measures ("Corrective GHG Action Plan"). The project applicant shall then implement the approved Corrective GHG Action Plan. If, one year after the Corrective GHG Action Plan is implemented, the required GHG emissions reduction target is still not being achieved, or if the project applicant fails to submit a report at the times described above, or if the reports do not meet City requirements outlined above, the City may, in addition to its other remedies, (a) assess the project applicant a financial penalty based upon actual percentage reduction in GHG emissions as compared to the percent reduction in GHG emissions established in the GHG Reduction Plan; or (b) refer the matter to the City Planning Commission for scheduling of a compliance hearing to determine whether the project's approvals should be revoked, altered or additional conditions of approval imposed. The penalty as described in (a) above shall be determined by the City Planning Director or his/her designee and be commensurate with the percentage GHG emissions reduction not achieved compared to the applicable numeric significance thresholds described in the GHG Reduction Plan. In determining whether a financial penalty or other remedy is appropriate, the City shall not impose a penalty if the project applicant has made a good faith effort to comply with the GHG Reduction Plan. The City would only have the ability to impose a monetary penalty after a reasonable cure period and in accordance with the enforcement process outlined in Planning Code Chapter 17.152. If a financial penalty is imposed, such penalty sums shall be used by the City solely toward the implementation of the Equitable Climate Action Plan. – *Timeline Discretion and Summary.* The City shall have the discretion to reasonably modify the timing of reporting, with reasonable notice and opportunity to comment by the applicant, to coincide with other related monitoring and reporting required for the project. **Mitigation Measure AIR-1 (Text Changes to SCA 21, Criteria Air Pollutant Controls Construction Related)**. See Section 4.1. Air Quality, above. **SCA 78: Transportation and Parking Demand Management.** See Section 4.15, Transportation and Circulation, below.	
Impact GHG-2: Adoption of the Proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs. (Criterion b) *(Less than Significant with Mitigation)*	**Mitigation Measure AIR-1: Text Changes to SCA 21, Criteria Air Pollutant Controls – Construction Related.** See Section 4.1. Air Quality, above. **SCA 21 (Criteria Air Pollutant Controls – Construction Related).** See Section 4.1. Air Quality, above.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.7 Greenhouse Gas Emissions (cont.)		
Impact GHG-2 (cont.)	**SCA 22 (Diesel Particulate Matter Controls – Construction Related).** See Section 4.1. Air Quality, above. **SCA 23 (Exposure to Air Pollution (Toxic Air Contaminants).** See Section 4.1. Air Quality, above. **SCA 24 (Stationary Sources of Air Pollution (Toxic Air Contaminants).** See Section 4.1. Air Quality, above. **SCA 41: Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist.** See above. **SCA 42: Greenhouse Gas (GHG) Reduction Plan.** See above.	
4.8 Hazards and Hazardous Materials		
Impact HAZ-1: Adoption of the Proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials. (Criteria 1 and 2) *(Less than Significant)*	**SCA 43: Hazardous Materials Related to Construction.** Requirement: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following: a. Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction; b. Avoid overtopping construction equipment fuel gas tanks; c. During routine maintenance of construction equipment, properly contain and remove grease and oils; d. Properly dispose of discarded containers of fuels and other chemicals; e. Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and f. If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.8 Hazards and Hazardous Materials (cont.)		
Impact HAZ-1 (cont.)	**SCA 44: Hazardous Building Materials and Site Contamination.** ***a. Hazardous Building Materials Assessment*** Requirement: The project applicant shall submit a comprehensive assessment report to the Bureau of Building, signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials (ACMs), lead-based paint (LBP), polychlorinated biphenyls (PCBs), and any other building materials or stored materials classified as hazardous materials by State or federal law. If LBP, ACMs, PCBs, or any other building materials or stored materials classified as hazardous materials are present, the project applicant shall submit specifications prepared and signed by a qualified environmental professional, for the stabilization and/or removal of the identified hazardous materials in accordance with all applicable laws and regulations. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency. ***b. Environmental Site Assessment Required*** Requirement: The project applicant hall submit a Phase I Environmental Site Assessment report, and Phase II Environmental Site Assessment report if warranted by the Phase I report, for the project site for review and approval by the City. The report(s) shall be prepared by a qualified environmental assessment professional and include recommendations for remedial action, as appropriate, for hazardous materials. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency. ***c. Health and Safety Plan Required*** Requirement: The project applicant shall submit a Health and Safety Plan for the review and approval by the City in order to protect project construction workers from risks associated with hazardous materials. The project applicant shall implement the approved Plan. ***d. Best Management Practices (BMPs) Required for Contaminated Site*** Requirement: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential soil and groundwater hazards. These shall include the following: i. Soil generated by construction activities shall be stockpiled on-site in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling and handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state, and federal requirements. ii. Groundwater pumped from the subsurface shall be contained on-site in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.8 Hazards and Hazardous Materials (cont.)		
Impact HAZ-1 (cont.)	**SCA 45: Hazardous Materials Business Plan** Requirement: The project applicant shall submit a Hazardous Materials Business Plan for review and approval by the City, and shall implement the approved Plan. The approved Plan shall be kept on file with the City and the project applicant shall update the Plan as applicable. The purpose of the Hazardous Materials Business Plan is to ensure that employees are adequately trained to handle hazardous materials and provides information to the Fire Department should emergency response be required. Hazardous materials shall be handled in accordance with all applicable local, state, and federal requirements. The Hazardous Materials Business Plan shall include the following: a. The types of hazardous materials or chemicals stored and/or used on-site, such as petroleum fuel products, lubricants, solvents, and cleaning fluids. b. The location of such hazardous materials. c. An emergency response plan including employee training information. d. A plan that describes the manner in which these materials are handled, transported, and disposed.	
Impact HAZ-2: Adoption of the Proposed Project would not release hazardous materials; emit hazardous emissions; or handle acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (Criteria 3 and 4) *(Less than Significant)*	**SCA 43: Hazardous Materials Related to Construction.** See above. **SCA 44: Hazardous Building Materials and Site Contamination.** See above. **SCA 45: Hazardous Materials Business Plan.** See above. **SCA 75: Construction Activity in the Public Right-of-Way** ***a. Obstruction Permit Required*** Requirement: The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public-right-of-way, including City streets, side*walks, bicycle facilities, and bus stops.* ***b. Traffic Control Plan Required*** Requirement: In the event of obstructions to vehicle or bicycle travel lanes, bus stops, or sidewalks, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian accommodations (or detours, if accommodations are not feasible), including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The Traffic Control Plan shall be in conformance with the City's Supplemental Design Guidance for Accommodating Pedestrians, Bicyclists, and Bus Facilities in Construction Zones. The project applicant shall implement the approved plan during construction.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.8 Hazards and Hazardous Materials (cont.)		
Impact HAZ-3: Adoption of the Proposed Project would not create an impact as a result of being located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, could create a significant hazard to the public or the environment. (Criterion 5) *(Less than Significant)*	**SCA 43: Hazardous Materials Related to Construction.** See above. **SCA 44: Hazardous Building Materials and Site Contamination.** See above.	Less Than Significant
Impact HAZ-4: Adoption of the Proposed Project would not result in a safety hazard or excessive noise for people residing or working in the Plan Area related to a public airport or public use airport. (Criteria 7 and 8) *(Less than Significant)*	None required.	Less Than Significant
Impact HAZ-5: Adoption of the Proposed Project would not result in less than two emergency access routes for streets exceeding 600 feet in length unless otherwise determined to be acceptable by the Fire Chief, or his/her designee, in specific instances due to climatic, geographic, topographic, or other conditions (Criterion 6) *(Less than Significant)*	None required.	Less Than Significant
Impact HAZ-6: Adoption of the Proposed Project could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Criterion 9) *(Significant and Unavoidable)*	**SCA 75: Construction Activity in the Public Right-of-Way.** See above.	Significant and Unavoidable
Impact HAZ-7: Adoption of the Proposed Project would not expose people or structures to significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. (Criterion 10) *(Less than Significant)*	**SCA 46: Fire Safety Phasing Plan.** Requirement: The project applicant shall submit a Fire Safety Phasing Plan for City review and approval, and shall implement the approved Plan. The Fire Safety Phasing Plan shall include all of the fire safety features and emergency vehicle access incorporated into each phase of the project and the schedule for implementation of the features. When Required: Prior to approval of construction-related permit Initial and Revision Approval: Oakland Fire Department Monitoring/Inspection: Bureau of Building **SCA 47: Designated Very High Fire Severity Zone – Vegetation Management** ***a. Vegetation Management Plan Required*** Requirement: The project applicant shall submit a Vegetation Management Plan for City review and approval, and shall implement the approved Plan prior to, during, and after construction of the project. The Vegetation Management Plan may be combined with the Landscape Plan otherwise required by the Conditions of Approval. The Vegetation Management Plan shall include, at a minimum, the following measures:	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.8 Hazards and Hazardous Materials (cont.)		
Impact HAZ-7 (cont.)	i. Removal of all tree branches and vegetation that overhang the horizontal building roof line and chimney areas within 10 feet vertically; ii. Removal of leaves and needles from roofs and rain gutters; iii. Planting and placement of fire-resistant plants around the house and phasing out flammable vegetation, however, ornamental vegetation shall not be planted within 5 feet of the foundation of the residential structure; iv. Trimming back vegetation around windows; Removal of flammable vegetation on hillside slopes greater than 20%; Defensible space requirements shall clear all hillsides of non-ornamental vegetation within 30 feet of the residential structure on slopes of 5% or less, within 50 feet on slopes on 5 to 20% and within 100 feet or to the property line on slopes greater than 20%. v. All trees shall be pruned up at least ¼ the height of the tree from the ground at the base of the trunk; vi. Clearing out ground-level brush and derris; and all non-ornamental plants, seasonal weeds, and grasses, brush, leaf litter and debris within 30 feet of the residential, structure shall be cut, raked, and removed from the parcel. vii. Stacking woodpiles away from structures at least 20 feet from residential structures. viii. If a biological report, prepared by a qualified biologist and reviewed by the Bureau of Planning, identifies threatened or endangered species on the parcel, the Vegetation Management Plan shall include islands of habitat refuge for the species noted on a site plan and appropriate fencing for the species shall be installed. Clearing of vegetation within these islands of refuge shall occur solely for the purpose of fire suppression within a designated Very High Fire Severity Zone and only upon the Fire Code Official approving specific methods and timeframes for clearing that take into account the specific flora and fauna species. ***b. Fire Safety Prior to Construction*** Requirement: The project plans shall specify that prior to construction, the project applicant shall ensure that the project contractor cuts, rakes and removes all combustible ground level vegetation project to a height of 6” or less from the construction, access and staging areas to reduce the threat of fire ignition per Sections 304.1.1 and 304.1.2 of the California Fire Code. ***c. Fire Safety During Construction*** Requirement: The project applicant shall require the construction contractor to implement spark arrestors on all construction vehicles and equipment to minimize accidental ignition of dry construction debris and surrounding dry vegetation. Per section 906 of the California Fire Code, during construction, the contractor shall have at minimum three (3) type 2A10BC fire extinguishers present on the job site, with current SFM service tags attached and these extinguishers shall be deployed in the immediate presence of workers for use in the event of an ignition.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.8 Hazards and Hazardous Materials (cont.)		
Impact HAZ-7 (cont.)	***d. Smoking Prohibition*** Requirement: The project applicant shall require the construction contractor to implement a no smoking policy on the site and surrounding area during construction per Section 310.8 of the California Fire Code.	
Impact HAZ-8: Adoption of the Proposed Project, combined with cumulative development, would not result in significant cumulative impacts related to hazards and hazardous materials. *(Less than Significant)*	**SCA 43: Hazardous Materials Related to Construction.** See above. **SCA 44: Hazardous Building Materials and Site Contamination.** See above. **SCA 45: Hazardous Materials Business Plan.** See above. **SCA 46: Fire Safety Phasing Plan.** See above. **SCA 75: Construction Activity in the Public Right-of-Way** See above.	Less Than Significant
Impact HAZ-9: Adoption of the Proposed Project, combined with cumulative development, could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. *(Significant and Unavoidable)*	**SCA 75: Construction Activity in the Public Right-of-Way.** See above.	Significant and Unavoidable
4.9 Hydrology and Water Quality		
Impact HYD-1: Adoption of the Proposed Project would not violate water quality standards or waste discharge requirements or otherwise substantially degrade water quality. (Criteria 1 and 7) *(Less than Significant)*	**SCA 48: Erosion and Sedimentation Control Measures for Construction** Requirement: The project applicant shall implement Best Management Practices (BMPs) to reduce erosion, sedimentation, and water quality impacts during construction to the maximum extent practicable. At a minimum, the project applicant shall provide filter materials deemed acceptable to the City at nearby catch basins to prevent any debris and dirt from flowing into the City's storm drain system and creeks. **SCA 49: Erosion and Sedimentation Control Plan for Construction** ***a. Erosion and Sedimentation Control Plan Required*** Requirement: The project applicant shall submit an Erosion and Sedimentation Control Plan to the City for review and approval. The Erosion and Sedimentation Control Plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading and/or construction operations. The Plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the City. The Plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.9 Hydrology and Water Quality (cont.)		
Impact HYD-1 (cont.)	***b. Erosion and Sedimentation Control During Construction*** Requirement: The project applicant shall implement the approved Erosion and Sedimentation Control Plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Bureau of Building. **SCA 50: State Construction General Permit** Requirement: The project applicant shall comply with the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB). The project applicant shall submit a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and other required Permit Registration Documents to SWRCB. The project applicant shall submit evidence of compliance with Permit requirements to the City. **SCA 51: Drainage Plan for Post-Construction Stormwater Runoff on Hillside Properties** Requirement: The project applicant shall submit and implement a Drainage Plan to be reviewed and approved by the City. The Drainage Plan shall include measures to reduce the volume and velocity of post-construction stormwater runoff to the maximum extent practicable. Stormwater runoff shall not be augmented to adjacent properties, creeks, or storm drains. The Drainage Plan shall be included with the project drawings submitted to the City for site improvements. **SCA 52: Site Design Measures to Reduce Stormwater Runoff** Requirement: Pursuant to Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES), the project applicant is encouraged to incorporate appropriate site design measures into the project to reduce the amount of stormwater runoff. These measures may include, but are not limited to, the following: a. Minimize impervious surfaces, especially directly connected impervious surfaces and surface parking areas; b. Utilize permeable paving in place of impervious paving where appropriate; c. Cluster structures; d. Direct roof runoff to vegetated areas; e. Preserve quality open space; and f. Establish vegetated buffer areas. **SCA 53: Source Control Measures to Limit Stormwater Pollution** Requirement: Pursuant to Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES), the project applicant is encouraged to incorporate appropriate source control measures to limit pollution in stormwater runoff. These measures may include, but are not limited to, the following: a. Stencil storm drain inlets “No Dumping – Drains to Bay;” b. Minimize the use of pesticides and fertilizers;	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.9 Hydrology and Water Quality (cont.)		
Impact HYD-1 (cont.)	c. Cover outdoor material storage areas, loading docks, repair/maintenance bays and fueling areas; d. Cover trash, food waste, and compactor enclosures; and e. Plumb the following discharges to the sanitary sewer system, subject to City approval: f. Discharges from indoor floor mats, equipment, hood filter, wash racks, and, covered outdoor wash racks for restaurants; g. Dumpster drips from covered trash, food waste, and compactor enclosures; h. Discharges from outdoor covered wash areas for vehicles, equipment, and accessories; i. Swimming pool water, if discharge to on-site vegetated areas is not feasible; and j. Fire sprinkler teat water, if discharge to on-site vegetated areas is not feasible. **SCA 54: NPDES C.3 Stormwater Requirements for Regulated Projects** ***a. Post-Construction Stormwater Management Plan Required*** Requirement: The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following: i. Location and size of new and replaced impervious surface; ii. Directional surface flow of stormwater runoff; iii. Location of proposed on-site storm drain lines; iv. Site design measures to reduce the amount of impervious surface area; v. Source control measures to limit stormwater pollution; vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff. ***b. Maintenance Agreement Required*** Requirement: The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following: i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.9 Hydrology and Water Quality (cont.)		
Impact HYD-1 (cont.)	ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense. **SCA 55: NPDES C.3 Stormwater Requirements for Small Projects** Requirement: Pursuant to Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES), the project applicant shall incorporate one or more of the following site design measures into the project: a. Direct roof runoff into cisterns or rain barrels for reuse; b. Direct roof runoff onto vegetated areas; c. Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas; d. Direct runoff from driveways and/or uncovered parking lots onto vegetated areas; e. Construct sidewalks, walkways, and/or patios with permeable surfaces; or f. Construct bike lanes, driveways, and/or uncovered parking lots with permeable surfaces. The project drawings submitted for construction-related permits shall include the proposed site design measure(s) and the approved measure(s) shall be installed during construction. The design and installation of the measure(s) shall comply with all applicable City requirements.	
Impact HYD-2: Adoption of the Proposed Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or proposed uses for which permits have been granted. (Criterion 2) *(Less than Significant)*	**SCA 54: NPDES C.3 Stormwater Requirements for Regulated Projects.** See above.	Less Than Significant
Impact HYD-3: Adoption of the Proposed Project would not result in substantial erosion or siltation on- or off-site that would affect the quality of receiving waters; result in substantial flooding on- or off-site; create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems; create or contribute substantial runoff which would be an additional source of polluted runoff; or substantially degrade water quality. (Criteria 3, 4, 5, 6, and 7) *(Less than Significant)*	**SCA 48: Erosion and Sedimentation Control Measures for Construction.** See above. **SCA 49: Erosion and Sedimentation Control Plan for Construction.** See above. **SCA 50: State Construction General Permit.** See above. **SCA 51: Drainage Plan for Post-Construction Stormwater Runoff on Hillside Properties.** See above. **SCA 52: Site Design Measures to Reduce Stormwater Runoff.** See above.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.9 Hydrology and Water Quality (cont.)		
Impact HYD-3 (cont.)	**SCA 53: Source Control Measures to Limit Stormwater Pollution.** See above. **SCA 54: NPDES C.3 Stormwater Requirements for Regulated Projects.** See above. **SCA 55: NPDES C.3 Stormwater Requirements for Small Projects.** See above.	
Impact HYD-4: Adoption of the Proposed Project could place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, that would impede or redirect flood flows; or expose people or structures to a substantial risk of loss, injury, or death involving flooding. (Criteria 8, 9, and 10) *(Less than Significant with Mitigation)*	**SCA 60: Structures in a Flood Zone** Requirement: The project shall be designed to ensure that new structures within a 100-year flood zone do not interfere with the flow of water or increase flooding. The project applicant shall submit plans and hydrological calculations for City review and approval with the construction related drawings that show finished site grades and floor elevations elevated above the Base Flood Elevation (BFE). **SCA 61: Bay Conservation and Development Commission (BCDC) Approval** Requirement: The project applicant shall obtain the necessary permit/approval, if required, from the Bay Conservation and Development Commission (BCDC) for work within BCDC's jurisdiction to address issues such as but not limited to shoreline public access and sea level rise. The project applicant shall submit evidence of the permit/approval to the City and comply with all requirements and conditions of the permit/approval. **Mitigation Measure HYD-1: Sea Level Rise Vulnerability Assessment.** To avoid and minimize impacts related to Sea Level Rise, the City shall adopt a new SCA that applies to all projects located in the 100-year coastal flood zone with 5.5 feet of SLR, or the most current SLR projection to be determined by the City. The SCA shall require the following measures: Conduct a Sea Level Rise vulnerability assessment for the project, prepare a Sea Level Rise Adaptation Plan for implementation as part of the project designs, and submit the assessment, adaptation plan, and preliminary design to the City for review and approval.	Less Than Significant
Impact HYD-5: Adoption of the Proposed Project would not risk release of pollutants in flood hazard, tsunami, or seiche zones (Criterion 11) *(Less than Significant)*	**SCA 60: Structures in a Flood Zone.** See above.	Less Than Significant
Impact HYD-6: Adoption of the Proposed Project would not substantially alter the existing drainage pattern of the site or area including through the alteration of the course or increasing the rate or amount of flow, of a creek, river, or stream in a manner that would result in substantial erosion, siltation, or flooding, both on- or offsite; or fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect hydrologic resources. (Criteria 12 and 13) *(Less than Significant)*	**SCA 57: Vegetation Management on Creekside Properties** Requirement: The project applicant shall comply with the following requirements when managing vegetation prior to, during, and after construction of the project: a. Identify and leave "islands" of vegetation in order to prevent erosion and landslides and protect habitat; b. Trim tree branches from the ground up (limbing up) and leave tree canopy intact; c. Leave stumps and roots from cut down trees to prevent erosion; d. Plant fire-appropriate, drought-tolerant, preferably native vegetation; e. Provide erosion and sediment control protection if cutting vegetation on a steep slope;	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.9 Hydrology and Water Quality (cont.)		
Impact HYD-6 (cont.)	f. Fence off sensitive plant habitats and creek areas if implementing goat grazing for vegetation management; g. Obtain a Tree Permit before removing a Protected Tree (any tree 9 inches diameter at breast height or dbh or greater and any oak tree 4 inches dbh or greater, except eucalyptus and Monterey pine); h. Do not clear-cut vegetation. This can lead to erosion and severe water quality problems and destroy important habitat; i. Do not remove vegetation within 20 feet of the top of the creek bank. If the top of bank cannot be identified, do not cut within 50 feet of the centerline of the creek or as wide a buffer as possible between the creek centerline and the development; j. Do not trim/prune branches that are larger than 4 inches in diameter; k. Do not remove tree canopy; l. Do not dump cut vegetation in the creek; m. Do not cut tall shrubbery to less than 3 feet high; and n. Do not cut short vegetation (e.g., grasses, ground-cover) to less than 6 inches high. **SCA 58: Creek Protection Plan** ***a. Creek Protection Plan Required*** Requirement: The project applicant shall submit a Creek Protection Plan for review and approval by the City. The Plan shall be included with the set of project drawings submitted to the City for site improvements and shall incorporate the contents required under section 13.16.150 of the Oakland Municipal Code including Best Management Practices ("BMPs") during construction and after construction to protect the creek. Required BMPs are identified below in sections (b), (c), and (d). ***b. Construction BMPs*** Requirement: The Creek Protection Plan shall incorporate all applicable erosion, sedimentation, debris, and pollution control BMPs to protect the creek during construction. The measures shall include, but are not limited to, the following: i. On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the creek. ii. The project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent biodegradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.9 Hydrology and Water Quality (cont.)		
Impact HYD-6 (cont.)	iii. Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible. iv. All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be repacked and native vegetation planted. v. Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the City at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding. vi. Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains. vii. Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek. viii. Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the creek or storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site. ix. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed at least on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution. x. Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work. xi. Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, or storm drains. xii. All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board (RWQCB). xiii. Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to construction (or both sides of the creek if applicable) at the maximum practical distance from the creek centerline. This area shall not be disturbed during construction without prior approval of the City.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.9 Hydrology and Water Quality (cont.)		
Impact HYD-6 (cont.)	***c. Post-Construction BMPs*** Requirement: The project shall not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains. The Creek Protection Plan shall include site design measures to reduce the amount of impervious surface to maximum extent practicable. New drain outfalls shall include energy dissipation to slow the velocity of the water at the point of outflow to maximize infiltration and minimize erosion. ***d. Creek Landscaping*** Requirement: The project applicant shall include final landscaping details for the site on the Creek Protection Plan, or on a Landscape Plan, for review and approval by the City. Landscaping information shall include a planting schedule, detailing plant types and locations, and a system to ensure adequate irrigation of plantings for at least one growing season. Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival. ***e. Creek Protection Plan Implementation*** Requirement: The project applicant shall implement the approved Creek Protection Plan during and after construction. During construction, all erosion, sedimentation, debris, and pollution control measures shall be monitored regularly by the project applicant. The City may require that a qualified consultant (paid for by the project applicant) inspect the control measures and submit a written report of the adequacy of the control measures to the City. If measures are deemed inadequate, the project applicant. **SCA 59: Creek Dewatering/Diversion** Requirement: The project applicant shall submit a Dewatering and Diversion Plan for review and approval by the City, and shall implement the approved Plan. The Plan shall comply, at a minimum, with the following: a. All dewatering and diversion activities shall comply with the requirements of all necessary regulatory permits and authorizations from other agencies (e.g., Regional Water Quality Control Board, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and Army Corps of Engineers). b. All native aquatic life (e.g., fish, amphibians, and turtles) within the work site shall be relocated by a qualified biologist prior to dewatering, in accordance with applicable regional, state, and federal requirements. Captured native aquatic life shall be moved to the nearest appropriate site on the stream channel downstream. The biologist shall check daily for stranded aquatic life as the water level in the dewatering area drops. All reasonable efforts shall be made to capture and move all stranded aquatic life observed in the dewatered areas. Capture methods may include fish landing nets, dip nets, buckets, and by hand. Captured aquatic life shall be released immediately in the nearest appropriate downstream site. This condition does not allow	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.9 Hydrology and Water Quality (cont.)		
Impact HYD-6 (cont.)	the take or disturbance of any state or federally listed species, nor state-listed species of special concern, unless the applicant obtains a project specific authorization from the California Department of Fish and Wildlife and/or the U.S. Fish and Wildlife Service, as applicable. c. If any dam or other artificial obstruction is constructed, maintained, or placed in operation within the stream channel, ensure that sufficient water is allowed to pass down channel at all times to maintain native aquatic life below the dam or other artificial obstruction. d. Construction and operation of dewatering/diversion devices shall meet the standards contained in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board. e. Coffer dams and/or water diversion system shall be constructed of a non-erodable material which will cause little or no siltation. Coffer dams and the water diversion system shall be maintained in place and functional throughout the construction period. If the coffer dams or water diversion systems fail, they shall be repaired immediately based on the recommendations of a qualified environmental consultant. The devices shall be removed after construction is complete and the site is stabilized. f. Pumped water shall be passed through a sediment settling device before returning to the stream channel. Velocity dissipation measures are required at the outfall to prevent erosion.	
Impact HYD-7: Adoption of the Proposed Project, combined with cumulative development, could result in significant cumulative impacts to hydrology and water quality. *(Less than Significant with Mitigation)*	**SCA 51: Drainage Plan for Post-Construction Stormwater Runoff on Hillside Properties.** See above. **SCA 52: Site Design Measures to Reduce Stormwater Runoff.** See above. **SCA 53: Source Control Measures to Limit Stormwater Pollution.** See above. **SCA 55: NPDES C.3 Stormwater Requirements for Small Projects.** See above. **Mitigation Measure HYD-1: Sea Level Rise Vulnerability Assessment.** See above.	Less Than Significant
4.10 Land Use and Planning		
Impact LUP-1: Adoption of the Proposed Project would not result in the physical division of an established community. (Criterion 1) *(Less than Significant)*	None required.	Less Than Significant
Impact LUP-2: Adoption of the Proposed Project would not cause a significant environmental impact due to a fundamental conflict between adjacent or nearby land uses. (Criterion 2) *(Less Than Significant)*	**SCA 23: Exposure to Air Pollution (Toxic Air Contaminants).** See Section 4.2, Air Quality, above. **SCA 45: Hazardous Materials Business Plan.** See Section 4.8, Hazards and Hazardous Materials, above. **SCA 67: Exposure to Community Noise.** See Section 4.11, Noise, below. **SCA 68: Operational Noise.** See Section 4.11, Noise, below.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.10 Land Use and Planning (cont.)		
Impact LUP-3: Adoption of the Proposed Project would not cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment (Criterion 3) *(Less than Significant)*	None required.	
Impact LUP-4: Adoption of the Proposed Project, combined with cumulative development, would not result in significant cumulative impacts to Land Use and Planning. *(Less than Significant)*	**SCA 23: Exposure to Air Pollution (Toxic Air Contaminants).** See Section 4.2, Air Quality, above. **SCA 45: Hazardous Materials Business Plan.** See Section 4.8, Hazards and Hazardous Materials, above. **SCA 67: Exposure to Community Noise.** See Section 4.11, Noise, below. **SCA 68: Operational Noise.** See Section 4.11, Noise, below.	
4.11 Noise and Vibration		
Impact NOI-1: Adoption of the Proposed Project would not result in generation of a substantial temporary increase in ambient noise levels in the Plan Area in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Criteria 1 and 2) *(Less than Significant)*	**SCA 61: Construction Days/Hours** Requirement: The project applicant shall comply with the following restrictions concerning construction days and hours: a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday. c. No construction is allowed on Sunday or federal holidays. Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on site in a non-enclosed area. Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants'	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.11 Noise and Vibration (cont.)		
Impact NOI-1 (cont.)	preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice. **SCA 62: Construction Noise** Requirement: The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following: a. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible. b. Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures. c. Applicant shall use temporary power poles instead of generators where feasible. d. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction. e. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented. **SCA 63: Extreme Construction Noise.** ***a. Construction Noise Management Plan Required*** Requirement: Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90 dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following:	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.11 Noise and Vibration (cont.)		
Impact NOI-1 (cont.)	i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings; ii. Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions; iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site; iv. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and v. Monitor the effectiveness of noise attenuation measures by taking noise measurements. ***b. Public Notification Required*** Requirement: The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented. **SCA 64: Project-Specific Construction Noise Reduction Measures** Requirement: The project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction noise impacts on [ENTER ADJACENT SENSITIVE RECEPTOR OR BUSINESS]. The project applicant shall implement the approved Plan during construction. **SCA 65: Construction Noise Complaints** Requirement: The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include: a. Designation of an on-site construction complaint and enforcement manager for the project; b. A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit; c. Protocols for receiving, responding to, and tracking received complaints; and d. Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.11 Noise and Vibration (cont.)		
Impact NOI-2: Adoption of the Proposed Project would not result in exposure of persons to or generation of excessive groundborne vibration levels. (Criterion 8) *(Less than Significant)*	**SCA 69: Vibration Impacts on Adjacent Structures or Vibration-Sensitive Activities** Requirement: The project applicant shall submit a Vibration Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities located at [ENTER ADDRESS OF ADJACENT PROPERTY OR VIBRATION SENSITIVE ACTIVITY]. The Vibration Analysis shall identify design means and methods of construction that shall be utilized in order to not exceed the thresholds. The applicant shall implement the recommendations during construction.	Less Than Significant
Impact NOI-3: Adoption of the Proposed Project would not expose persons to noise levels in excess of applicable standards established by a regulatory agency (e.g., occupational noise standards of the Occupational Safety and Health Administration (OSHA)). (Criterion 7) *(Less than Significant)*	None required.	Less Than Significant
Impact NOI-4: Adoption of the Proposed Project would not result in generation of a substantial permanent increase in ambient noise levels in the Plan Area in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Criteria 3 and 6) *(Less than Significant)*	**SCA 67: Operational Noise** Requirement: Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of Chapter 17.120 of the Oakland Planning Code and Chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City.	Less Than Significant
Impact NOI-5: Adoption of the Proposed Project would not generate noise resulting in a 5 dBA permanent increase in ambient noise levels in the Plan Area above existing noise levels. (Criterion 4) *(Less than Significant)*	None required.	Less Than Significant
Impact NOI-6: Adoption of the Proposed Project would not expose persons to interior Ldn or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories, and long-term care facilities (and may be extended by local legislative action to include single-family dwellings) per California Noise Insulation Standards (CCR Part 2, Title 24). (Criterion 5) *(Less than Significant for this non-CEQA impact)*	**SCA 66: Exposure to Community Noise** Requirement: The project applicant shall submit a Noise Reduction Plan prepared by a qualified acoustical engineer for City review and approval that contains noise reduction measures (e.g., sound-rated window, wall, and door assemblies) to achieve an acceptable interior noise level in accordance with the land use compatibility guidelines of the Noise Element of the Oakland General Plan. The applicant shall implement the approved Plan during construction. To the maximum extent practicable, interior noise levels shall not exceed the following: a. 45 dBA: Residential activities, civic activities, hotels b. 50 dBA: Administrative offices; group assembly activities c. 55 dBA: Commercial activities d. 5 dBA: Industrial activities	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.11 Noise and Vibration (cont.)		
Impact NOI-7: Adoption of the Proposed Project would not expose people in the Plan Area to community noise in conflict with the land use compatibility guidelines of the Oakland General Plan. (Criterion 6) *(Less than Significant for this non-CEQA impact)*	**SCA 66: Exposure to Community Noise.** See above. **SCA 68: Exposure to Vibration** Requirement: The project applicant shall submit a Vibration Reduction Plan prepared by a qualified acoustical consultant for City review and approval that contains vibration reduction measures to reduce groundborne vibration to acceptable levels per Federal Transit Administration (FTA) standards. The applicant shall implement the approved Plan during construction. Potential vibration reduction measures include, but are not limited to, the following: a. Isolation of foundation and footings using resilient elements such as rubber bearing pads or springs, such as a "spring isolation" system that consists of resilient spring supports that can support the podium or residential foundations. The specific system shall be selected so that it can properly support the structural loads, and provide adequate filtering of groundborne vibration to the residences above. b. Trenching, which involves excavating soil between the railway and the project so that the vibration path is interrupted, thereby reducing the vibration levels before they enter the project's structures. Since the reduction in vibration level is based on a ratio between trench depth and vibration wavelength, additional measurements shall be conducted to determine the vibration wavelengths affecting the project. Based on the resulting measurement findings, an adequate trench depth and, if required, suitable fill shall be identified (such as foamed styrene packing pellets [i.e., Styrofoam] or low-density polyethylene). **SCA 69: Vibration Impacts on Adjacent Structures or Vibration-Sensitive Activities.** See above.	Less Than Significant
Impact NOI-8: Adoption of the Proposed Project would not expose persons to or generate groundborne vibration that exceeds criteria established by the Federal Transit Administration (FTA). (Criterion 8) *(Less than Significant)*	**SCA 68: Exposure to Vibration.** See above.	Less Than Significant
Impact NOI-9: Adoption of the Proposed Project would not result in new housing located within an airport land use plan that could expose people residing in the Plan Area to excessive noise levels. (Criterion 9) *(Less than Significant)*	None required.	Less Than Significant
Impact NOI-10: Adoption of the Proposed Project, combined with cumulative development, would not result in significant cumulative impacts to Noise. *(Less than Significant)*	**SCA 61: Construction Days/Hours.** See above. **SCA 62: Construction Noise.** See above. **SCA 63: Extreme Construction Noise.** See above. **SCA 64: Project-Specific Construction Noise Reduction Measures.** See above. **SCA 65: Construction Noise Complaints.** See above. **SCA 69: Vibration Impacts on Adjacent Structures or Vibration-Sensitive Activities.** See above.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.12 Population and Housing		
Impact POP-1: Adoption of the Proposed Project would not induce substantial population growth in a manner not contemplated in the General Plan, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extensions of roads or other infrastructure), such that additional infrastructure is required but the impacts of such were not previously considered or analyzed. (Criterion 1) *(Less than Significant)*	None required.	Less Than Significant
Impact POP-2: Adoption of the Proposed Project would not displace substantial numbers of housing or people, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element. (Criterion 2) *(Less than Significant)*	**SCA 71: Jobs/Housing Impact Fee** Requirement: The project applicant shall comply with the requirements of the City of Oakland Jobs/Housing Impact Fee Ordinance (Chapter 15.68 of the Oakland Municipal Code). **SCA 72: Affordable Housing Impact Fee** Requirement: The project applicant shall comply with the requirements of the City of Oakland Affordable Housing Impact Fee Ordinance (Chapter 15.72 of the Oakland Municipal Code).	Less Than Significant
Impact POP-3: Adoption and development under the Proposed Project individually and in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects would not induce substantial population growth in a manner not contemplated in the General Plan, either directly by facilitating new housing or businesses, or indirectly through infrastructure improvements, such that additional infrastructure is required but the impacts of such were not previously considered or analyzed. *(Less than Significant)*	None required.	Less Than Significant
4.13 Public Services		
Impact PUB-1: Adoption of the Proposed Project would not result in substantial adverse physical impacts associated with the provision of or need for new or physically altered fire protection and emergency medical response services facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection. (Criterion 1.i) *(Less than Significant)*	**SCA 46: Fire Safety Phasing Plan.** See Section 4.8 Hazards and Hazardous Materials, above. **SCA 47: Designated Very High Fire Severity Zone – Vegetation Management.** See Section 4.8 Hazards and Hazardous Materials, above. **SCA 73: Capital Improvements Impact Fee** Requirement: The project applicant shall comply with the requirements of the City of Oakland Capital Improvements Fee Ordinance (Chapter 15.74 of the Oakland Municipal Code).	Less Than Significant
Impact PUB-2: Adoption of the Proposed Project would not result in substantial adverse physical impacts associated with the provision of or need for new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police services. (Criterion 1.ii) *(Less than Significant)*	**SCA 73: Capital Improvements Impact Fee.** See above.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.13 Public Services (cont.)		
Impact PUB-3: Adoption of the Proposed Project would not result in substantial adverse physical impacts associated with the provision of or need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for schools. (Criterion 1.iii) *(Less than Significant)*	None required.	Less Than Significant
Impact PUB-4: Adoption of the Proposed Project would not result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for libraries. (Criterion 1.v) *(Less than Significant)*	**SCA 73: Capital Improvements Impact Fee.** See above.	Less Than Significant
Impact PUB-5: Adoption of the Proposed Project, combined with cumulative development, would not result in significant cumulative impacts related to substantial adverse physical impacts associated with the construction of new or physically altered governmental facilities in order to maintain acceptable performance objectives for public services. *(Less than Significant)*	**SCA 73: Capital Improvements Impact Fee.** See above.	Less Than Significant
4.14 Recreation		
Impact REC-1: Adoption of the Proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. (Criterion 1) *(Less than Significant)*	**SCA 73: Capital Improvements Impact Fee.** See Section 4.13 Public Services, above.	Less Than Significant
Impact REC-2: Adoption of the Proposed Project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. (Criterion 2) *(Less than Significant)*	**SCA 73: Capital Improvements Impact Fee.** See Section 4.13 Public Services, above.	Less Than Significant
Impact REC-3: Adoption of the Proposed, combined with cumulative development, would not result in significant cumulative impacts to parks and recreation. *(Less than Significant)*	**SCA 73: Capital Improvements Impact Fee.** See Section 4.13 Public Services, above. **SCA 74: Access to Parks and Open Space** (The following condition applies to all projects involving new construction adjacent to an existing open space such as parks, lakes, or the shoreline.) Requirement: The project applicant shall submit a plan for City review and approval to enhance bicycle and pedestrian access from the project site and adjacent areas to [INSERT NAME OF EXISTING OPEN SPACE]. Examples of enhancements may include, but are not limited to, new or improved bikeways, bike parking, traffic control devices, sidewalks, pathways, bulb-outs, and signage. The project sponsor shall install the approved enhancements during construction and prior to completion of the project.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.15 Transportation and Circulation		
Impact TRA-1: Adoption of the Proposed Project would not conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit, roadway, bicycle lanes, and pedestrian paths. (Criterion 1) *(Less than Significant)*	**SCA 77: Transportation Improvements** Requirement: The project applicant shall implement the recommended on- and off-site transportation-related improvements contained within the Transportation Impact Review for the project (e.g., signal timing adjustments, restriping, signalization, traffic control devices, roadway reconfigurations, transportation demand management measures, and transit, pedestrian, and bicyclist amenities). The project applicant is responsible for funding and installing the improvements and shall obtain all necessary permits and approvals from the City and/or other applicable regulatory agencies such as, but not limited to, Caltrans (for improvements related to Caltrans facilities) and the California Public Utilities Commission (for improvements related to railroad crossings), prior to installing the improvements. To implement this measure for intersection modifications, the project applicant shall submit Plans, Specifications, and Estimates (PS&E) to the City for review and approval. All elements shall be designed to applicable City standards in effect at the time of construction and all new or upgraded signals shall include these enhancements as required by the City. All other facilities supporting vehicle travel and alternative modes through the intersection shall be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for, among other items, the elements listed below: a. 2070L Type Controller with cabinet accessory b. GPS communication (clock) c. Accessible pedestrian crosswalks according to Federal and State Access Board guidelines with signals (audible and tactile) d. Countdown pedestrian head module switch out e. City Standard ADA wheelchair ramps f. Video detection on existing (or new, if required) g. Mast arm poles, full activation (where applicable) h. Polara Push buttons (full activation) i. Bicycle detection (full activation) j. Pull boxes k. Signal interconnect and communication with trenching (where applicable), or through existing conduit (where applicable), 600 feet maximum l. Conduit replacement contingency m. Fiber switch n. PTZ camera (where applicable) o. Transit Signal Priority (TSP) equipment consistent with other signals along corridor p. Signal timing plans for the signals in the coordination group	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

<table>
<tr><th>Impacts</th><th>Standard Conditions of Approval and Mitigation Measures</th><th>Significance After Incorporation of SCAs and Mitigation Measures</th></tr>
<tr><td colspan="3">4.15 Transportation and Circulation (cont.)</td></tr>
<tr><td>Impact TRA-1 (cont.)</td><td>q. Bi-directional curb ramps (where feasible, and if project is on a street corner)
r. Upgrade ramps on receiving curb (where feasible, and if project is on a street corner)
SCA 78: Transportation and Parking Demand Management
Transportation and Parking Demand Management (TDM) Plan Required Requirement: The project applicant shall submit a Transportation and Parking Demand Management (TDM) Plan for review and approval by the City.
i. The goals of the TDM Plan shall be the following:
• Reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable.
• Achieve the following project vehicle trip reductions (VTR):
– Projects generating 50-99 net new a.m. or p.m. peak hour vehicle trips: 10 percent VTR
– Projects generating 100 or more net new a.m. or p.m. peak hour vehicle trips: 20 percent VTR
• Increase pedestrian, bicycle, transit, and carpool/vanpool modes of travel. All four modes of travel shall be considered, as appropriate.
• Enhance the City’s transportation system, consistent with City policies and programs.
ii. The TDM Plan should include the following:
• Baseline existing conditions of parking and curbside regulations within the surrounding neighborhood that could affect the effectiveness of TDM strategies, including inventory of parking spaces and occupancy if applicable.
• Proposed TDM strategies to achieve VTR goals (see below).
iii. For employers with 100 or more employees at the subject site, the TDM Plan shall also comply with the requirements of Oakland Municipal Code Chapter 10.68 Employer Based Trip Reduction Program.
iv. The following TDM strategies must be incorporated into a TDM Plan based on a project location or other characteristics. When required, these mandatory strategies should be identified as a credit toward a project’s VTR.
<table><tr><th>Improvement</th><th>Required by code or when…</th></tr><tr><td>Bus boarding bulbs or islands</td><td>• A bus boarding bulb or island does not already exist, and a bus stop is located along the project frontage; and/or
• A bus stop along the project frontage serves a route with 15 minutes or better peak hour service and has a shared bus-bike lane curb</td></tr></table></td><td></td></tr>
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TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

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<tr><th>Impacts</th><th>Standard Conditions of Approval and Mitigation Measures</th><th>Significance After Incorporation of SCAs and Mitigation Measures</th></tr>
<tr><td colspan="3">4.15 Transportation and Circulation (cont.)</td></tr>
<tr><td>Impact TRA-1 (cont.)</td><td>
<table>
<tr><th>Improvement</th><th>Required by code or when…</th></tr>
<tr><td>Bus shelter</td><td>• A stop with no shelter is located within the project frontage, or
• The project is located within 0.10 miles of a flag stop with 25 or more boardings per day</td></tr>
<tr><td>Concrete bus pad</td><td>• A bus stop is located along the project frontage and a concrete bus pad does not already exist</td></tr>
<tr><td>Curb extensions or bulb-outs</td><td>• Identified as an improvement within site analysis</td></tr>
<tr><td>Implementation of a corridor- level bikeway improvement</td><td>• A buffered Class II or Class IV bikeway facility is in a local or county adopted plan within 0.10 miles of the project location; and
• The project would generate 500 or more daily bicycle trips</td></tr>
<tr><td>Implementation of a corridor- level transit capital improvement</td><td>• A high-quality transit facility is in a local or county adopted plan within 0.25 miles of the project location; and
• The project would generate 400 or more peak period transit trips</td></tr>
<tr><td>Installation of amenities such as lighting; pedestrian-oriented green infrastructure, trees, or other greening landscape; and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.</td><td>• Always required</td></tr>
<tr><td>Installation of safety improvements identified in the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.)</td><td>• When improvements are identified in the Pedestrian Master Plan along project frontage or at an adjacent intersection</td></tr>
<tr><td>In-street bicycle corral</td><td>• A project includes more than 10,000 square feet of ground floor retail, is located along a Tier 1 bikeway, and on-street vehicle parking is provided along the project frontages.</td></tr>
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TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

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<tr><td colspan="3">4.15 Transportation and Circulation (cont.)</td></tr>
<tr><td>Impact TRA-1 (cont.)</td><td>
<table>
<tr><th>Improvement</th><th>Required by code or when…</th></tr>
<tr><td>Intersection improvements[5]</td><td>• Identified as an improvement within site analysis</td></tr>
<tr><td>New sidewalk, curb ramps, curb and gutter meeting current City and ADA standards</td><td>• Always required</td></tr>
<tr><td>No monthly permits and establish minimum price floor for public parking[6]</td><td>• If proposed parking ratio exceeds 1:1000 sf. (commercial)</td></tr>
<tr><td>Parking garage is designed with retrofit capability</td><td>• Optional if proposed parking ratio exceeds 1:1.25 (residential) or 1:1000 sf. (commercial)</td></tr>
<tr><td>Parking space reserved for car share</td><td>• If a project is providing parking and a project is located within downtown. One car share space reserved for buildings between 50 – 200 units, then one car share space per 200 units.</td></tr>
<tr><td>Paving, lane striping or restriping (vehicle and bicycle), and signs to midpoint of street section</td><td>• Typically required</td></tr>
<tr><td>Pedestrian crossing improvements</td><td>• Identified as an improvement within site analysis</td></tr>
<tr><td>Pedestrian-supportive signal changes[7]</td><td>• Identified as an improvement within operations analysis</td></tr>
<tr><td>Real-time transit information system</td><td>• A project frontage block includes a bus stop or BART station and is along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better</td></tr>
<tr><td>Relocating bus stops to far side</td><td>• A project is located within 0.10 mile of any active bus stop that is currently near side</td></tr>
</table>
</td><td></td></tr>
</table>

[5] Including but not limited to visibility improvements, shortening corner radii, pedestrian safety islands, accounting for pedestrian desire lines.
[6] May also provide a cash incentive or transit pass alternative to a free parking space in commercial properties.
[7] Including but not limited to reducing signal cycle lengths to less than 90 seconds to avoid pedestrian crossings against the signal, providing a leading pedestrian interval, provide a “scramble” signal phase where appropriate.

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

<table>
<tr><th>Impacts</th><th>Standard Conditions of Approval and Mitigation Measures</th><th>Significance After Incorporation of SCAs and Mitigation Measures</th></tr>
<tr><td colspan="3">4.15 Transportation and Circulation (cont.)</td></tr>
<tr><td>Impact TRA-1 (cont.)</td><td>
<table>
<tr><th>Improvement</th><th>Required by code or when…</th></tr>
<tr><td>Signal upgrades[8]</td><td>• Project size exceeds 100 residential units, 80,000 sf. of retail, or 100,000 sf. of commercial; and
• Project frontage abuts an intersection with signal infrastructure older than 15 years</td></tr>
<tr><td>Signal upgrades[9]</td><td>• Project size exceeds 100 residential units, 80,000 sf. of retail, or 100,000 sf. of commercial; and
• Project frontage abuts an intersection with signal infrastructure older than 15 years</td></tr>
<tr><td>Transit queue jumps</td><td>• Identified as a needed improvement within operations analysis of a project with frontage along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better</td></tr>
<tr><td>Trenching and placement of conduit for providing traffic signal interconnect</td><td>• Project size exceeds 100 units, 80,000 sf. of retail, or 100,000 sf. of commercial; and
• Project frontage block is identified for signal interconnect improvements as part of a planned ITS improvement; and
• A major transit improvement is identified within operations analysis requiring traffic signal interconnect</td></tr>
<tr><td>Unbundled parking</td><td>• If proposed parking ratio exceeds 1:1.25 (residential)</td></tr>
</table>
v. Other TDM strategies to consider include, but are not limited to, the following:
• Inclusion of additional long-term and short-term bicycle parking that meets the design standards set forth in chapter five of the Bicycle Master Plan and the Bicycle Parking Ordinance (Chapter 17.117 of the Oakland Planning Code), and shower and locker facilities in commercial developments that exceed the requirement.
• Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority bikeways, on-site signage and bike lane striping.
• Installation of safety elements per the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.) to encourage convenient and safe crossing at arterials, in addition to safety elements required to address safety impacts of the project.
</td><td></td></tr>
</table>

[8] Including typical traffic lights, pedestrian signals, bike actuated signals, transit-only signals
[9] Including typical traffic lights, pedestrian signals, bike actuated signals, transit-only signals

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.15 Transportation and Circulation (cont.)		
Impact TRA-1 (cont.)	• Installation of amenities such as lighting, street trees, and trash receptacles per the Pedestrian Master Plan, the Master Street Tree List and Tree Planting Guidelines and any applicable streetscape plan. • Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements. • Direct on-site sales of transit passes purchased and sold at a bulk group rate (through programs such as AC Transit Easy Pass or a similar program through another transit agency). • Provision of a transit subsidy to employees or residents, determined by the project applicant and subject to review by the City, if employees or residents use transit or commute by other alternative modes. • Provision of an ongoing contribution to transit service to the area between the project and nearest mass transit station prioritized as follows: 1) Contribution to AC Transit bus service; 2) Contribution to an existing area shuttle service; and 3) Establishment of new shuttle service. The amount of contribution (for any of the above scenarios) would be based upon the cost of establishing new shuttle service (Scenario 3). • Guaranteed ride home program for employees, either through 511.org or through separate program. • Pre-tax commuter benefits (commuter checks) for employees. • Free designated parking spaces for on-site car-sharing program (such as City Car Share, Zip Car, etc.) and/or car-share membership for employees or tenants. • On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools. • Distribution of information concerning alternative transportation options. • Parking spaces sold/leased separately for residential units. Charge employees for parking or provide a cash incentive or transit pass alternative to a free parking space in commercial properties. • Parking management strategies including attendant/valet parking and shared parking spaces. • Requiring tenants to provide opportunities and the ability to work off-site. • Allow employees or residents to adjust their work schedule in order to complete the basic work requirement of five eight-hour workdays by adjusting their schedule to reduce vehicle trips to the worksite (e.g., working four, ten-hour days; allowing employees to work from home two days per week). • Provide or require tenants to provide employees with staggered work hours involving a shift in the set work hours of all employees at the workplace or flexible work hours involving individually determined work hours.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.15 Transportation and Circulation (cont.)		
Impact TRA-1 (cont.)	The TDM Plan shall indicate the estimated VTR for each strategy, based on published research or guidelines where feasible. For TDM Plans containing ongoing operational VTR strategies, the Plan shall include an ongoing monitoring and enforcement program to ensure the Plan is implemented on an ongoing basis during project operation. If an annual compliance report is required, as explained below, the TDM Plan shall also specify the topics to be addressed in the annual report. ***b. TDM Implementation – Physical Improvements*** Requirement: For VTR strategies involving physical improvements, the project applicant shall obtain the necessary permits/approvals from the City and install the improvements prior to the completion of the project. ***c. TDM Implementation – Operational Strategies*** Requirement: For projects that generate 100 or more net new a.m. or p.m. peak hour vehicle trips and contain ongoing operational VTR strategies, the project applicant shall submit an annual compliance report for the first five years following completion of the project (or completion of each phase for phased projects) for review and approval by the City. The annual report shall document the status and effectiveness of the TDM program, including the actual VTR achieved by the project during operation. If deemed necessary, the City may elect to have a peer review consultant, paid for by the project applicant, review the annual report. If timely reports are not submitted and/or the annual reports indicate that the project applicant has failed to implement the TDM Plan, the project will be considered in violation of the Conditions of Approval and the City may initiate enforcement action as provided for in these Conditions of Approval. The project shall not be considered in violation of this Condition if the TDM Plan is implemented but the VTR goal is not achieved.	
Impact TRA-2: Adoption of the Proposed Project would not cause substantial additional VMT per capita, per service population, or other appropriate efficiency measure. (Criterion 2) *(Less than Significant)*	**SCA 76: Bicycle Parking** Requirement: The project applicant shall comply with the City of Oakland Bicycle Parking Requirements (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall demonstrate compliance with the requirements. **SCA 77: Transportation Improvements.** See above. **SCA 78: Transportation and Parking Demand Management.** See above. **SCA 79: Transportation Impact Fee** Requirement: The project applicant shall comply with the requirements of the City of Oakland Transportation Impact Fee Ordinance (Chapter 15.74 of the Oakland Municipal Code).	Less Than Significant
Impact TRA-3: Adoption of the Proposed Project would not substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow lanes) or by adding new roadways to the network. (Criterion 3) *(Less than Significant)*	**SCA 76: Bicycle Parking.** See above. **SCA 77: Transportation Improvements.** See above. **SCA 78: Transportation and Parking Demand Management.** See above.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.15 Transportation and Circulation (cont.)		
Impact TRA-4: Implementation of the Proposed Project, combined with cumulative development, would not result in significant cumulative impacts related to transportation. *(Less than Significant)*	**SCA 76: Bicycle Parking.** See above. **SCA 77: Transportation Improvements.** See above. **SCA 78: Transportation and Parking Demand Management.** See above. **SCA 79: Transportation Impact Fee.** See above.	Less Than Significant
4.16 Tribal Cultural Resources		
Impact TRI-1: Adoption of the Proposed Project could cause a substantial adverse change in the significance of a tribal cultural resource. (Criterion 1) *(Less than Significant with Mitigation)*	**SCA 32, Archaeological and Paleontological Resources – Discovery During Construction.** See Section 4.4 Cultural Resources, above. **SCA 33, Archaeologically Sensitive Areas – Pre Construction Measures.** See Section 4.4 Cultural Resources, above. **SCA 34, Human Remains – Discovery During Construction.** See Section 4.4 Cultural Resources, above. **Mitigation Measure CUL-2: Text changes to SCA 33.** See Section 4.4 Cultural Resources, above.	Less Than Significant
Impact TRI-2: Adoption of the Proposed Project, combined with cumulative development, could result in less than significant cumulative impacts for tribal cultural resources. *(Less than Significant with Mitigation)*	**SCA 32, Archaeological and Paleontological Resources – Discovery During Construction.** See Section 4.4 Cultural Resources, above. **SCA 33, Archaeologically Sensitive Areas – Pre Construction Measures.** See Section 4.4 Cultural Resources, above. **SCA 34, Human Remains – Discovery During Construction.** See Section 4.4 Cultural Resources, above. **Mitigation Measure CUL-2: Text changes to SCA 33.** See Section 4.4 Cultural Resources, above.	Less Than Significant
4.17 Utilities and Service Systems		
Impact UTL-1: Adoption of the Proposed Project would not exceed the capacity of the existing wastewater conveyance or treatment system and could result in exceedance of EBMUD's wastewater discharge limitations. (Criteria 1 and 4) *(Less than Significant)*	**SCA 85. Green Building Requirements** ***a) Compliance with Green Building Requirements During Plan-Check*** Requirement: The project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (chapter 18.02 of the Oakland Municipal Code). i. The following information shall be submitted to the City for review and approval with the application for a building permit: – Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards. – Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.17 Utilities and Service Systems (cont.)		
Impact UTL-1 (cont.)	– Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit. – Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (ii) below. – Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance. – Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit. – Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. ii. The set of plans in subsection (i) shall demonstrate compliance with the following: – CALGreen mandatory measures. – [INSERT: Green building point level/certification requirement: (See Green Building Summary Table; for New Construction of Residential or Non-residential projects that remove a Historic Resource (as defined by the Green Building Ordinance) the point level certification requirement is 53 points for residential and LEED Gold for non-residential)] per the appropriate checklist approved during the Planning entitlement process. – All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Bureau of Planning that shows the previously approved points that will be eliminated or substituted. – The required green building point minimums in the appropriate credit categories. ***b) Compliance with Green Building Requirements During Plan-Check*** Requirement: The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project. i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit. ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance. iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. ***c) Compliance with Green Building Requirements During Plan-Check*** Requirement: Prior to the finalizing the Building Permit, the Green Building Certifier shall submit the appropriate documentation to City staff and attain the minimum required point level.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.17 Utilities and Service Systems (cont.)		
Impact UTL-1 (cont.)	**SCA 86. Green Building Requirements – Small Projects** ***a) Compliance with Green Building Requirements During Plan-Check*** The project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (Chapter 18.02 of the Oakland Municipal Code) for projects using the [INSERT: StopWaste.Org Small Commercial Checklist or Bay Friendly Basic Landscape Checklist]. i. The following information shall be submitted to the City for review and approval with the application for a building permit: – Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards. – Completed copy of the green building checklist approved during the review of a Planning and Zoning permit. – Permit plans that show in general notes, detailed design drawings and specifications as necessary compliance with the items listed in subsection (b) below. – Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance. – Other documentation to prove compliance. ii. The set of plans in subsection (a) shall demonstrate compliance with the following: – CALGreen mandatory measures. – All applicable green building measures identified on the checklist approved during the review of a Planning and Zoning permit, or submittal of a Request. ***b) Compliance with Green Building Requirements During Plan-Check*** Requirement: The project applicant shall comply with the applicable requirements of CALGreen and the Green Building Ordinance during construction. The following information shall be submitted to the City for review and approval. i. Completed copy of the green building checklists approved during review of the Planning and Zoning permit and during the review of the Building permit. ii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. **SCA 87: Sanitary Sewer System** Requirement: The project applicant shall prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City of Oakland Sanitary Sewer Design Guidelines. The Impact Analysis shall include an estimate of pre-project and post-project	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.17 Utilities and Service Systems (cont.)		
Impact UTL-1 (cont.)	wastewater flow from the project site. In the event that the Impact Analysis indicates that the net increase in project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer system, the project applicant shall pay the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding.	
Impact UTL-2: Adoption of the Proposed Project would not require or result in construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Criterion 2) *(Less than Significant)*	**SCA 49: Erosion and Sedimentation Control Measures for Construction.** See Section 4.9, *Hydrology and Water Quality*, above. **SCA 54** See Section 4.9, *Hydrology and Water Quality*, above. **SCA 55: NPDES C.3 Stormwater Requirements for Regulated Projects/Small Projects. See** Section 4.9, *Hydrology and Water Quality*, above. **SCA 88: Storm Drain System** Requirement: The project storm drainage system shall be designed in accordance with the City of Oakland's Storm Drainage Design Guidelines. To the maximum extent practicable, peak stormwater runoff from the project site shall be reduced by at least 25 percent compared to the pre-project condition.	Less Than Significant
Impact UTL-3: Adoption of the Proposed Project would not exceed water supplies available to serve projected demand in addition to the provider's existing commitments from existing entitlements and resources and require or result in construction of water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Criterion 3) *(Less than Significant)*	**SCA 85. Green Building Requirements.** See above. **SCA 86. Green Building Requirements – Small Projects.** See above. **SCA 89: Recycled Water** Requirement: Pursuant to Section 16.08.030 of the Oakland Municipal Code, the project applicant shall provide for the use of recycled water in the project for feasible recycled water uses unless the City determines that there is a higher and better use for the recycled water, the use of recycled water is not economically justified for the project, or the use of recycled water is not financially or technically feasible for the project. Feasible recycled water uses may include, but are not limited to, landscape irrigation, commercial and industrial process use, and toilet and urinal flushing in non-residential buildings. The project applicant shall contact the New Business Office of the East Bay Municipal Utility District (EBMUD) for a recycled water feasibility assessment by the Office of Water Recycling. If recycled water is to be provided in the project, the project drawings submitted for construction-related permits shall include the proposed recycled water system and the project applicant shall install the recycled water system during construction. **SCA 90: Water Efficient Landscape Ordinance (WELO)** Requirement: The project applicant shall comply with California's Water Efficient Landscape Ordinance (WELO) in order to reduce landscape water usage. For the specific ordinance requirements, see the link below: http://www.water.ca.gov/wateruseefficiency/landscapeordinance/docs/Title%2023%20extract%2 0-%20Official%20CCR%20pages.pdf. For any landscape project with an aggregate (total noncontiguous) landscape area equal to 2,500 sq. ft. or less, the project applicant may implement either the Prescriptive Measures or the Performance Measures, of, and in accordance with the California's Model Water Efficient Landscape Ordinance.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.17 Utilities and Service Systems (cont.)		
Impact UTL-3 (cont.)	For any landscape project with an aggregate (total noncontiguous) landscape area over 2,500 sq. ft., the project applicant shall implement the Performance Measures in accordance with the WELO. Prescriptive Measures: Prior to construction, the project applicant shall submit the Project Information (detailed below) and documentation showing compliance with Appendix D of California's Model Water Efficient Landscape Ordinance (see page 38.14(g) in the link above). Performance Measures: Prior to construction, the project applicant shall prepare and submit a Landscape Documentation Package for review and approval, which includes the following: a. Project Information: i. Date, ii. Applicant and property owner name, iii. Property address, iv. Total landscape area, v. Project type (new, rehabilitated, cemetery, or homeowner installed), vi. Water supply type and water purveyor, vii. Checklist of documents in the package, and viii. Project contacts ix. Applicant signature and date with the statement: "I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package." b. Water Efficient Landscape Worksheet i. Hydrozone Information Table ii. Water Budget Calculations with Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use iii. Soil Management report iv. Landscape Design Plan v. Irrigation Design Plan, and vi. Grading Plan Upon installation of the landscaping and irrigation systems, and prior to the final of a construction-related permit, the Project applicant shall submit a Certificate of Completion (see page 38.6 in the link above) and landscape and irrigation maintenance schedule for review and approval by the City. The Certificate of Completion shall also be submitted to the local water purveyor and property owner or his or her designee.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.17 Utilities and Service Systems (cont.)		
Impact UTL-4: Adoption of the Proposed Project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. (Criterion 5) *(Less than Significant)*	**SCA 82: Construction and Demolition Waste Reduction and Recycling** Requirement: The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/modifications with construction values of $50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center. **SCA 84: Recycling Collection and Storage Space** Requirement: The project applicant shall comply with the City of Oakland Recycling Space Allocation Ordinance (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall contain recycling collection and storage areas in compliance with the Ordinance. For residential projects, at least two (2) cubic feet of storage and collection space per residential unit is required, with a minimum of ten (10) cubic feet. For nonresidential projects, at least two (2) cubic feet of storage and collection space per 1,000 square feet of building floor area is required, with a minimum **SCA 85. Green Building Requirements.** See above. **SCA 86. Green Building Requirements – Small Projects.** See above.	Less Than Significant
Impact UTL-5: Adoption of the Proposed Project would comply with federal, State, and local management and reduction statutes and regulations related to solid waste. (Criterion 6) *(Less than Significant)*	**SCA 82: Construction and Demolition Waste Reduction and Recycling.** See above. **SCA 84: Recycling Collection and Storage Space.** See above. **SCA 85. Green Building Requirements.** See above. **SCA 86. Green Building Requirements – Small Projects.** See above.	Less Than Significant
Impact UTL-1.CU: Adoption of the Proposed Project, when combined with other past, present, or reasonably foreseeable projects, would not contribute considerably to cumulative impacts on water supplies; the wastewater systems or stormwater conveyance capacity; or generation of solid waste. (Less than Significant)	**SCA 49, Erosion and Sedimentation Control Measures for Construction.** See Section 4.9, *Hydrology and Water Quality*, above. **SCA 54** See Section 4.9, *Hydrology and Water Quality*, above. **SCA 55, NPDES C.3 Stormwater Requirements for Regulated Projects/Small Projects. See** Section 4.9, *Hydrology and Water Quality*, above. **SCA 82: Construction and Demolition Waste Reduction and Recycling.** See above.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.17 Utilities and Service Systems (cont.)		
Impact UTL-1.CU (cont.)	**SCA 83: Underground Utilities** Requirement: The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities. **SCA 84: Recycling Collection and Storage Space.** See above. **SCA 85. Green Building Requirements.** See above. **SCA 86. Green Building Requirements – Small Projects.** See above. **SCA 87: Sanitary Sewer System.** See above. **SCA 88: Storm Drain System.** See above. **SCA 90: Water Efficient Landscape Ordinance (WELO).** See above.	
4.18 Wildfire		
Impact WLD-1: Adoption of the Proposed Project could substantially impair an adopted emergency response plan or emergency evacuation plan. (Criterion 1) *(Significant and Unavoidable)*	**SCA 46: Fire Safety Phasing Plan** Applicability: All projects to be constructed in phases and the furthest structure is over 150 feet from the nearest fire hydrant. Requirement: The project applicant shall submit a Fire Safety Phasing Plan for City review and approval and shall implement the approved Plan. The Fire Safety Phasing Plan shall include all the fire safety features and emergency vehicle access incorporated into each phase of the project and the schedule for implementation of the features. **SCA 75: Construction Activity in the Public Right-of-Way.** See Section 4.8, Hazards and Hazardous Materials, above.	Significant and Unavoidable
Impact WLD-2: Future development under the Proposed Project located in or near State Responsibility Areas and/or lands classified as Very High Fire Hazard Severity Zones, would not exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. (Criterion 2) *(Less than Significant)*	**SCA 47: Designated Very High Fire Severity Zone – Vegetation Management.** See Section 4.8 Hazards and Hazardous Materials, above.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND STANDARD CONDITIONS OF APPROVAL AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Standard Conditions of Approval and Mitigation Measures	Significance After Incorporation of SCAs and Mitigation Measures
4.18 Wildfire (cont.)		
Impact WLD-3: Future development under the Proposed Project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. (Criterion 3) *(Less than Significant)*	None required.	Less Than Significant
Impact WLD-4: Future development under the Proposed Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. (Criterion 4) *(Less than Significant)*	None required.	Less Than Significant
Impact WLD-5: Adoption of the Proposed Project, combined with cumulative development, could result in significant cumulative impacts related to wildfire. *(Significant and Unavoidable)*	**SCA 47: Designated Very High Fire Severity Zone – Vegetation Management.** See Section 4.8 Hazards and Hazardous Materials, above.	Significant and Unavoidable

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CHAPTER 3
Project Description

3.1 Introduction

This EIR addresses the City's updates to its Safety Element and its adoption of a new Environmental Justice Element. In addition, it addresses the impacts of Planning Code, Zoning Map and General Plan text and map amendments, or Housing Element Implementation (HEI) implementing several actions contained in the City's recently adopted 2023-2031 Housing Element. These specific actions, aimed at increasing the production of affordable housing, streamlining approvals for special housing needs and removing constraints to housing production more generally, are described in greater detail in this Chapter.

California Law requires a City to have and maintain a general plan with specific contents to provide a vision for the City's future and inform local decisions about land use and development. State law requires specific topics, also called "Elements," to be covered in a general plan (Gov. Code Section 65302). Required elements include land use, circulation, housing, conservation, open space, noise, safety, and environmental justice.

State law mandates that the Housing Element be updated every eight years to reflect changing conditions, community objectives, and goals. Pursuant to State law (Government Code Section 65588) requirements, the Oakland City Council adopted the 2023-2031 Housing Element on January 31, 2023. The adopted Housing Element updates the City's 2015-2023 Housing Element to address the "6th Cycle" planning period from January 31, 2023 to January 31, 2031. The 2023-2031 Housing Element is available on the City's website at https://www.oaklandca.gov/topics/general-plan-update.

The primary purpose of the 2023-2031 Housing Element is to comply with the requirements of State law by analyzing existing and projected housing needs, and updating goals, policies, objectives, and implementation programs for the preservation, improvement, and development of housing, including affordable housing. The 2023-2031 Housing Element contains an updated housing needs assessment, a housing sites inventory that meets the City's Regional Housing Needs Assessment (RHNA) allocation, including a buffer of additional housing capacity, and a Housing Action Plan (HAP) that presents the updated goals, policies, and actions critical to respond to increasing housing pressures in Oakland. The HAP includes several zoning proposals as implementation actions intended to reduce and eliminate constraints and incentivize the construction of affordable housing.

The proposed HEI includes adoption of Planning Code, Zoning Map, and General Plan text and map amendments to implement several, but not all, actions in the HAP (see section 3.5 below).

The HEI amendments include specific proposals to redefine zoning designations and change development standards in zoning districts that have historically served as single-family neighborhoods to allow for missing middle housing development; to create a checklist review objective design review process; to adopt an affordable housing overlay zone that would provide for ministerial approval and other incentives to qualifying affordable housing developments; and to additionally create a "by right" or ministerial approval process for qualifying housing development located on sites identified in the Housing Element housing sites inventory.[1] The General Plan text and map amendments include conforming changes to ensure that the policies, allowed uses, and allowed densities included in the Planning Code and Zoning Map are consistent with General Plan designations and policies.

The City's Safety Element must be updated every eight years concurrent with its update of its Housing Element. The Safety Element Update presents a framework for minimizing risks posed by natural and human-caused hazards that may impact health and welfare. This element aims to protect residents, workers, and visitors from seismic and geologic hazards, wildland and other fire hazards, hazardous materials, flood hazards, and other potential hazards that risk life and property. Assembly Bill 747 (2019) and Senate Bill 99 (2019) require Safety Elements to identify evacuation routes and their capacity, safety, and viability under a range of emergency scenarios, and to include information identifying residential developments in hazard areas that do not have at least two emergency evacuation routes. Senate Bill 379 (2016) requires Safety Elements to include climate adaptation and resiliency strategies, including community goals, policies, and objectives informed by a climate change vulnerability assessment, as well as measures for addressing climate vulnerabilities.

Senate Bill 1000, also referred to as the 2016 Planning for Healthy Communities Act, requires that cities with "disadvantaged communities" or "Environmental Justice Communities (EJ Communities)" adopt environmental justice policies or an Environmental Justice Element as part of its General Plan.[2] Specifically, SB 1000 requires general plans to "identify objectives and policies to reduce the unique or compounded health risks in disadvantaged communities" by means that include, but are not limited to:

- Reducing pollution exposure, including the improvement of air quality;
- Promoting equitable access to public facilities, healthy food, safe and sanitary homes, and physical activity;
- Reducing barriers to inclusive engagement and participation in the public decision-making process;
- Prioritizing improvements and programs that address the needs of EJ Communities;
- Identifying and reversing systemic funding inequities; and
- Ensuring EJ Communities are the primary beneficiaries of investments.

1 Missing middle Housing is a range of house-scale buildings with multiple units (e.g., duplexes, triplexes, fourplexes, cottage courts, and multiplexes) that are compatible in scale and form with detached single-family homes and are located in a walkable neighborhood. More information is available at missingmiddlehousing.com.

2 As described in the *Oakland 2045 Environmental Justice and Racial Equity Baseline,* while State law refers to these as "disadvantaged communities," the City of Oakland has opted to use the term "Environmental Justice Communities" or "EJ Communities."

Therefore, the City proposes to update the Safety Element, adopt a new Environmental Justice Element, and enact the HEI, which consists of amendments to the Oakland Planning Code, Zoning Map, and General Plan. These actions constitute the Proposed Project that is the subject of this EIR and, along with the recently adopted 2023-2031 Housing Element, constitute the *Phase I Oakland 2045 General Plan Update*. The Draft General Plan Safety Element and Environmental Justice Elements are available on the City's website at https://www.oaklandca.gov/topics/general-plan-update.

3.2 Plan Area Location and Setting

Oakland is located on the eastern shore of the San Francisco Bay (Bay). The City is the county seat of Alameda County and the geographic center of the Bay Area. The City is defined by the Bay and Oakland Estuary on the southwest, the crest of the Berkeley-Oakland Hills on the northeast and east, and the city boundaries of Berkeley, Emeryville, Piedmont and San Leandro. San Francisco is located west, across the San Francisco–Oakland Bay Bridge (Bay Bridge). Alameda is located southwest, across the Estuary (see **Figure 3-1**). The City's General Plan Area (Plan Area) encompasses an area of 78 square miles of land and water. There are no unincorporated areas within the City's sphere of influence.

Certain parts of the Plan Area fall under the additional authority of other jurisdictions and agencies aside from the City of Oakland. The Port of Oakland, an independently operating department of the City, is given responsibility by the Oakland City Charter to own, develop and manage lands along the Oakland Estuary, including but not limited to the Oakland International Airport, within the specified area of Port jurisdiction. The land within the Port jurisdiction is subject, like the rest of the City, to the Oakland General Plan and is included within the City's General Plan Area. Additionally, the San Francisco Bay Conservation and Development Commission (BCDC) oversees areas that lie within a 100-foot 'Shoreline Band' surrounding the San Francisco Bay, ensuring development within this area is consistent with the San Francisco Bay Plan and the San Francisco Bay Area Seaport Plan. The United States Army Corps of Engineers (USACE) governs the federally owned Inner Harbor Tidal Canal, which is the narrow waterway that extends southeasterly from the east end of the Oakland Estuary for approximately 1.5 miles to the mouth of the San Leandro Bay (see **Figure 3-2**).

Four interstates (I-80, I-880, I-980, I-580) pass through the City. All Bay Area Rapid Transit (BART) lines traverse the City, serving eight stations. The City is also served by Amtrak, San Francisco Bay Ferry, and AC Transit.

Oakland is the third most populous city in the Bay Area, and the eighth largest in the state; it is also one of the fastest growing of the state's dozen largest cities, with the population growing nearly 14 percent from 2010 to 2022. The Oakland Port is the fourth largest container port in the western US, with 99 percent of the containerized goods in Northern California flowing through the port. The City is a regional employment center and home to major corporations, institutions, and numerous small businesses. Much of Oakland's waterfront is lined with industrial establishments due to its position as the western terminus of the Transcontinental Railroad and



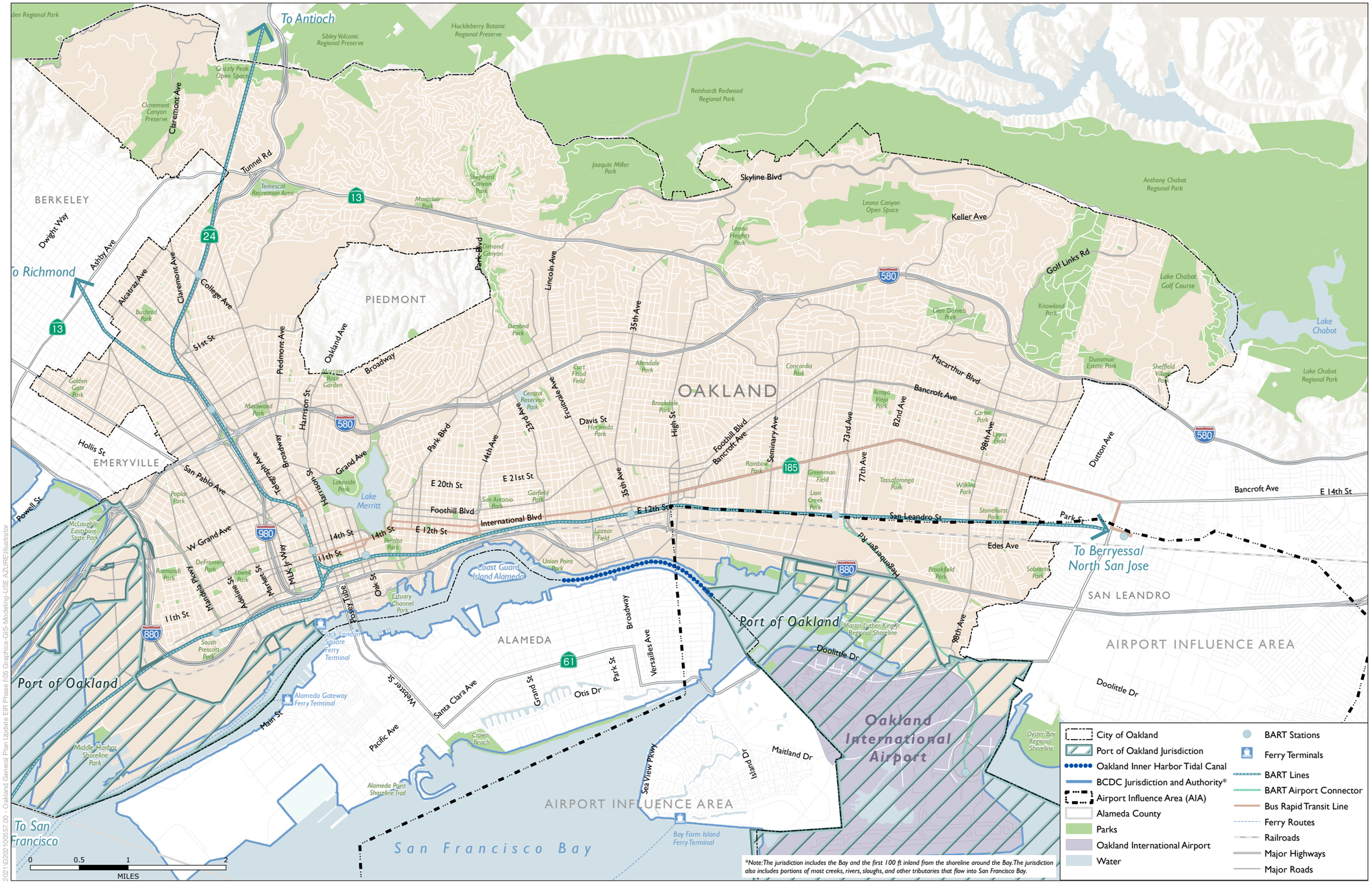
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SOURCE: Dyett & Bhatia, 2022

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Figure 3-1
Regional Setting

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SOURCE: Dyett & Bhatia, 2022

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Figure 3-2
Planning Area

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current status as a major port. While some of these industrial areas have been converted to other uses, existing industrial uses proximate to residential uses remain, particularly in West Oakland and areas of East Oakland along the I-880, San Leandro Street, and International Boulevard corridors.

3.3 Background

3.3.1 Existing Planning Code and Zoning Map

3.3.1.1 General Plan Elements

The current City of Oakland General Plan Elements were last updated and adopted at different times (see **Table 3-1**). The OSCAR was adopted in 1996, the LUTE was adopted in 1998, the Estuary Policy Plan was adopted in 1999 and most recently amended in 2013, the Safety Element was adopted in 2004 and comprehensively amended in 2012, the Noise Element was adopted in 2005 and amended in 2012, and the 2023-2031 Housing Element was adopted in January 2023. The Oakland Bike Plan (2019) and Pedestrian Plan (2017) were later adopted as part of the Circulation Element contained within the LUTE. The previously mentioned Estuary Policy Plan (1999) serves as the Land Use Element for much of the land below I-880 along the Oakland Estuary, and guides development along Oakland's waterfront between Castro Street, I-880, East Creek Slough, and the estuary shoreline. The estuary area includes both City of Oakland and Port of Oakland jurisdictional areas, so the Estuary Policy Plan is a key document in balancing the roles of these agencies.

TABLE 3-1
CITY OF OAKLAND GENERAL PLAN ELEMENTS AND POLICY PLANS

Components of the City of Oakland General Plan	Corresponding State Required Elements
1998 Land Use and Transportation Element (LUTE)	Land Use (land use policies) Circulation (circulation policies)
1999 Estuary Policy Plan (EPP)	Land Use (land use policies)
2007 Oakland Bicycle Master Plan 2019 Let's Bike Oakland! Bicycle Master Plan Update	Circulation (circulation policies)
2017 Oakland Walks! Pedestrian Plan	Circulation (circulation policies)
2023-2031 Housing Element	Housing (goals, objectives, and policies that are the foundation of the City's housing strategy)
1996 Open Space, Conservation, and Recreation Element (OSCAR)	Conservation (conservation policies) Open Space (open space policies)
2005 Noise Element	Noise (policies and implementation measures)
2004 Safety Element (amended in 2012)	Safety (policies to minimize risk from, and reduce exposure to environmental hazards)
2021-2026 Local Hazard Mitigation Plan	Safety (information on the risks from natural hazards)
1994 Historic Preservation Element	Historic Preservation (policies and actions to encourage the preservation of historic resources)
1974 Scenic Highways Element	Scenic Highways (policies to preserve and enhance attractive roadways)

SOURCE: City of Oakland

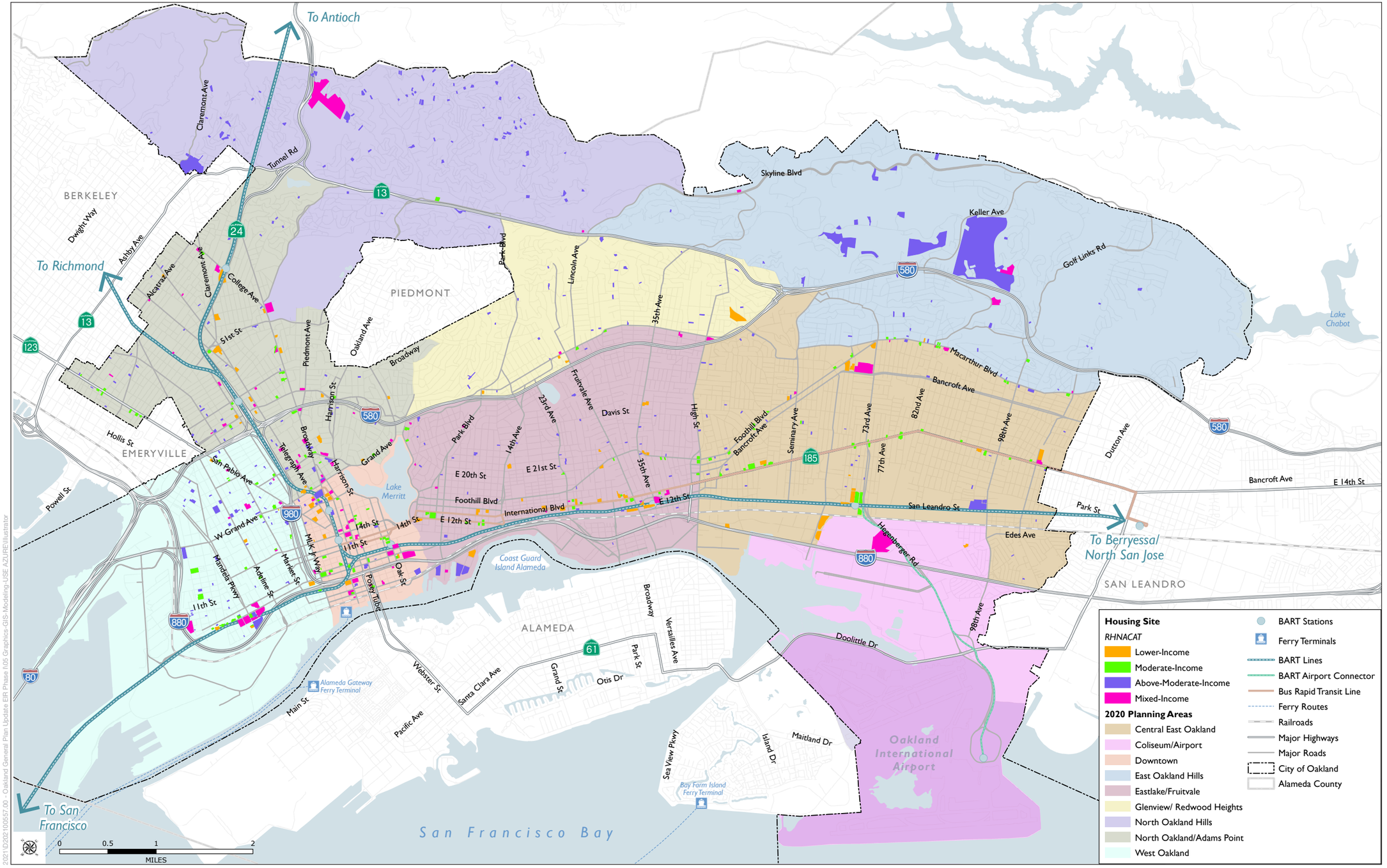
The Land Use and Transportation Element (LUTE) of the General Plan sets forth the City's policies for guiding local land use and development for all areas outside the Estuary Policy Plan boundaries. The LUTE outlines the land use and development vision for the majority of Oakland, establishing an agenda to encourage sustainable economic development, ensure and build on the transportation network, increase residential and commercial development in downtown, reclaim the waterfront for open space and mixed uses, and protect existing neighborhoods while concentrating new development in key areas. These policies, together with the zoning regulations, establish the amount and distribution of land allocated for different uses within the City.

The City's 2023-2031 Housing Element serves as Oakland's roadmap to ensure sufficient housing is built to meet the needs of all Oaklanders, protect existing Oaklanders from displacement, and ensure that future development patterns undo past patterns of segregation. As described above, the Housing Element includes an updated housing needs assessment, a housing sites inventory that meets the City's RNHA including a buffer of additional housing development capacity, and the HAP chapter, which presents the updated goals, policies, and actions critical to respond to increasing housing pressures in Oakland. Specifically, the Housing Element addresses Oakland's housing needs considering the significant rise in rents and home prices, income burdens, and gentrification and the risk of displacement. For more information, including the definition of these terms, and the updates to goals, policies, and programs, please see the 2023-2031 Housing Element available on the City's website at https://www.oaklandca.gov/topics/oakland-general-plan-2045-housing-element.

3.3.1.2 Housing Sites Inventory and Existing Capacity

The 2023-2031 Housing Element includes a housing site inventory that analyzes whether Oakland's current zoning includes sufficient site capacity to meet the City's housing production goals through 2030, known as the Regional Housing Needs Assessment (RHNA). HCD Guidance provides that the RHNA can be accommodated by considering: 1) projects that are currently in the development pipeline; 2) identifying sites that have potential and realistic capacity for development within the 8-year planning period; and 3) alternative means of meeting the RHNA, such as projected ADUs and a limited number of rehabilitated, converted, or preserved units affordable to lower-income households. Based on the City's current General Plan and zoning regulations, there is sufficient capacity to accommodate its RHNA allocation including at least a 15 percent buffer as recommended by the State. **Table 3-2** below shows the City's existing capacity to develop an estimated 36,274 units, which is approximately 140 percent of the City's RHNA allocation (see **Figure 3-3**). Nonetheless, the Housing Element identified that additional programs would support the City's goals of increasing housing production, encouraging affordable housing, and supporting the development of housing in historically exclusive neighborhoods.

To assemble its inventory, the City identified pipeline projects that will receive a Certificate of Occupancy after June 30, 2022; ADU projections; "alternative sites" that convert hotels to residences for individuals experiencing homelessness; available sites previously identified in the 5th Housing Element cycle; and new opportunity sites.



SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 3-3
City of Oakland 6th Cycle Housing Sites Inventory, 2023-2031

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Pipeline Projects

Pipeline projects are projects that have been approved, permitted, or will receive a Certificate of Occupancy during the 2023-2031 Housing Element projection period (June 30, 2022, to December 15, 2030). Using data from the City's Accela permitting system, 336 pipeline projects with 12,339 units are spread across the City, with the majority in the Downtown, West Oakland, Eastlake/Fruitvale, and North Oakland/Adams Point areas. Based on the affordability levels or projected rents specified on the project proposals, approximately 21.5 percent of pipeline capacity is affordable for lower-income households, while 1.3 percent is affordable for moderate-income households. The remainder is assumed to be affordable for above-moderate-income households.

TABLE 3-2
HOUSING SITES INVENTORY AND EXISTING CAPACITY

	Needed Units	Needed Units with 15 percent Buffer	Existing Capacity	Percent of Needed Units
Pipeline Projects	-	-	12,339	-
Accessory Dwelling Units	-	-	1,978	-
Adequate Alternative Sites	-	-	82	-
Potential Development Projects	-	-	8,602	-
Available 5th Cycle RHNA Sites	-	-	5,197	-
New Opportunity Sites	-	-	8,076	-
Total	**26,251**	**30,189**	**36,374**	**138.2%**

NOTE: Since the time of EIR development, the California Department of Housing and Community Development requested several changes to the Housing Sites Inventory that reduced the overall existing capacity of development (34,831 units; a difference of 1,543 units) but distributed more housing units in areas of higher incomes and near transit. Thus, this EIR describes a modestly more intense buildout estimate and thus serves as a conservative analysis.

SOURCE: Housing Element Update Appendix C Table C-2

Accessory Dwelling Units (ADU)

Using a conservative estimate based on production trends in recent years, the City anticipates the construction of approximately 1,978 ADUs, or an average of approximately 247 ADU permits per year times eight years. To estimate affordability during the projection period, the City used the results of its recent online survey of ADU owners as well as regional data provided by Association of Bay Area Governments/Metropolitan Transportation Commission.[3]

Adequate Alternative Sites

According to HCD, under "limited circumstances" a local government may credit up to 25 percent of their adequate sites requirement per income category through existing units.[4] "Limited circumstances" refer to sites that are substantially rehabilitated; located on a foreclosed

[3] This survey was conducted in preparation of the "Oakland ADU Initiative: Existing Conditions and Barriers Report," which was published January 2020 and revised June 2020. There were 56 responses to the question "How much does the current ADU occupant pay in rent per month? If the occupant is staying in the ADU for free, then mark $0."

[4] More specific conditions that sites included under this option must meet are provided by HCD on their website: https://www.hcd.ca.gov/community-development/building-blocks/site-inventory-analysis/adequate-sites-alternative.shtml

property or in a multifamily complex of three or more units converted from non-affordable to affordable rental; preserved at levels affordable to low- or very-low-income households with committed assistance; or preservation of mobile home parks through acquired spaces. According to Oakland HCD's 2021-2023 Strategic Action Plan, the City has acquired and converted and/or preserved 600 affordable units between 2018 and 2020. As an ongoing City strategy, there are a number of units that the City will convert and/or preserve during the 2023-2031 planning period. The affordability of these projects reflects the actual affordability levels pursuant to the regulatory agreements that will maintain such income-restricted units.

Potential Development Projects

While pipeline projects are those that have received planning approval or are in the building permit process, there are also several other potential projects at various stages in the planning process, including those in the pre-application stage and those with filed and under review planning permits.

Available 5th Cycle RHNA Sites

There are several opportunity sites selected as part of the 5th Cycle RHNA that did not develop over the 2015-2023 period and are still available for housing. Pursuant to Government Code Section 65583.2I, sites identified to accommodate a portion of Oakland's lower-income RHNA that were also contained in previous housing element cycles must be zoned at residential densities of at least 30 dwelling units per acre (du/ac) and must also be rezoned to allow for residential use by right for housing developments in which at least 20 percent of the units are affordable to lower income households.

New Opportunity Sites

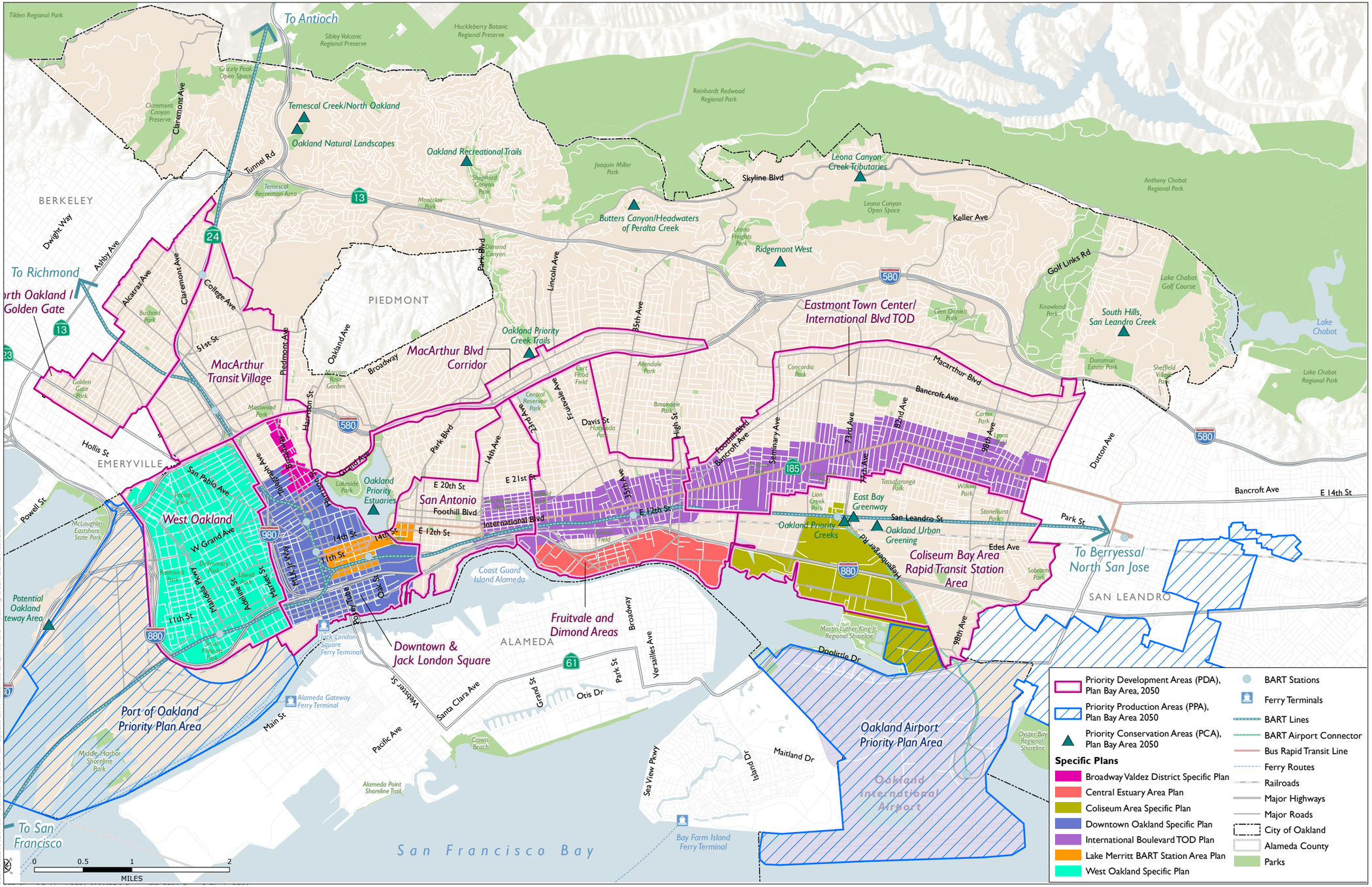
New opportunity sites not included in previous housing element cycles were identified to meet the City's remaining RHNA. These sites include both vacant and non-vacant sites and consist of City-owned sites, sites owned by BART, sites located within a specific plan area (as described below in section 3.3.1.3), and other sites with expressed or potential housing development interest from property owners.

3.3.1.3 Specific Plans and Area Plans

Four adopted Specific Plans and one Area Plan provide greater specificity for future development and public improvements for several neighborhoods within Oakland. These plans are summarized below (see **Figure 3-4**).

Coliseum Area Specific Plan (2015)

The Coliseum Area Specific Plan seeks to transform 800 acres of underutilized land around the Oakland-Alameda County Coliseum (centered around I-880, north of Hegenberger Road) into a state-of-the-art district with a sports, entertainment, and science and technology focus. In tandem with this goal, the plan seeks to expand employment opportunities, create a pedestrian-friendly environment, and provide housing. At the time this plan was prepared, the area was home to the Oakland Raiders and Golden State Warriors, both of which have since departed to locations outside Oakland, and the Oakland A's, future plans for which are currently in flux.



SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 3-4
Area Plans and Priority Development Areas

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West Oakland Specific Plan (2014)

The West Oakland Specific Plan is a comprehensive approach to developing vacant or underutilized commercial and industrial parcels in West Oakland, a 1,900-acre area bounded by I-580 to the north, I-980 to the east, and I-880 wrapping around the south and west. It additionally identifies necessary transportation improvements and seeks to improve the quality of life for residents by reducing blight and creating 22,000 living-wage jobs through the development of commercial, office, and industrial space. It also supports transit-oriented, mixed-use development around the West Oakland BART station to supply 1,325-2,300 new housing units.

Lake Merritt Station Area Specific Plan (2014)

The Lake Merritt Station Area Specific Plan encompasses generally a half-mile radius around the Lake Merritt BART Station. This includes Chinatown, Laney College, the channel connecting Lake Merritt to the Oakland Estuary, and Oakland and Alameda County civic buildings. This plan seeks to reduce auto use and increase multimodal transportation use (transit, biking, walking); increase housing near the BART station; streamline the real estate development process; increase jobs, services, and retail; support existing businesses; and increase recreational space.

Broadway Valdez District Specific Plan (2014)

The Broadway Valdez District Specific Plan includes approximately 95 acres, encompassing the Broadway corridor between West Grand Avenue and Interstate 580, including stretches of 27th and Valdez streets, where many of the City's auto dealers were formerly located. The goal of this plan is to transform this area, located directly north of Downtown and near two BART stations, into a pedestrian-friendly retail and employment destination for the region. Additionally, the plan seeks to promote a diverse array of housing, medical services, and dining options.

Central Estuary Area Plan (2013)

The Central Estuary Area Plan includes 416 acres and is composed of the estuary shoreline and surrounding neighborhoods, roughly from 19th Avenue south to 54th Avenue between the estuary (west) and I-880 (east). This plan was developed in response to increased development interest. The Plan addresses conflicting land use priorities and infrastructure deficiencies with the goal of developing a vibrant destination that supports a mix of uses. It recommends several transportation improvements and street redesigns for safer, pedestrian-oriented streets, and many objectives focus on public space and public access to the shoreline.

Downtown Oakland Specific Plan (In Progress)

The City is currently completing the Downtown Oakland Specific Plan (DOSP), which encompasses 930 acres of land bounded by the Oakland Estuary to the south, Lake Merritt to the east, I-980 to the west, and 27th Street/Grand Avenue to the north. This plan seeks to create policy guidance as Downtown Oakland continues to redevelop, focusing on economic opportunity, housing needs and homelessness, transportation, cultural arts, public space, and social equity.

3.3.1.4 Planning Code and Zoning Map

The Oakland Planning Code implements the land use and other related policies put forth in the General Plan, as well as the Specific Plans and Area Plan, through detailed development regulations. Zoning plays a key role in regulating development type, density, and land use, and generally supports the vision of the General Plan. While much of the City's zoning districts fall under "residential", "commercial", or "industrial", the first two categories sometimes allow for interchangeable uses. Zoning also regulates the form that development may take within these districts (see **Figure 3-5**). Development standards identified in the Planning Code include setbacks, lot area, lot width, density, floor area ratio, site coverage, landscaping and open area requirements, height limits, storage, and parking.

3.3.1.5 Priority Development Areas (PDAs)

The regional Priority Development Area (PDA) program was created to meet regional housing needs in an equitable and sustainable way. PDAs are areas located near transit that are prioritized by local governments for developing new homes, jobs, and community amenities. This infill development minimizes impacts to the environment and enables future residents to take advantage of existing infrastructure, particularly transit. The areas were nominated by local governments for the Association of Bay Area Governments (ABAG) adoption. Oakland has nine adopted PDAs, which are shown on Figure 3-4 and listed below:

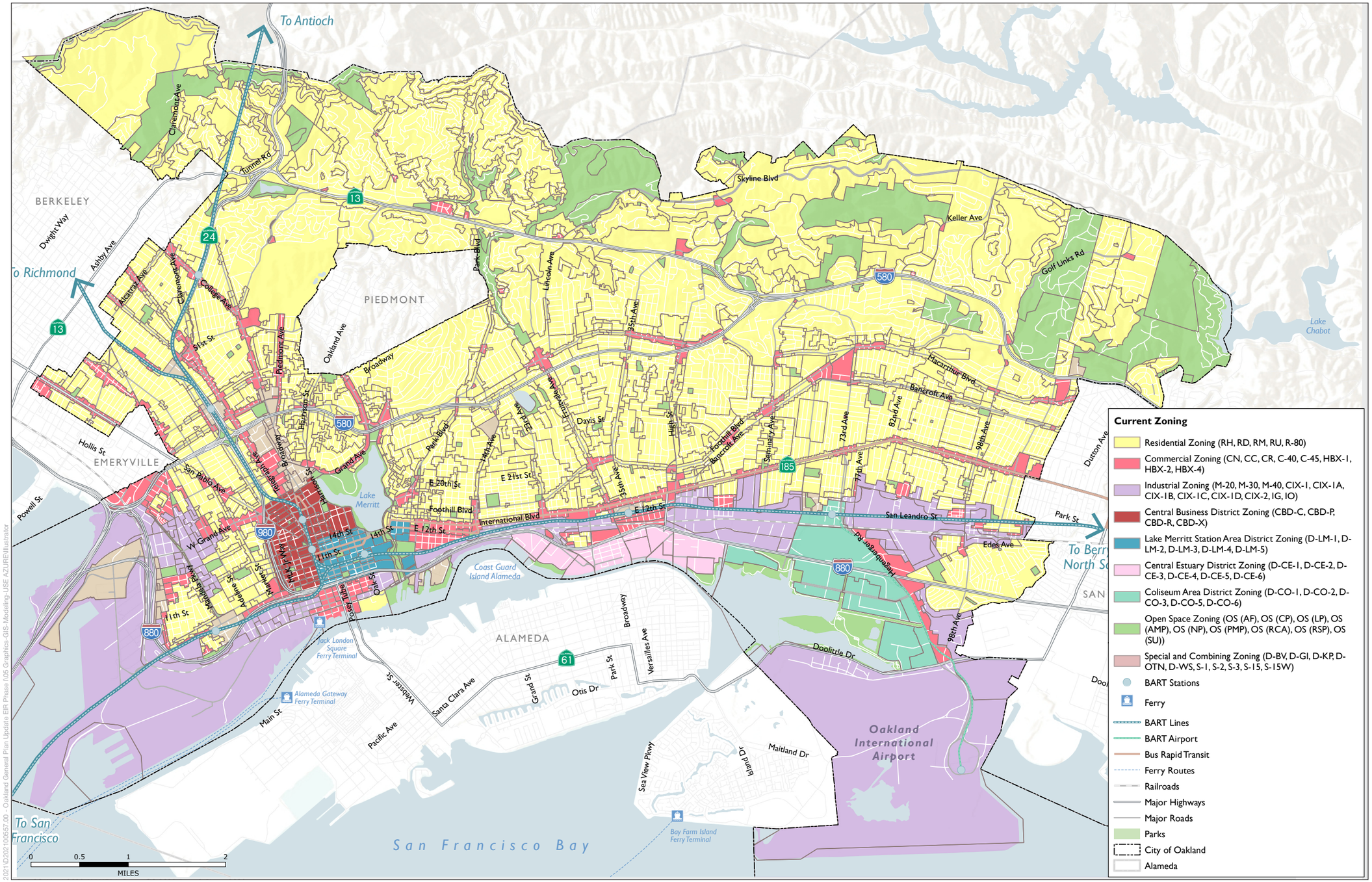
- North Oakland/Golden Gate
- MacArthur Transit Village
- West Oakland
- Downtown & Jack London Square
- San Antonio
- MacArthur Blvd Corridor
- Fruitvale & Dimond Areas
- Eastmont Town Center/International Blvd TOD
- Coliseum BART Station Area

3.4 Plan Area Existing Conditions

The City prepared three existing conditions reports for the *Phase I Oakland 2045 General Plan Update* process. These reports document and analyze background conditions, trends, and opportunities to lay the groundwork for community deliberations and policymaking. The reports include the following:

- Oakland 2045 Map Atlas (published March 30, 2022) (see Appendix A);
- Oakland 2045 Environmental Justice and Racial Equity Baseline (published March 30, 2022); and
- Economic Trends and Prospects Baseline Analysis (published June 1, 2022)

These reports are available on the City's website at https://www.oaklandca.gov/topics/general-plan-update. The Oakland 2045 Map Atlas focuses on the existing physical environmental conditions of the City of Oakland and is included in this EIR as Appendix A.



SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 3-5
Current Zoning Designations

ESA

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3.4.1 Existing Land Uses

Oakland encompasses approximately 78 square miles, including about 55.8 square miles of land and 22.2 square miles of water. **Table 3-3** shows the breakdown of existing land uses. The majority land uses are Residential (38 percent) (particularly detached Single-Family Residential that makes up about 75 percent of this category), followed by Recreation and Open Space (29.9 percent), and then by Industrial (16.5 percent); combined, these three land use categories comprise nearly 84 percent of the City's land uses.

TABLE 3-3
CITY OF OAKLAND EXISTING LAND USE SUMMARY TABLE

Existing Use Categories	Acres	Percentage
Residential	12,535	38.0 percent
Commercial	1,107	3.4 percent
Industrial	5,461	16.5 percent
Public And Community Facilities	2,664	8.1 percent
Recreation And Open Space	9,865	29.9 percent
Parking Lot/Garage	78	0.2 percent
Vacant	1,312	4.0 percent

SOURCE: Oakland 2045 Map Atlas, Appendix A, Table 2-1; ESA amended, 2022.

Oakland's existing land use and development pattern shown in **Figure 3-6** reflects the City's history and evolution. Downtown has a diverse mix of uses, including office and general commercial uses, City and County administrative offices, courthouses and facilities such as the Main Library. Downtown also includes many entertainment venues, restaurants and smaller retail shops. In addition to downtown, commercial uses line the City's major corridors, such as Telegraph Avenue and International Boulevard.

Much of Oakland's estuary waterfront between the Port of Oakland and the Oakland International Airport is lined with industrial establishments. Exceptions include the Jack London District, which has been converted to retail, residential and entertainment uses, and Brooklyn Basin, a new master-planned residential development east of Estuary Park. Large concentrations of industrial uses extend inland in both West and East Oakland.

Outside of Downtown, industrial areas, and the corridors, the dominant use is residential, arranged in many diverse neighborhoods together with neighborhood commercial uses, parks and open spaces, and facilities such as schools. Across Oakland, many neighborhoods balance single- and multi-family buildings, while some are predominantly multi-family (such as Adams Point) and others are predominantly single-family (such as Maxwell Park). Densities are generally lower in areas of the hills due to challenging topography, high fire risk, and the substandard road network.

3.4.1.1 Existing Densities/Intensities

Figure 3-7 shows the existing residential density across the Plan Area. For residential uses, density is expressed as the number of dwelling units per acre. The highest residential densities are concentrated within a 1.5-mile radius of the City's core. Downtown has recently experienced some of the tallest residential building developments in the City and has many buildings with densities above 200 units/acre. Thirty-six percent of Oakland's total housing units are found within a 1.5-mile of Lake Merritt. Adams Point and other neighborhoods around Lake Merritt feature older mid-rise residential buildings, with many between 40-100 units/acre. The Jack London and Broadway Valdez districts both feature many new mid-rise residential buildings, including some in the 100-200 units/acre category. North Oakland, West Oakland and East Oakland are primarily mid-low density at 8-20 units/acre, with clusters of higher-density buildings, and densities gradually decrease towards the hills. Most of the southern Oakland Hills, east of I-580, is characterized by the lowest residential density of up to 4 units/acre, while most of the northern Oakland Hills, east of Highway 13, is 4-8 units/acre.

While the lowest density category (up to 4 units/acre, found only in the hills and adjacent neighborhoods) comprises 20.5 percent of the City's residential acreage, it supplies only 2.9 percent of the City's units. Similarly, while nearly a quarter of the City's residential land is developed at 4-8 units/acre (primarily in the hills), this category supplies only 10.6 percent of the City's units. The largest portion of residential land (37.9 percent) falls into the 8-20 units/acre category, consistent with the fact that this category is abundant in North, West, and East Oakland. The highest-density category (above 200 units/acre; found primarily in Downtown) only comprises 0.24 percent of the City's residential land, yet it supplies nearly 5 percent of the City's units.

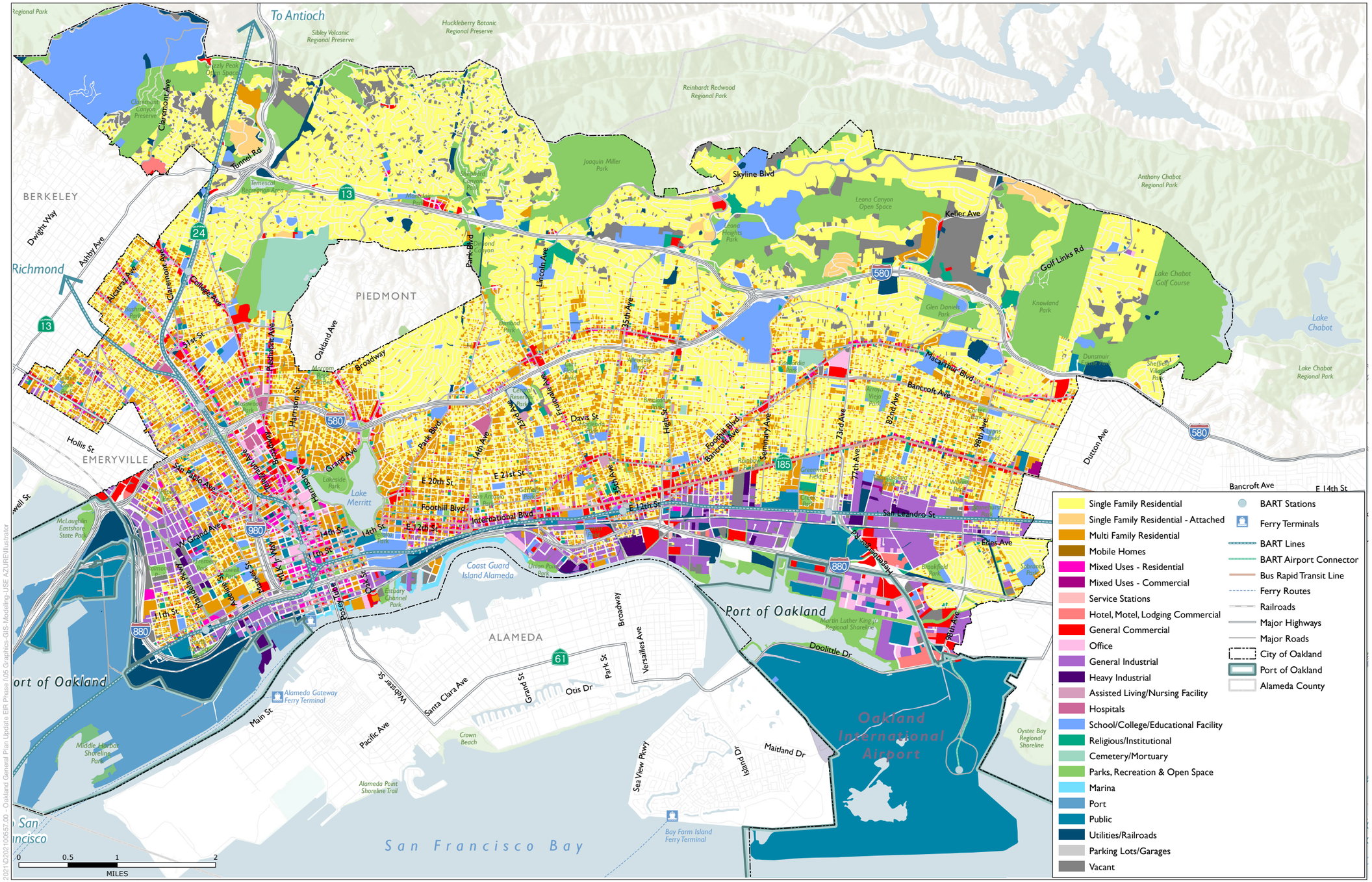
3.4.2 Existing Emergency and Safety Services

Community health depends on access to emergency services. First responders should be well distributed throughout the City to respond promptly to emergency situations. Twenty-five fire stations are distributed throughout the City. The City has two police stations, one located in Fruitvale and one located in the southeastern part of the City in Eastmont. The Police Headquarters building, currently located downtown, is planned to relocate to the Coliseum area, and develop the present site with housing, retail and other uses.

Oakland Hospitals are clustered around freeways. Three hospitals are accessible from the MacArthur BART Station, and four are located along AC Transit bus routes. Additionally, three hospitals in the adjacent City of San Leandro serve East Oakland residents; of those three, only San Leandro Hospital is accessible by public transit (AC Transit bus).

3.4.3 Existing Environmental Justice Communities: Race, Income, and Areas of Impact and Risk

SB 1000 provides two options for identifying EJ Communities, which are defined as "an area that is a low-income area that is disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation." These communities are the specific beneficiaries of certain funding and targeted environmental justice

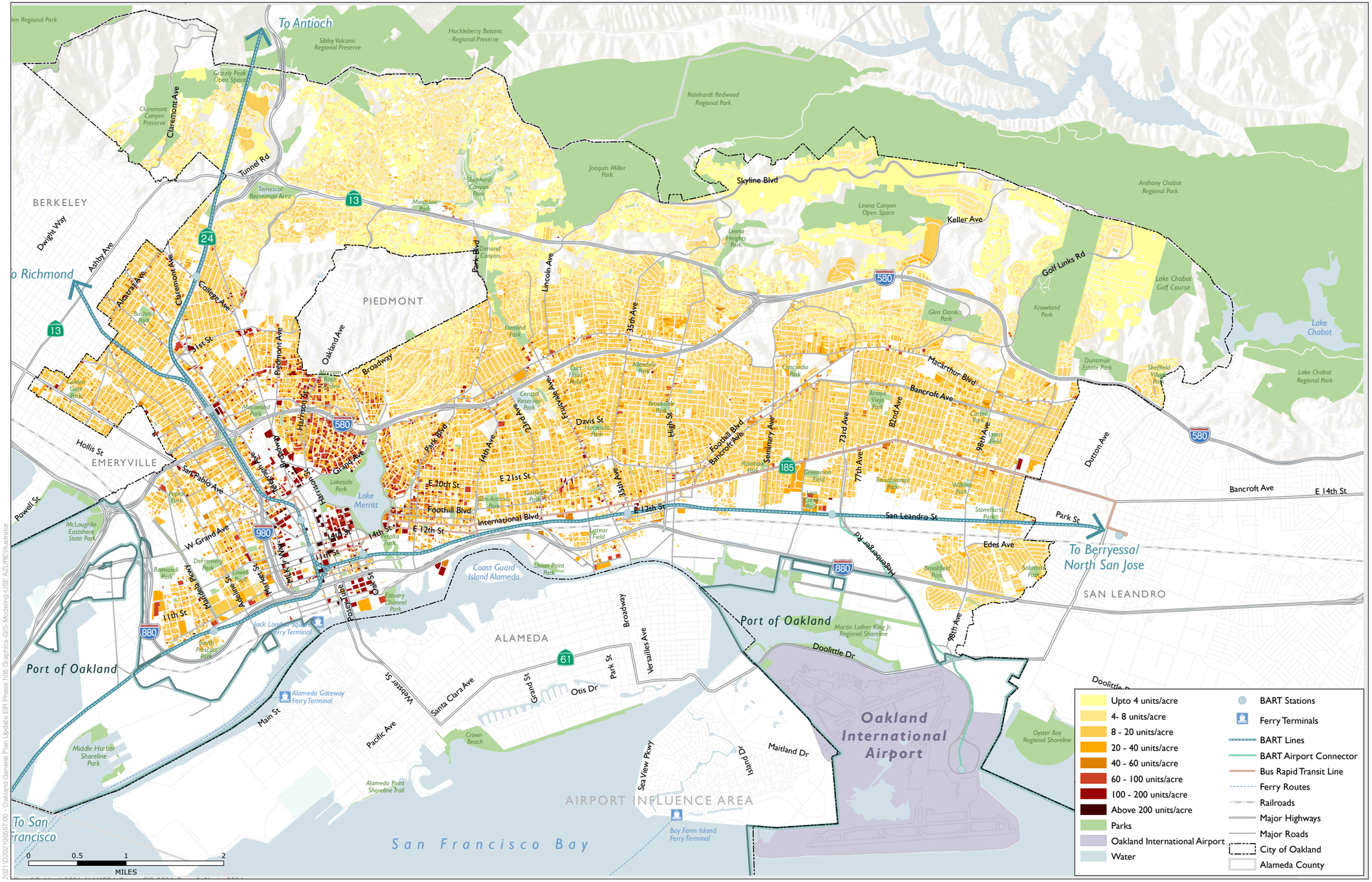


SOURCE: Dyett & Bhatia, 2022

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Figure 3-6
Existing (On the Ground) Land Use

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SOURCE: Dyett & Bhatia, 2022

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Figure 3-7
Existing Residential Density

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efforts. One option is to rely on CalEnviroScreen, which uses 13 pollution burden indicators and 8 population characteristic indicators to score census tracts. **Figure 3-8** shows CalEnviroScreen 4.0's 2021 scores for the City. The higher the score, the more impacted the community.

SB 1000 defines low-income communities as areas where median household incomes are at or below 80 percent of the statewide median income ($60,188 in 2019), or where median household incomes are at or below the low-income threshold designated by the California Department of Housing and Community Development (HCD) (a four-person household in Alameda County making $98,550 or less). These two definitions of low-income communities are very different thresholds (see **Figure 3-9**).

In Oakland, the EJ Communities are designated based on the California Communities Environmental Health Screening Tool, or CalEnviroScreen, in addition to locally specific indicators, as the State Office of Planning and Research allows.

The *Oakland 2045 Environmental Justice and Racial Equity Baseline* thoroughly describes the preliminary methodology used to identify potential EJ Communities. The mapping process expanded on the methodologies used in CalEnviroScreen to include community conditions, including racial/ethnic makeup, beyond pollution and hazards that can lead to negative health effects, exposure, or environmental degradation. Overall, 50 individual indicators grouped in four categories were selected to map and identify EJ Communities. After calculating scores for all 50 indicators and combining these into the topic, category, and overall composite score; criteria and cutoff thresholds were applied to determine which census tracts are formally identified as EJ Communities. These criteria included scores falling within the top 25th percentile of overall composite scores; those among the top 10th percentile of any of the category scores; and those within the West Oakland AB 617 boundary.[5] The result was 38 total census tracts preliminarily identified as EJ Communities in the City of Oakland: 29 are in the top 25th percentile by composite score, 4 census tracts are in the top 10th percentile of any one of the category scores, and 5 census tracts have lower scores, but are located within the West Oakland AB 617 Community boundary. These tracts are shown in **Figure 3-10**.

Figure 3-11 shows the preliminary mapping results presented in the *Oakland 2045 Environmental Justice and Racial Equity Baseline* report. As shown, communities that have higher overall scores are predominantly in the southern half of Oakland, below the I-580 freeway. The top 25 highest-scoring tracts are in parts of the West Oakland and Downtown areas, Oakland Estuary and San Antonio areas, and many parts of East Oakland. All of these tracts are considered low-income areas under both State definitions.

An initial Race and Equity Impact Assessment assessed this methodology, highlighted gaps in the analysis, and provided recommendations for improvement. The final methodology used to identify EJ Communities in the EJ Element was refined based on these recommendations,

[5] Assembly Bill 617 (AB 617) was promulgated into state law in 2017. The purpose of this legislation is for the California Air Resources Board to establish the Community Air Protection Program (CAPP) with the objective to reduce human health risk levels by reducing air toxics exposure in communities most impacted by toxic air contaminants emissions. West Oakland is a designated CAPP community.

including the removal, addition, and adjustment of indicators to better align them with a focused set of selection guidelines.

3.4.4 Existing Industrial Lands

The City's industrial land supply remains concentrated along the major I-880 freeway and rail corridors, which offer proximity and accessibility to the business and population centers of the City and the region. Oakland's current industrial land occupies approximately 10 square miles of the City, where about 60 percent of the industrial land inventory is situated in the West and East Oakland neighborhoods. The Port of Oakland, at the northern end of the waterfront, is the fourth largest container shipping port on the West Coast. The Oakland International Airport is at the southern end of the City's estuary waterfront. In between these two nodes, much of the estuary waterfront is lined with industrial establishments. Exceptions include the Jack London District, where formerly industrial areas have been converted to retail, residential and entertainment uses; and Brooklyn Basin, a new master-planned residential development east of Estuary Park. Large concentrations of industrial uses extend inland in both West and East Oakland. In some areas, particularly in West and East Oakland, large portions of industrial land are located in or adjacent to some of the City's most at-risk residential areas, where populations face disproportionate health burdens and pollution exposure.

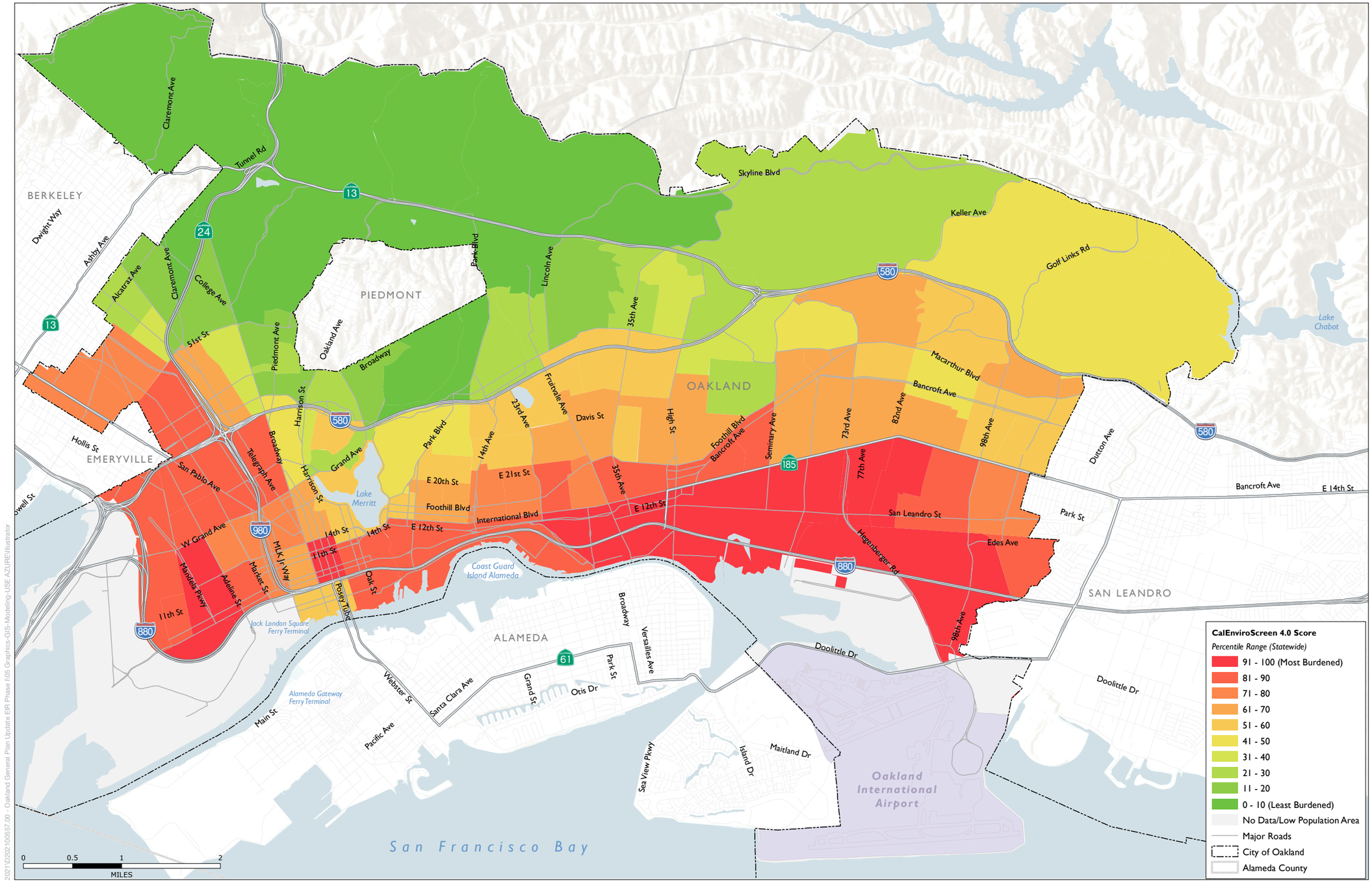
3.5 Proposed Project

The *Oakland 2045 General Plan Update* consists of two main phases following adoption of the 2023-2031 Housing Element. Phase I includes the following:

- Housing Element Implementation (HEI) (includes amendments to the Oakland Planning Code, Zoning Map, and General Plan);
- Safety Element Update;
- New Environmental Justice Element; and
- Industrial Lands Zoning Changes.

The City of Oakland adopted its 2023-2031 Housing Element on January 31, 2023. The 2023-2031 Housing Element presents the City of Oakland's strategy and commitment to make quality housing opportunities available to all Oakland residents through the *Protection, Preservation, and Production* of homes, and to address systemic housing inequity. The Housing Element is comprised of four chapters and 13 appendices. Chapter 4 of the Housing Element, the Housing Action Plan (HAP), includes five goals, 17 policies, and 120 actions intended to address a wide range of housing issues confronting the City of Oakland, including the following overarching goals:

- Protect Oakland Residents from Displacement and Prevent Homelessness
- Preserve and Improve Existing Affordable Housing Stock
- Expand Affordable Housing Opportunities
- Address Homelessness and Expand Resources for the Unhoused
- Promote Neighborhood Stability and Health



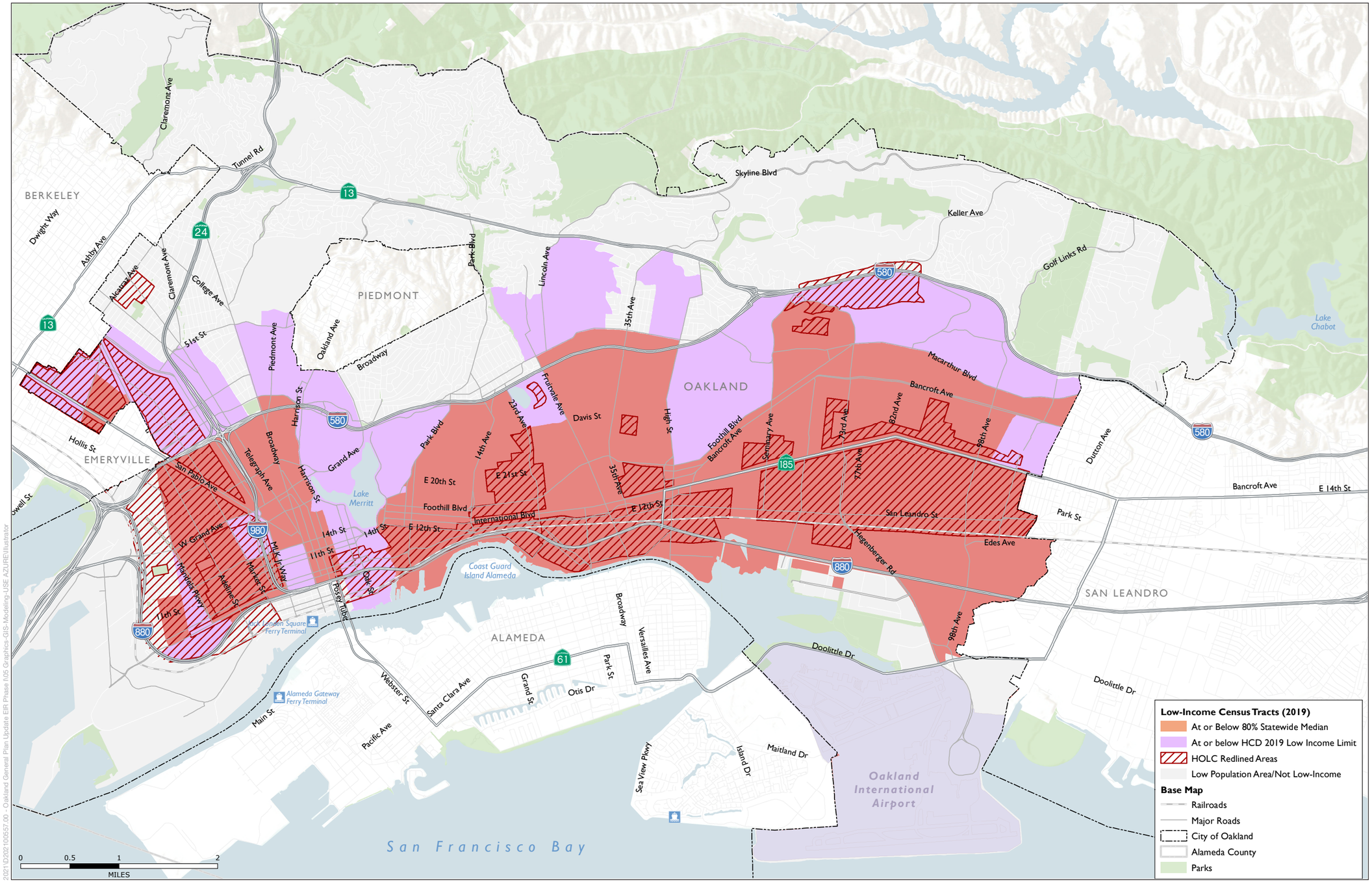
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SOURCE: Dyett & Bhatia, 2022

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Figure 3-8
CalEnviroScreen 4.0 Scores, 2021

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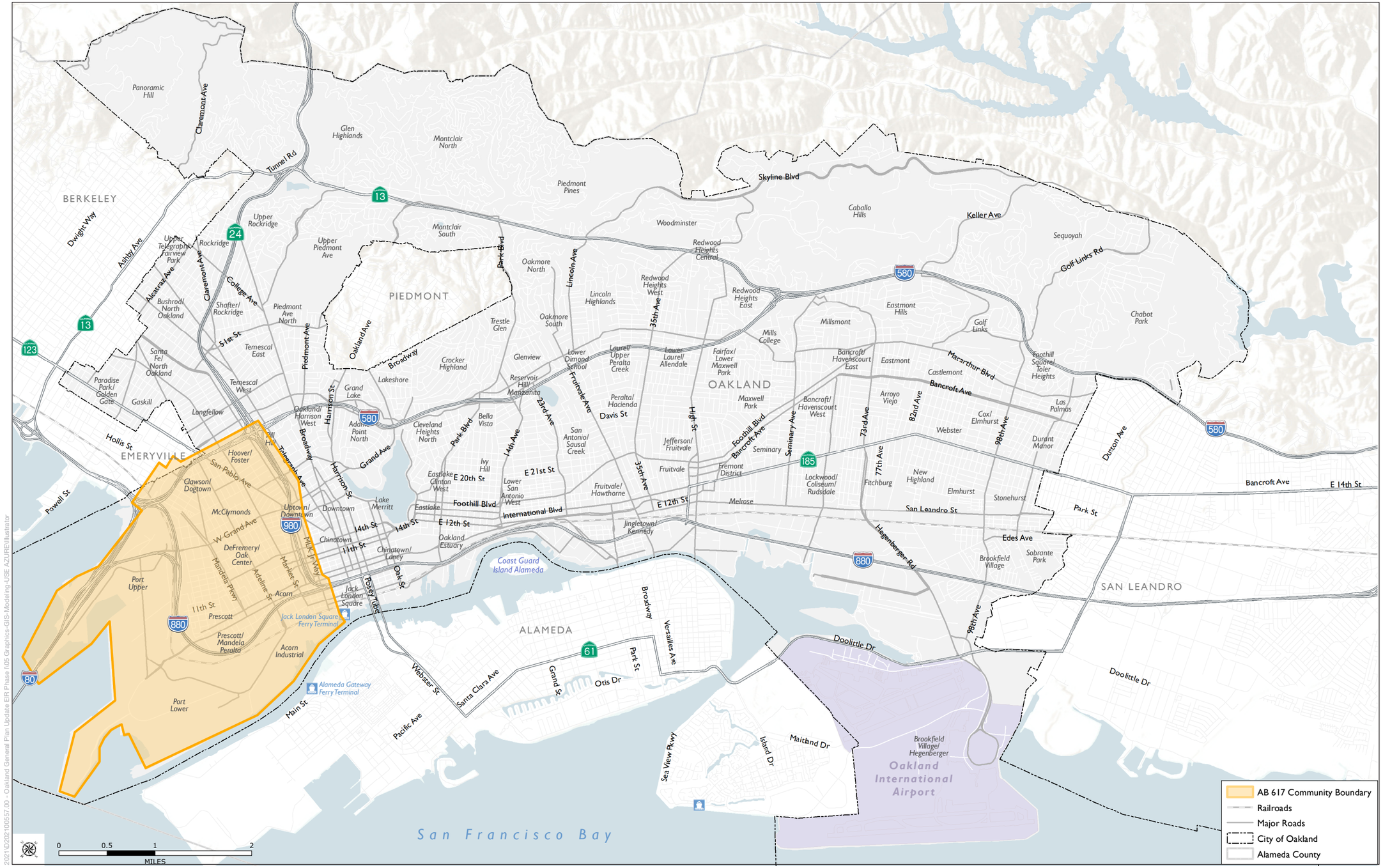
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SOURCE: Dyett & Bhatia, 2022

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Figure 3-9
Low-Income Areas, 2019

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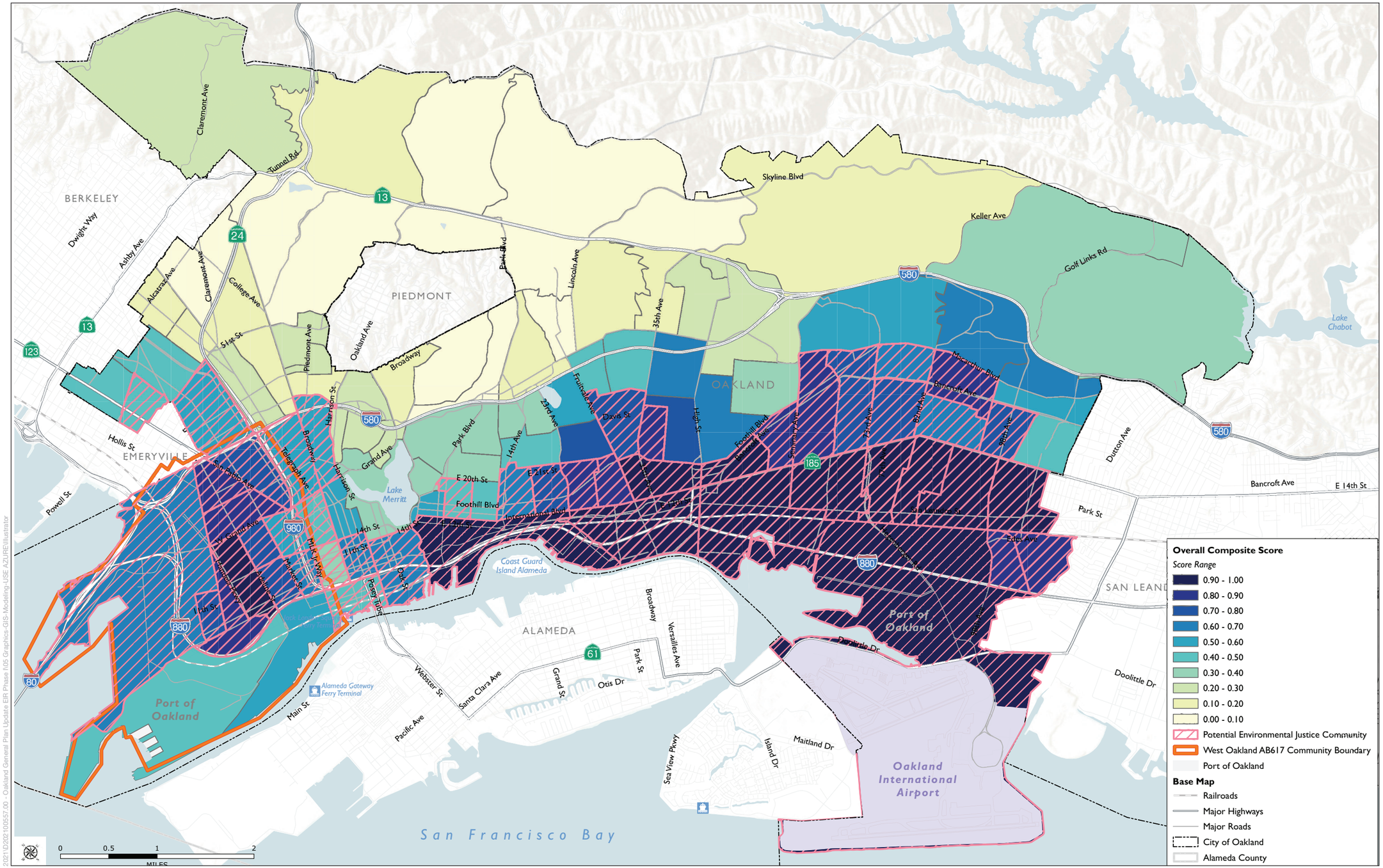
SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 3-10
AB 617 West Oakland Community Boundary

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SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 3-11
Environmental Justice Communities

ESA

While these five goals provide an overall framework for addressing the multifaceted housing crisis, the policies and actions in the HAP specify the means for implementing those goals. Actions include both programs currently in operation as well as new actions needed to address the City's housing needs. The HEI includes adoption of Planning Code, Zoning Map, and General Plan text and map amendments to implement several actions in the HAP. However, not all of the HAP actions are addressed in the HEI and analyzed as part of the Proposed Project. HAP actions not addressed in the HEI include various tenant protection provisions, actions to conserve and improve affordability of existing housing stock; housing subsidy programs, fee reductions, and other financing tools; actions to address homelessness across the spectrum of needs; and homeownership opportunities; homeownership support; and housing integration. Some of these actions proposed in the Housing Element HAP are continuing existing programs while others require additional study and will be considered at a later date. Because those programs are not within the scope of this Draft EIR, their compliance with CEQA will need to be independently assessed at the time of their consideration. The HEI addresses the remaining HAP actions, each of which is listed below.

The Proposed Project analyzed in this Draft EIR is comprised of the HEI and General Plan elements that are part of the *Phase I Oakland 2045 General Plan Update*. After completing Phase I, the City will subsequently prepare the *Phase II Oakland 2045 General Plan Update* between 2023 and 2025, which will include updates to the Land Use and Transportation (LUTE); Estuary Policy Plan (the Land Use Element for much of the land below I-880 along the Oakland Estuary); Open Space, Conservation and Recreation (OSCAR) Element; Noise Element; and preparation of a new Infrastructure and Facilities Element; including preparation of a separate EIR.

3.5.1 Housing Element Implementation (HEI)

The Housing Element Implementation (HEI) includes an initial package of zoning actions being proposed by the City of Oakland Planning Bureau to implement some of the HAP actions. The HAP actions included in the HEI require revisions to the Planning Code development standards such as increased heights, increased housing density, shifts in where additional density is allowed, revisions to design review process, and entitlement reforms. These Planning Code, Zoning Map, and General Plan text and map amendments are anticipated to alter the type of housing produced, as well as how and where housing is produced, such that it is more dispersed throughout the City. These amendments are anticipated to result in an increase in housing development and associated increase in residential population. The following HAP actions prompt changes to the Planning Code that are part of the Proposed Project analyzed in this Draft EIR:

- *Action 3.2.1*: Develop zoning standards to encourage missing middle and multi-unit housing types in currently single-family-dominated neighborhoods, including flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and ADUs.
- *Action 3.3.1*: Sale or ground-lease of City-owned property for affordable housing.
- *Action 3.3.4*: Development of permanent housing affordable to extremely-low-income (ELI) households on public land.
- *Action 3.3.5*: Implement an affordable housing overlay.

- *Action 3.4.1*: Revise development standards, including allowable building heights, densities, open space and setback requirements.
- *Action 3.4.3*: Revise Conditional Use Permit (CUP) requirements.
- *Action 3.4.4*: Revise citywide parking standards.
- *Action 3.4.5*: Revise open space requirements.
- *Action 3.4.8*: Implement objective design standards.
- *Action 3.4.10*: Implement a Housing Sites Overlay Zone to permit sites included in the Housing Sites Inventory to develop with affordable housing by right.
- *Action 3.6.3*: Expand by-right approvals and implement entitlement reform for affordable housing.
- *Action 3.7.6*: Expand areas where rooming units and efficiency units are permitted by right.
- *Action 3.7.7*: Amend Planning Code to comply with the Employee Housing Act.
- *Action 3.7.8*: Expand areas where Residential Care Facilities are permitted by right.
- *Action 4.3.2*: Streamline approval of modular development to provide quality shelter quickly.
- *Action 4.3.3*: Remove regulatory constraints to development of transitional housing and supportive housing.
- *Action 4.3.5*: Provide development standards for low barrier navigation centers.
- *Action 4.3.6*: Expand opportunities for the permitting of emergency shelters.
- *Action 5.2.2*: Promote infill, transit-oriented development (TOD), and mixed-use development.
- *Action 5.2.8*: Encourage new affordable housing in higher resource neighborhoods.
- *Action 5.2.9:* Prioritize improvements to meet the needs of low-resourced and disproportionately burdened communities.
- *Action 5.2.10*: Promote the development of mixed-income housing to reduce income-based concentration.

The Proposed Project HEI also includes additional Planning Code, Zoning Map and General Plan amendments that are required to fully conform to the 2023-2031 Housing Element, Safety Element Update, and new Environmental Justice Element. Overall, the HEI is focused on ensuring consistency with the 2023-2031 Housing Element HAP and compliance with State laws, while recognizing that a more detailed zoning code update will be undertaken by the City as part of *Phase II of the General Plan Update.*

The primary purpose of the HEI amendments is to remove identified regulatory constraints on housing development to expand opportunities for missing middle housing, encourage affordable housing, and create opportunities for special housing needs. Proposed changes include reduced parking and open space requirements, reduced minimum lot size and setback standards, and removed prohibition on residential units on the ground floor in some commercial zones. Most of

the proposed zoning changes would increase density standards in various zones. For example, revisions would re-define the "Two-Family Residential Facility" type as the "Two- to Four-Family Residential Facility" type and eliminate all conditionally permitted densities so that those densities would be by right.

HEI amendments that are designed to expedite the approval process include streamlined design review procedures and allowing more project types through ministerial approval. Other amendments are designed to protect existing residential zones by limiting the allowed intensity of commercial and industrial activities including "ghost kitchen" activities. In addition, several proposed amendments are intended to facilitate housing indirectly by removing restrictions to other use types within mixed-use zones.

The HEI includes amendments to the City's Zoning Map to reflect changes in permitted heights and density of sites that are included in the in **Figure 3-12** and **Figure 3-13**, below. For more information on these proposed zoning changes, please see the Oakland 2045 General Plan Zoning Proposals available on the City's website at https://www.oaklandca.gov/topics/oakland-2045-general-plan-zoning-amendments.

Affordable Housing Overlay

Action 3.3.5 of the HAP proposes the creation of an Affordable Housing Overlay (AHO) Zone. The AHO Zone is intended to create and preserve affordable housing restricted for extremely low, very low, low, and/or moderate-income households (as defined in California Health and Safety Code Sections 50093, 50105, and 50106). Generally, the AHO Zone would allow for a bonus height for eligible affordable housing projects (AHO projects), an elimination of any maximum residential density standards, and a relaxation of other listed development standards.

The City is currently considering several AHO variants with differing permitted heights and areas for inclusion in the AHO Zone. For the purposes of a comprehensive analysis, and to provide the most conservative assumptions regarding potential impacts of the Proposed Project, the higher applicable height and broadest geographic area for inclusion are assumed for the Draft EIR Proposed Project. Under this proposal, the City would apply the AHO Zone on top of existing RH-4, RD, RM, RU, HBX, D-CE, CN, CC, CBD, CR, S-15, D-BV, D-LM, and D-CO base Zones. Under this proposal, bonus heights for eligible AHO projects would allow for two-three additional stories or at least a height of 65 feet, whichever is higher.

The zoning districts and buffer areas included in the AHO Zone are shown in **Figure 3-14** and are described in detail in Section 4.10, *Land Use and Planning*. The AHO Zone would generally not be applied to parcels in the underlying zoning districts listed above if they are located in the designated very high fire hazard severity zone (VHFHSZ). An exception to this exclusion is being considered in limited areas with ready access to the Highway 13 and I-580 corridor (portion of I-580 south of the merge with Hwy 13) that are not located in the S-9 Fire Safety Protection Combining Zone. This analysis considers this area to encompass areas within 1,000 feet in either direction from Highway 13 and I-580 corridor that are outside the S-9 Fire Safety Protection Combining Zone. By-right approvals would be allowed for 100 percent affordable housing

projects that fall within the AHO Zone. The following property development standards would apply to AHO projects:

- Bonus height (two additional stories) or at least a height of 65 feet, whichever is higher,
- Unlimited density that fits within the allowed building envelope of new or existing structures,
- Reduced open space requirements,
- No minimum parking requirements,

The following additional property development standards would apply to AHO projects in certain Residential Zones (RH-4, RD, RM, RU), HBX (Housing and Business Mix Commercial Zone), and D-CE (Central Estuary District) Zones:

- Allow additional lot coverage (70 percent), and
- Allow reduced rear setback (10 feet)

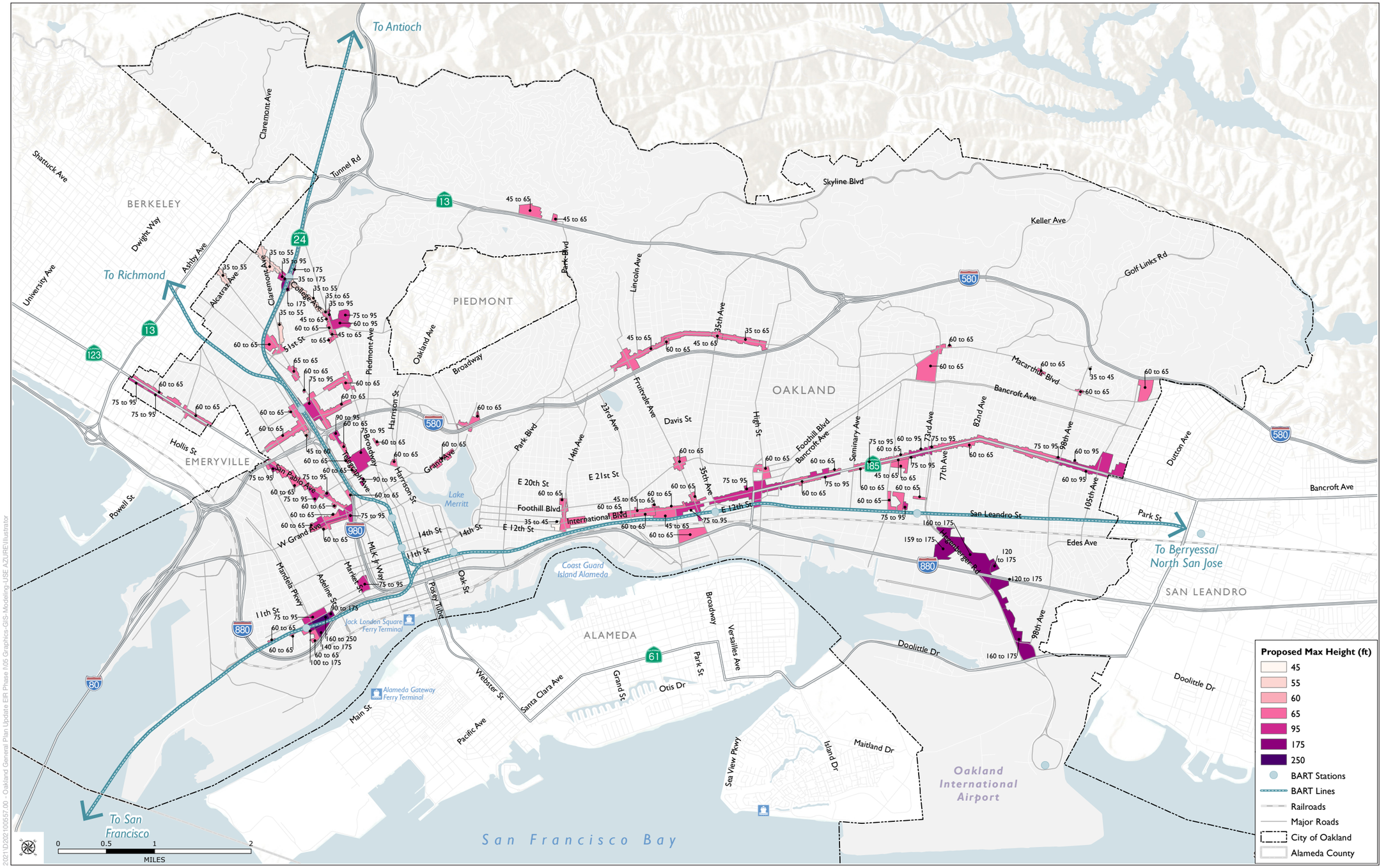
Parcels with designated City, State, or federal Historic Landmarks and parcels within the S-9 Fire Safety Protection Zone would be excluded from the AHO Zone and new regulations would not apply (see Figure 4.4-1 in Section 4.4, *Cultural Resources* and Figure 3-14 below). In addition, certain Historic Districts would be exempt from the AHO height increases (see Section 4.4, *Cultural Resources*).

Missing Middle and Related Planning Code Amendments

The proposed missing middle and other related Planning Code amendments are designed to encourage a diversity of housing types such as flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and accessory dwelling units (ADUs) in currently single-family-dominated neighborhoods, and along corridors, transit-proximate areas, and high resource neighborhoods and remove constraints on the development of housing. The proposed missing-middle Planning Code amendments will:

- Reduce minimum lot size and setback standards where appropriate throughout the Planning Code to facilitate small lot development.
- Create a new residential facility type called “Two- to Four-Family Residential Facility” that would replace the current “Two-Family Residential Facility” Type throughout the Planning Code; and change the definition of a “Multifamily Residential Facility” from the current 3 or more units to 5 or more units.
- Eliminate all conditionally permitted residential densities throughout Planning Code (densities will all be by right); and the current requirement for a Major Conditional Use Permit for 3 or more dwelling units in the RM-2 Zone; 7 or more dwelling units in the RM-3 or RM-4 Zone; and for any project that exceeds the basic or permitted density resulting in 7 or more dwelling units in the RU or CBD-R Zones.

More information on the Missing Middle Planning Code amendments is available at https://www.oaklandca.gov/topics/oakland-2045-general-plan-zoning-amendments.



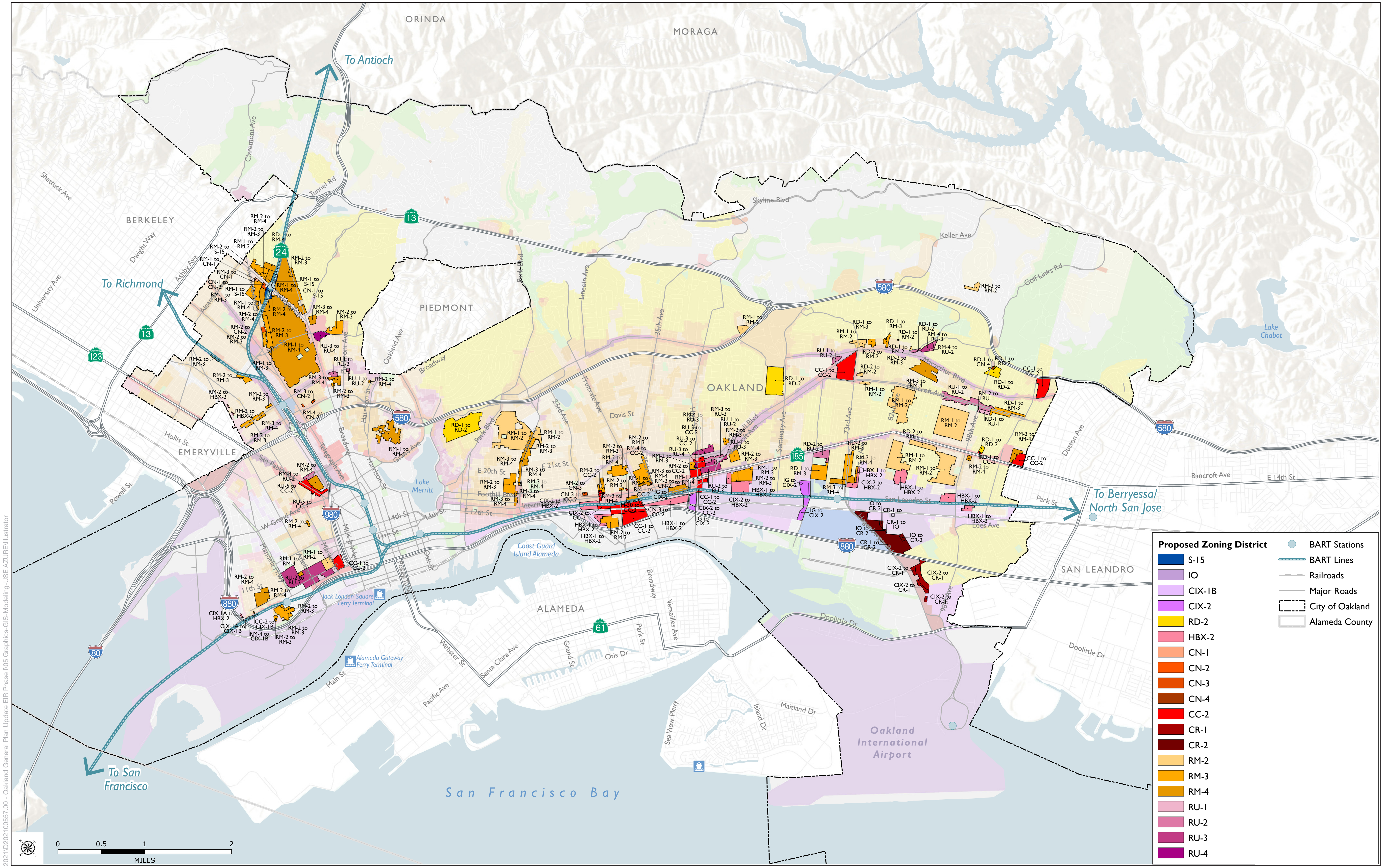
SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 3-12
Existing and Proposed Corridor Heights

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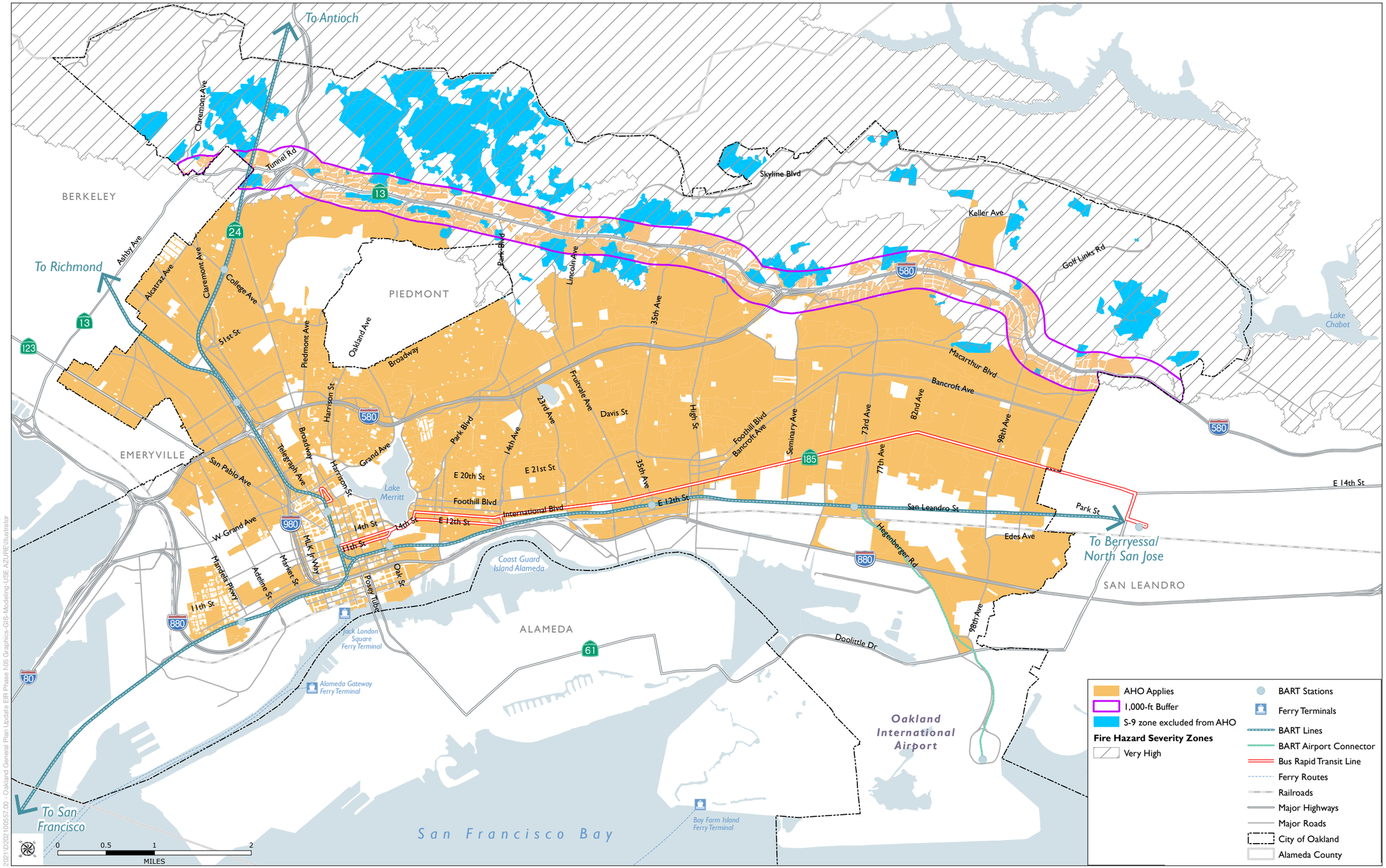
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SOURCE: Dyett & Bhatia, 2022

Figure 3-13
Existing Zoning and Proposed Zoning Changes



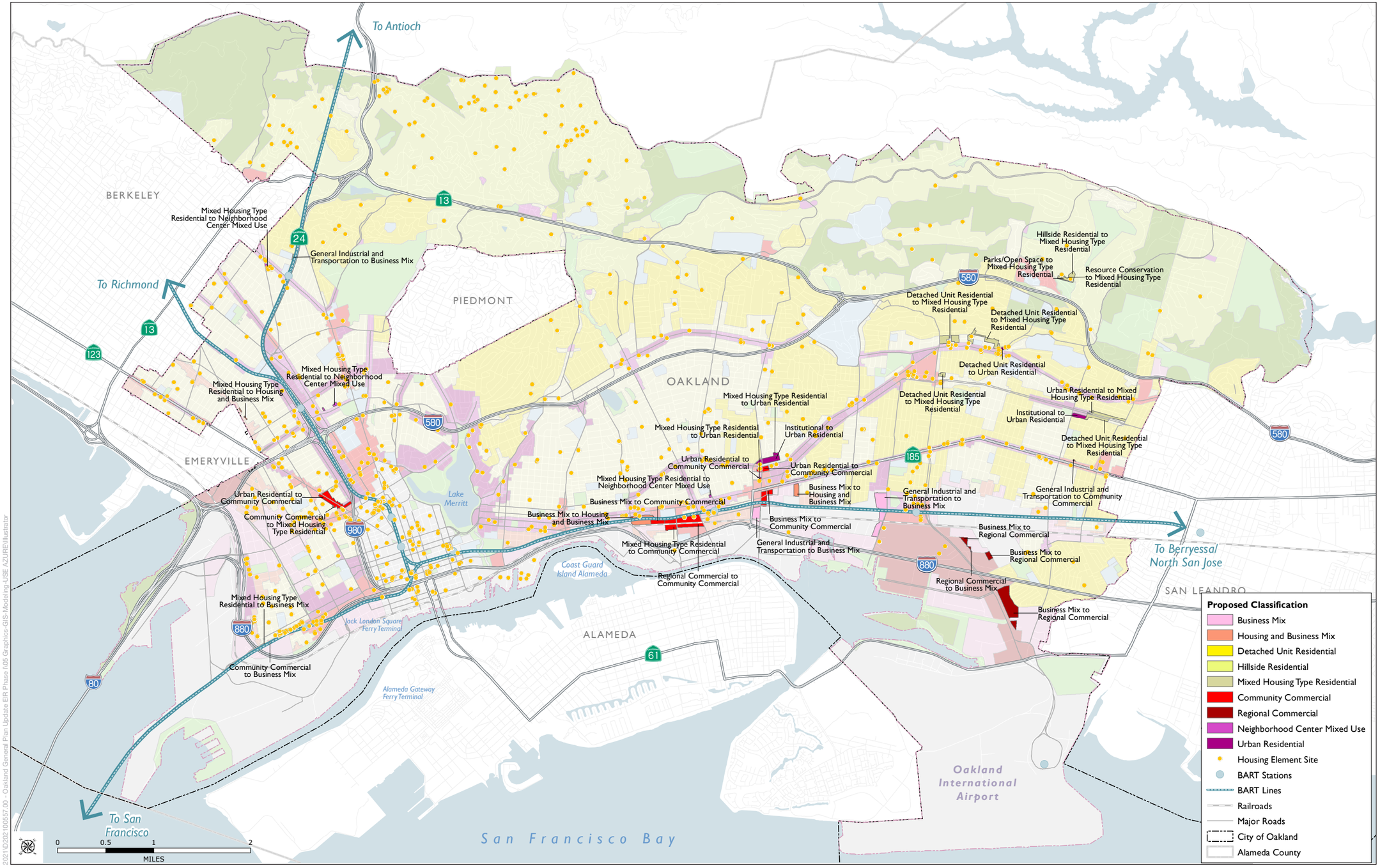
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SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 3-14
Affordable Housing Overlay

ESA



SOURCE: Dyett & Bhatia, 2022

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Figure 3-15
Proposed General Plan Amendments

ESA

The City has prepared proposed zoning code amendments that are being analyzed as part of this EIR. These proposed missing middle Planning Code amendments could include proposals to:

- Reduce minimum lot size and setback standards throughout residential zones in the Planning Code.
  - Minimum lot size reduced to 2,000 square feet in RD and RM Residential Zones.
  - Residential side setbacks are reduced to 3 feet for lots less than 3,000 square feet and 4 feet for lots 3,000 square feet or greater in RD and RM zones.
  - Residential rear setbacks are reduced from 20 feet to 10 feet in RD Zones and reduced from 15 feet to 10 feet in RM Zones.
  - Residential front setbacks in RD and RM-1 and RM-2 Zones are reduced from 20 feet to 15 feet (existing provision allows for further reduction if structures on either side of the parcel are closer than the setback requirement).
- Allow for encroachment of regular detached units into the rear setback, similar to encroachments allowed for detached ADUs.
- Revise density, maximum building heights, and minimum lot frontage standards to permit more housing units per lot where appropriate throughout the city in Hillside Residential RH-4 Zone, Detached Residential (RD) Zone, all Residential Mixed Housing Type (RM) Zones, and Urban Residential RU-1 and RU-2 Zones.
  - Create new RD Zone to replace RD-1 and RD-2 so that both zones have the same standards.
  - All RD, RM, and RU Residential Zones will allow four or more units on lots that are 4,000 square feet or more and at least two units on any lot smaller than 4,000 square feet.
  - Maximum floor area ratio (FAR) and lot coverage increased to 55 percent lot coverage in RD and RM zones, and they only apply to one and two residential units (FAR only applies to lots with a slope greater than 20 percent).
  - Minimum lot frontage requirement for RD and RM Zones is reduced from 25 feet to 20 feet.
  - Height limits increased in RD Zone from 25 feet wall height and 30 feet roof height to 30 feet wall height and 35 feet roof height.
  - Height limits increased for RM-1, RM-2, and RM-3 from 25 feet wall height and 30 feet roof height to 35 feet height for both wall and roof.
  - Reductions in open space requirements in RD, RM, and RU Zones to allow flexibility on its onsite location and configuration to ensure that more of the allowed buildable area can be dedicated to new housing units.
  - Reduction of parking requirements, including no minimum parking requirements for residential facility types within ½ mile of a major transit stop and 0.5 parking spaces per unit if located farther than ½ mile from a major transit stop. The proposed reduction would also expand the areas in the city with no minimum parking requirements to include the S-15 Transit-Oriented Development Zone and the D-CO-1 Zone in addition to the existing no parking requirements in the CBD, D-LM, and S-2 Zones. Maximum parking

requirements would be reduced in the CBD, S-15, D-CO-1, D-LM, and S-2 Zones. No minimum parking requirements would be required for 100 percent affordable housing developments.

- Create a new residential facility type called "Two- to Four-Family Residential Facility" that would replace the current "Two-Family Residential Facility" type throughout the Planning Code; and change the definition of a "Multifamily Residential Facility" from the current 3 or more units to 5 or more units.
- Eliminate all conditionally permitted densities throughout Planning Code (densities will all be by right); and the current requirement for a Major Conditional Use Permit for 3 or more dwelling units in the RM-2 Zone; 7 or more dwelling units in the RM-3 or RM-4 Zone; and for any project that exceeds the basic or permitted density resulting in 7 or more dwelling units in the RU or CBD-R Zones.

Together, these missing middle Planning Code amendments will encourage a diversity of housing types such as flats, duplexes, triplexes, fourplexes, townhouses/rowhouses, and accessory dwelling units in currently single-family dominated neighborhoods, along corridors, and in transit-proximate areas and high resource neighborhoods. Generally, the amendments remove constraints on the development of housing.

Housing Sites Overlay Zone

To implement HAP Action 3.4.10, a Housing Sites Overlay Zone is proposed to permit affordable housing by right with at least 20 percent affordable housing units for all sites identified in the Housing Sites. The proposed Housing Sites Overlay Zone is intended to facilitate housing opportunities in Oakland and to bring attention to those sites that the City intends for housing to be built pursuant to State requirements. The Housing Site Overlay Zone would apply to all housing sites identified in the Housing Sites Inventory (Table C-26 in the Housing Element Update, Appendix C).

A minimum percentage of housing must be built on these sites, with some allowance for limited non-residential on the site, such as the ground floor. Consistent with State requirements, any projects on sites identified in previous Housing Element inventories providing at least 20 percent affordable housing units proposed within the Housing Opportunity Sites Overlay Zone would be subject to a ministerial approval process. A proposed project would not be subject to CEQA and would not be appealable. This would provide greater certainty that if the project is within the Housing Opportunity Overlay Zone and meets the objective zoning criteria listed in the Planning Code, the project will be approved and not held up through an appeal process. This will also provide an incentive for mixed income buildings to be built on these designated opportunity sites.

The Housing Sites Overlay Zone would also require that any project proposed within the overlay, including those not utilizing or not eligible for the by right approval process, would be required to be a majority residential use and would be required to include a minimum number of residential units proportionate to the site's realistic capacity, as identified in Housing Sites Inventory. This would help ensure that the City sees housing produced on its identified housing sites.

More information on the Housing Sites Overlay Zone is available at https://www.oaklandca.gov/topics/oakland-2045-general-plan-zoning-amendmentshttps://cao-94612.s3.amazonaws.com/documents/Preliminary-Missing-Middle-Proposal-Summary-rev9.20.2022.pdf

Industrial Lands Zoning Changes

Proposed changes to the Planning Code seek to avoid impacts to sensitive receptors in land uses that include, but are not limited to, hospitals, schools, daycare facilities, elderly housing and convalescent facilities. Changes require truck-intensive industrial activities located within 500 feet of any zone that permits residential activities to obtain a special conditional use permit. In addition, any truck-intensive uses within 500 feet of a zone that allows residential activities are subject to additional special performance standards and standard conditions of approval (SCA) related to buffering and landscaping, including a sound wall and/or vegetative buffer to block diesel and other emissions from sensitive receptor locations.[6]

Corridor Heights and Upzoning

Actions 3.2.1 and 3.4.1 of the HAP propose allowing additional building heights and densities in specific locations of the City (see **Figures 3-12**, **3-13**, and **3-15**). Action 3.2.1 is designed to encourage missing middle and multi-unit housing types in currently single-family-dominated neighborhoods.[7] New zoning standards in low-density residential zones (Detached Unit Residential [RD] and Mixed Housing Type Residential [RM]) would reduce the minimum lot size, remove constraints to lot splitting, allow a variety of building types (attached, detached, bungalow courts) and housing types (flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and ADUs), and develop objective design standards. Ultimately, this action would expand the availability of ministerial permits and streamline the development process.

Action 3.4.1 supports Action 3.2.1 by revising development standards for allowable building heights, densities, and requirements for open space and setbacks. In addition to revising development standards in the RD and RM Zones, this action would allow increased heights and densities along existing transit corridors such as International, Foothill, College, Claremont, and MacArthur Boulevards. Similarly, this action would allow increased heights and densities in areas near high-capacity transit, including areas near BART and Bus Rapid Transit (BRT) Stations. Finally, Action 3.4.1 would allow higher density multi-unit buildings in these areas that are rich in services to help further fair housing objectives by increasing the availability of housing, and particularly more affordable units by design, in high resource areas.

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6 The City adopted Standards and Conditions of Approval (SCAs) pursuant to Public Resources Code Section 21083.3 and State *CEQA Guidelines* Section 15183 (and now Section 15183.3). The SCAs address three aspects of a project: (1) General administrative aspects of the project approval; (2) environmental protection measures that are incorporated into a project and are designed to, and will, substantially mitigate environmental effects; and (3) other SCAs containing requirements to substantially reduce non-environmental effects of a project. As specified in the City's SCA document, in this Draft EIR, the SCAs are included in the regulatory setting discussion of the applicable environmental topic and incorporated into the CEQA analysis.

7 Missing middle Housing is a range of house-scale buildings with multiple units (e.g., duplexes, triplexes, fourplexes, cottage courts, and multiplexes) that are compatible in scale and form with detached single-family homes and are located in a walkable neighborhood. More information is available at missingmiddlehousing.com.

To support these actions, the City has prepared zoning map changes that would rezone a variety of neighborhoods that have been identified as appropriate for additional housing. In addition, the proposed zoning code changes include increases to allowed heights in commercial zones along corridors and BART stations (CN, CC, CR, and S-15 Zones).

Special Housing Needs

The HEI additionally includes amendments to the Planning Code that would facilitate the production of unique, special housing types. This includes the following:

- *Action 3.7.6*: Expand areas where rooming units and efficiency units are permitted by right
- *Action 3.7.7*: Amend Planning Code to comply with the Employee Housing Act
- *Action 3.7.8*: Expand areas where residential care facilities are permitted by right
- *Action 3.8.2*: Encourage conversion of ground floor commercial spaces to residential uses in appropriate locations
- *Action 4.3.2*: Streamline approval of modular development to provide quality shelter quickly
- *Action 4.3.3*: Remove regulatory constraints to development of transitional housing and supportive housing
- *Action 4.3.5*: Provide development standards for Low Barrier Navigation Centers
- *Action 4.3.6*: Expand opportunities for permitting of emergency shelters

Streamlining Actions

The following three proposed actions would facilitate housing production, particularly affordable housing, by streamlining the approval process and removing constraints to housing development. Projects utilizing streamlined review would not be subject to discretionary review and thus would be exempt from CEQA and would not be appealable. This process would be similar to the existing streamlining review available for projects with at least 50 percent affordable housing qualifying under SB 35 and supportive housing projects qualifying under AB 2162. Action 3.6.3, Expand by-right approvals and implement entitlement reform for affordable housing, would expand by-right approvals by creating a ministerial review pathway for qualifying developments based on project size, type, affordability level, and location. This would be achieved by Action 3.4.8 implementing objective design standards, thereby avoiding the discretionary design review process. Actions 4.3.2 and 4.3.3 would expand the entitlement reforms from Action 3.6.3 by expediting the production of modular developments and other quick-build shelter solutions, and transitional housing and supportive housing.

Projects that will be permitted ministerial review as a result of the Proposed Project include the following:

- Projects proposed on parcels within the Housing Sites Overlay Zone building that include at least 20 percent affordable units and meet applicable objective design standards (Action 3.4.10).
- Projects proposed on parcels within the Affordable Housing Overlay Zone with 100 percent affordable housing and meeting applicable objective design standards (Action 3.4.3).

- Residential projects not otherwise requiring a discretionary permit (e.g., variance, planned unit development permit, conditional use permit) or a legislative action (rezoning or general plan amendment), eligible for objective design review, and meeting the applicable objective design standards (Action 3.4.8).

The City anticipates that with adoption of the Proposed Project, many residential projects would go through a streamlined design review process. The streamlined review would be consistent with the design review process described in *McCorkle East Side Neighborhood Group v. St. Helena* (2018) 31 Cal.App.5th 80, in which the First Appellate District found that the City of St. Helena did not have discretion regarding the environmental effects of the project because the City zoning code limited its authority to design issues. Note that the City's findings regarding the demolition of structures would continue to apply.

3.5.1.2 Total Housing Capacity

The HEI does not propose specific development projects or directly approve any physical development. However, the HEI is intended to remove constraints that necessarily must be removed for the City of Oakland to achieve its housing production goals. Therefore, this Draft EIR assumes that construction in exceedance of the City's housing production goals would be a reasonably foreseeable future outcome of the Proposed Project. To capture the potential impact of future development under the Proposed Project, this Draft EIR utilizes the baseline existing conditions described above and in the Map Atlas and analyzes the potential environmental impacts of housing development through the projection period ending in 2030 (see Appendix A).[8]

Based on the City's current General Plan and zoning regulations, approximately 36,274 units are already allowed under the City's adopted General Plan, zoning, and Specific Plans (see *Housing Sites Inventory and Existing Capacity* above). As described above under *Proposed Zoning Code Amendments*, the HEI would create opportunities for added density on areas near BART stations, along transit corridors, and in existing lower-density residential neighborhoods to allow for missing middle housing. Adoption of these changes, along with the Planning Code Amendments reflecting the AHO and Industrial Zoning Changes (see section 3.5.1.1 above), is estimated to produce an additional 5,184 housing units within the projection period ending in 2030. Therefore, this Draft EIR analyzes the impacts associated development of approximately 41,458 dwelling units, focused primarily in high resource neighborhoods such as the Rockridge area, DOSP planning area (see Figure 3-4 above), along transit corridors (see Figures 3-12, 3-13, and 3-15 above), and in the AHO (see Figure 3-14 above). **Table 3-4** shows the estimated increased housing production associated with adoption of the HEI. **Figure 3-16** shows the estimated housing growth per transportation analysis zone (TAZ).[9]

[8] It should be noted that the projection period differs from the planning period – while the planning period is the time between Housing Element due dates (2023 to 2031), the projection period is the time for which the regional housing need is calculated (June 30, 2022, to December 15, 2030).

[9] The Alameda Countywide travel model (see Section 4.15, *Transportation and Circulation*) uses transportation analysis zones, or TAZs, as the spatial unit at which transportation calculations take place. TAZs are used to organize and store spatial data that are used as inputs to the travel model.

TABLE 3-4
TOTAL HOUSING CAPACITY

	Needed Units	Needed Units with 15 percent Buffer	Existing Capacity	Percent of Needed Units
Total Existing Capacity[1]	**26,251**	**30,189**	**36,274**	**138.2%**
Corridor Heights			2,000	
Upzoning			1,684	
Affordable Housing Overlay			1,000	
DOSP[2]			500	
Subtotal			***5,184***	
Total Proposed Project Capacity			**41,458**	**157.9%**

NOTE:
1 Since the time of EIR development, the California Department of Housing and Community Development requested several changes to the Housing Sites Inventory that reduced the overall existing capacity of development (34,831 units; a difference of 1,543 units) but distributed more housing units in areas of higher incomes and near transit. Thus, this EIR describes a modestly more intense buildout estimate and thus serves as a conservative analysis.
2 The DOSP is reasonably expected be adopted within the projection period and thus the estimated additional capacity of 500 units is also reasonably expected occur within the projection period, with or without adoption of the Proposed Project.

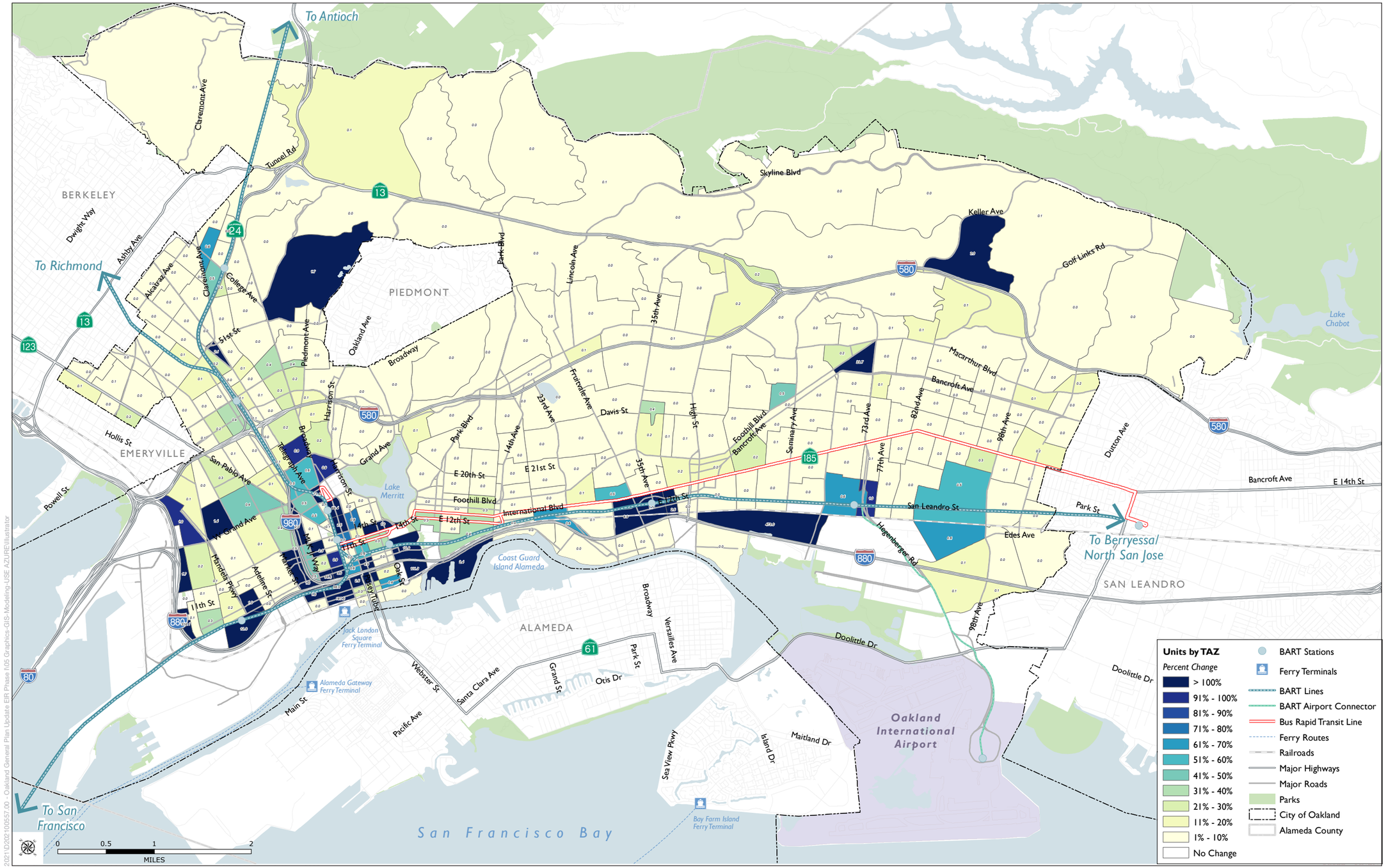
SOURCE: Dyett & Bhatia; Alameda County Transportation Commission (ACTC) 2020 Regional Travel Demand Model

While State law requires the 2023-2031 Housing Element to include an inventory of housing sites and requires the City to appropriately zone sites for housing, future development on identified sites would be at the discretion of individual property owners and would be largely dependent on market forces and, in the case of affordable housing, available funding and/or other incentives. Nonetheless, because the zoning code amendments proposed as part of the HEI are intended to create opportunities for full buildout of the City's housing production goals, the analysis in this Draft EIR conservatively assumes build-out of the housing sites inventory within the eight-year projection period ending in 2030. This Draft EIR considers potential impacts of housing development that may occur during the eight-year projection period, focusing on proposed actions to encourage and guide the type and location of housing production throughout the Plan Area such as changes in allowable densities, changes in development standards, adoption of incentives, and entitlement reform.

3.5.1.3 General Plan and Land Use Designation Amendments

The HEI includes amendments to the LUTE to ensure consistency among General Plan Elements. The General Plan text and map amendments include conforming changes to ensure that the policies, allowed uses, and allowed densities included in the Planning Code and Zoning Map are consistent with General Plan designations and policies. Proposed new General Plan Land Use map designations are shown in Figure 3-15 above.

Text amendments to the LUTE are focused on increasing the allowable density/intensity (units per acre) in most land use classifications throughout the City and facilitating development of accessory units and multi-unit buildings in areas currently characterized by lower density development. The changes additionally would delete the following existing text under the Mixed Housing Type Residential designation: "Within these mixed housing type neighborhoods, there exist areas and pockets of lower density housing which should be preserved through appropriate



2021D202106557.00 - Oakland General Plan Update EIR Phase I\06 Graphics-GIS Modeling-LUSE A2\LUSE Illustrator

SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 3-16
Percent Change Over Existing Conditions

ESA

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zoning designations." Finally, the intent statement for the Detached Unit Residential type would be modified to include a broader list of residential housing typologies, including small multi-unit buildings and small neighborhood businesses.

TABLE 3-5
PROPOSED TEXT CHANGES TO ALLOWED RESIDENTIAL DENSITY, LUTE

Existing Land Use Designation	Existing Allowed Density (principal units per gross acre)	Proposed Allowed Density (principal units per gross acre)[a]
Mixed Housing Type Residential	30	35
Detached Unit Residential	11	15
Urban Residential	125	165
Neighborhood Center Mixed Use	125	165
Community Commercial	125	165
Regional Commercial	125	165
Housing and Business Mix	30	50

NOTE:

[a] Text amendments would also allow one hundred percent affordable housing projects to exceed the maximum residential density so long as they are otherwise consistent with zoning requirements. With exception of the Detached Unit Residential designation, rooming houses and multi-unit buildings with efficiency units could also exceed maximum residential density so long as otherwise consistent with zoning requirements.

3.5.2 Safety Element Updates

The City is a proposing a comprehensive update to the Safety Element that builds on the City's adopted 2021- 2026 Local Hazard Mitigation Plan; addresses all State requirements; and serves as a central reference point for the City's efforts to address safety and climate change. The proposed changes include updates to the existing policies in the current Safety Element, added relevant policies from existing plans such as the City's Equitable Climate Action Plan, and new policies to address known safety and environmental justice issues in the City. The analysis and policy development focus on wildfire, toxic and hazardous materials, seismic risk, flooding, climate change adaptation and resilience, and drought. The Safety Element Update includes actionable strategies for addressing identified critical facility needs and enabling climate-smart development. Safety Element policies relevant to CEQA are included in the appropriate environmental topic sections in Chapter 4. For more information, please see the Draft 2023-2031 General Plan Safety Element available on the City's website at https://www.oaklandca.gov/topics/general-plan-update.

3.5.3 Environmental Justice Element

In accordance with SB 1000, the City has prepared a new Environmental Justice Element with the purpose of addressing the unique or compounded health risks in EJ Communities within the City of Oakland. Building on issues identified in the *Oakland 2045 Environmental Justice and Racial Equity Baseline*, the Environmental Justice Element measures include, but are not limited to, measures to improve air quality; and measures to promote public facilities, food access, safe and sanitary homes, and physical activity. In addition, the element serves to promote civic

engagement in the public decision-making process and prioritize improvements and programs that address the needs of these communities. There are 48 total census tracts that have been identified as EJ Communities in the City of Oakland: 29 are in the top 25th percentile by composite score, 12 additional census tracts are in the top 10th percentile of any one of the category scores, and seven additional census tracts have lower scores, but are designated by CalEPA as SB 535 Disadvantaged Communities (as of May 2022). These census tracts are mapped on Figure EJ-7 of the EJ Element. For more information about the proposed Environmental Justice Element implementation actions and programs, please see the Draft General Plan Environmental Justice Element available on the City's website at https://www.oaklandca.gov/topics/general-plan-update.

3.6 Maximum Theoretical Development

As a program-level EIR, this EIR presents an analysis of potential impacts of the Proposed Project by assessing proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. This EIR does not contain a site-specific analysis of development that may occur following adoption of the Proposed Project. Use of growth projections as a basis for analysis is appropriate when the project being analyzed is a proposed plan and provides an envelope for the analysis of potential impacts. This approach recognizes that it is not possible to predict the details of development that may be proposed for construction on any individual site once the Proposed Project is adopted. Also, as stated earlier, the precise changes to various development standards and the scope of various proposed zoning overlays and upzoning proposals may evolve based on public outreach during preparation of this EIR.

The 2023-2031 Housing Element is projected to allow for approximately 41,458 new housing units during the projection period ending in 2030, although the actual pace of development will depend on market conditions, property owner interest, and other factors. Of the approximately 41,458 new units, 5,184 are estimated to result from the HEI, including the AHO, Missing Middle zoning amendments, and other amendments to the Planning Code and Zoning Map. The balance of 36,274 units (represented in the Housing Element's Housing Sites Inventory) could theoretically occur with or without the Proposed Project because it is consistent with existing City policy, Planning Code, and Zoning Map. However, development of these units may be accelerated compared to the theoretical No Project scenario due to programs in the Proposed Project that streamline, incentivize, or remove constraints for housing. Therefore, to capture the potential impact of future development under the Proposed Project, this Draft EIR utilizes the baseline existing conditions described above, in the Map Atlas, and in Chapter 4 and analyzes the impacts of future development under the Proposed Project through the projection period ending in 2030.

The Proposed Project is a planning document that identifies opportunities to improve and expand the City's housing stock; it does not, however, result in the actual new construction or revitalization of housing units in the City. The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the Proposed Project's *Buildout Program*, which represents the maximum feasible housing development that the City has projected can reasonably be expected to occur through 2030. In total, the Buildout Program analyzed in this EIR includes the addition of approximately 41,458 residential units, 100,411 new

residents, and 18,851 new jobs to the City of Oakland between 2022 and 2030. **Table 3-6** below presents growth projections used in this analysis and shows the amount of growth attributable to the cumulative growth and development including future development under the Proposed Project.

TABLE 3-6
OAKLAND GROWTH PROJECTIONS FOR 2030

	Existing Baseline (2020)	Buildout Program (ending in 2030)	2030 Conditions with the Proposed Project
Housing Units	178,904	41,458	215,178
Households[1]	169,959	39,377	209,336
Population[2]	433,395	100,411	533,806
Jobs[3]	236,206	18,851	255,057

NOTES:
[1] Assumes an average 0.5 percent vacancy rate, based on the City's projections.
[2] Assumes an average of 2.5 persons per household aside from 0.02 percent of households assumed to be group quarters, based on the City's projections.
[3] Employment growth of approximately 18,851 jobs during the projection period is considered as background and is not part of the Proposed Project.

SOURCE: City of Oakland, August 2022.

3.6.1 Construction Activity Assumptions

With a projection period through 2030, development of the Buildout Program would occur over an extended period of time and would depend on factors such as local economic conditions, market demand, and other financing considerations. Without specific project-level details it is not possible to develop a refined construction inventory, so the determination of construction-related impacts for each individual development project (or a combination of projects) would require the City to speculate regarding potential future project-level environmental impacts. Thus, in the absence of the necessary construction information required to provide meaningful quantified analysis, the evaluation of potential impacts resulting from future development under the Proposed Project is conducted qualitatively in this EIR.

3.7 Project Objectives

CEQA Guidelines Section 15124(b) requires the description of the project in an EIR to state the objectives sought by the project.

> "*A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.*"

The primary objectives of the Proposed Project include the following:

1. Remove regulatory development constraints and provide development incentives so that the City can meet the housing needs of all Oaklanders for the 6th Housing Element cycle;

2. Reduce racial segregation and disparities in housing opportunities and outcomes;
3. Replace segregated living patterns with truly integrated and balanced living patterns, and transform racially and ethnically concentrated areas of poverty into areas of opportunity;
4. Encourage a diversity of housing types such as flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and accessory dwelling units in currently single-family-dominated neighborhoods, and along corridors, transit-proximate areas, and high resource neighborhoods and remove constraints on the development of housing;
5. Create and preserve affordable housing restricted for extremely low, very low, low, and/or moderate-income households;
6. Minimize risks posed by natural and human-caused hazards that may impact residents' health and welfare by protecting residents, workers, and visitors from seismic and geologic hazards, fire hazards, hazardous materials, flooding, and other potential hazards that risk life and property;
7. Reduce pollution exposure, including the improvement of air quality;
8. Promote equitable access to public facilities, healthy food, safe and sanitary homes, and physical activity;
9. Reduce barriers to inclusive engagement and participation in the public decision-making process; and
10. Prioritize improvements and programs that address the needs of Environmental Justice Communities.

3.8 Intended Uses of this EIR

The purpose of this EIR is to analyze the impacts of the developed Planning Code amendment package as well as provide a programmatic review of the Safety and Environmental Justice Elements. The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the Proposed Project *Buildout Program*, which represents the maximum feasible housing development that the City has projected can reasonably be expected to occur in the 6th Cycle by 2030. For this reason, environmental review of the Proposed Project will necessarily be general. The *CEQA Guidelines* instruct that environmental review of a planning-level document need not contain the level of detail required for review of a specific construction project, for example. (*CEQA Guidelines*, Section 15146 ("[t]he degree of specificity required … will correspond to the degree of specificity involved in the underlying activity").

As described above, the Proposed Project would expand by-right approvals by creating a ministerial review pathway for qualifying developments based on project size, type, affordability level, and location (see Other Streamlining Actions, above). Future development under the Proposed Project requiring discretionary approval will be reviewed to determine whether their impacts fall within the scope of the analysis in this EIR and additional site-specific environmental review will be required if new significant impacts would result. As provided for in *CEQA Guidelines* Sections 15152 and 15385, any subsequent environmental document that might be

required could "tier" from this EIR and focus its analysis on any new potentially significant impacts.

3.9 Required Approvals and Actions

Adoption of the Proposed Project requires several discretionary approvals. As Lead Agency, the City of Oakland is responsible for the majority of approvals required for adoption of the Proposed Project, and for preparation of this Draft EIR.

3.9.1 Actions by the City of Oakland

The Proposed Project includes amendments to the City's General Plan and Planning Code. Where policies, goals, or standards are not provided in the Proposed Project, the existing policies, goals, and standards of the City's General Plan and Planning Code would continue to apply.

This Draft EIR is intended to provide the information and environmental analysis necessary to assist the City in considering all approvals and actions necessary to adopt and implement the Proposed Project. The following anticipated actions/approvals concerning the Proposed Project include the following, without limitation:

- Certify the EIR and make environmental findings and adopt an SCA and Mitigation Monitoring and Reporting Program pursuant to CEQA.
- Amend the Oakland Planning Code text and maps that are part of the Proposed Project;
- Adopt the Safety Element;
- Adopt the Environmental Justice Element; and
- Amend General Plan and associated maps to be consistent with the Proposed Project.

3.9.2 Other Agencies

In addition, other agencies that may be required to rely on this EIR for future development under the Proposed Project in areas under their jurisdiction may include the following, without limitation:

- **Alameda County Department of Environmental Health (ACDEH).** Review and acceptance of an updated Hazardous Materials Management Plan and Inventory (HMMP) and the Hazardous Materials Business Plan (HMBP).
- **Bay Area Rapid Transit (BART).** Ensure any otherwise applicable local design standards are included as general guidance to a Transit Oriented Development (TOD) developer and would require a TOD developer to adhere to any applicable local design standards insofar as those standards do not prohibit the minimum height, minimum density, minimum floor area ratio, and maximum parking allowances required by the TOD zoning standards. The bill would require that, where housing is proposed as part of a TOD project, a certain minimum of residential housing units is affordable housing, as specified, and that the construction of the TOD project complies with specified labor requirements. AB 2923 provide that when BART enters into an exclusive negotiating agreement with a developer for development of an

eligible TOD project, that agreement shall confer a vested right to proceed with development, as specified.

- **Bay Air Quality Management District (BAAQMD).** Compliance with BAAQMD Regulation 2, Rule 1(General Requirements) for all portable construction equipment subject to that rule.
- **Bay Conservation and Development District (BCDC).** Review and approval of permit requirements for future development in areas under their jurisdiction.
- **California Department of Toxic Substances Control (DTSC).** Ensuring compliance with state regulations for the generation, transportation, treatment, storage, and disposal of hazardous waste.
- **California Department of Transportation (Caltrans).** Review and approval of plans, specifications, and estimates (including any equipment or facility upgrades) for modifications to intersections under the jurisdictions of Caltrans to accommodate signal timing changes.
- **East Bay Municipal Utility District (EBMUD).** Approval of new service request and new water meter installations.
- **Alameda County Local Agency Formation Commission (LAFCo).** Development of municipal services reviews (MSRs) to study specific services within a designated geographic area. The MSRs provide information about service providers' service levels/adequacy, financing, and governance, as well as opportunities to improve efficiency of service provision.
- **Port of Oakland.** Review and approval of permit requirements for future development in areas under their jurisdiction.
- **San Francisco Bay Regional Water Quality Control Board (RWQCB).** Granting of required clearances to confirm that all applicable standards, regulations, and conditions for all previous contamination at development sites have been met.

CHAPTER 4
Environmental Setting, Impacts, Standard Conditions of Approval, and Mitigation Measures

4.0 Introduction to the Environmental Analysis

This Draft Environmental Impact Report (EIR) is a Program EIR, as provided for in *California Environmental Quality Act* (*CEQA) Guidelines* Section 15168 and will allow the City "to consider broad policy alternatives and program wide mitigation measures" as noted in Section 15168(b)(4). Section 15168(a) of the *CEQA Guidelines* states that a Program EIR is appropriate for projects which are "… a series of actions that can be characterized as one large project and are related either:

1. Geographically;
2. A logical part in the chain of contemplated actions;
3. In connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program; or
4. As individual activities carried out under the same authorizing statutory or regulating authority and having generally similar environmental effects which can be mitigated in similar ways."

Therefore, in accordance with the CEQA, Public Resources Code (PRC) Sections 21000, et seq., and the Guidelines for the California Environmental Quality Act (CEQA Guidelines), California Code of Regulations, Title 14, Chapter 3, Section 15000, et seq.; this program-level Draft EIR has been prepared to analyze potential physical environmental effects of the Proposed Project.[1] Sections 4.1 through 4.19 in this chapter consider the existing conditions, regulatory background, and environmental impacts associated with implementation of the Proposed Project, as well as mitigation measures to reduce the impact of environmental impacts, and the level of significance of impacts following mitigation.

Future discretionary actions that would be facilitated by the Proposed Project's adoption would generally require additional assessment to determine consistency with the analysis provided in this Program EIR. The potential future discretionary actions would also be subject to the mitigation

[1] The *California Environmental Quality Act* can be found in the California Public Resources Code, Section 21000 et seq. The State *CEQA Guidelines*, formally known as the *Guidelines for California Environmental Quality Act*, can be found in the California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15000 et seq.

measures established in this Program EIR, unless superseded by a subsequent environmental document prepared to analyze environmental impacts not foreseen in this Program EIR.

4.0.1 Definition of Terms Used in this EIR

4.0.1.1 Environmental Setting and Baseline

An environmental setting establishes the baseline physical conditions or point of reference from which the environmental impacts of the Proposed Project and the alternatives to the Proposed Project are measured to determine whether an impact would be significant. Generally, the environmental setting or baseline conditions are described as they existed when the Notice of Preparation (NOP) for this Draft EIR was published.[2] However, CEQA also allows that, when necessary, the environmental setting and/or baseline conditions may be described by historic conditions, conditions expected when the project becomes operational, or projected future conditions when supported by substantial evidence (State *CEQA Guidelines* Section 15125(a)(1)). To the extent that this occurs in this Draft EIR, it is described within the particular environmental topic analysis in this chapter.

As discussed in Chapter 3, *Project Description*, the City prepared three existing conditions reports for the *Phase I Oakland 2045 General Plan Update* including the *Oakland 2045 Map Atlas* (Map Atlas), the *Oakland 2045 Environmental Justice and Racial Equity Baseline*, and the *Economic Trends and Prospects Baseline Analysis*. These reports document and analyze background conditions, trends, and opportunities and support the development of baseline existing conditions utilized in this Draft EIR. In particular, the Map Atlas, which is included in this Draft EIR as Appendix A, focuses on the existing physical environmental conditions of the City of Oakland that make up the baseline existing conditions for this Draft EIR analysis. and in the Map Atlas.

In addition, each section describes an *environmental setting* and a *regulatory setting*. The environmental setting addresses the conditions that exist prior to implementation of the Proposed Project and defines relevant scientific terms associated with the environmental topic addressed in the section. The regulatory setting presents relevant information about federal, State, regional, and/or local laws, regulations, and plans or policies that pertain to the environmental topic addressed in the section.

4.0.1.2 Oakland Thresholds of Significance

The City of Oakland has established local *CEQA Thresholds of Significance Guidelines* (commonly referred to in this EIR as "thresholds"), which have been in general use by the City since at least 2002, and parts of which were most recently updated in December 2020. The thresholds are intended to help clarify and standardize analysis and decision-making in the environmental review process in the City of Oakland. The thresholds are offered as guidance in preparing all environmental review documents and are intended to implement and supplement provisions in the State *CEQA Guidelines* for determining the significance of environmental

[2] The City issued the NOP for this Draft EIR on March 30, 2022 (see Appendix B).

effects, including Sections 15064, 15064.4, 15064.5, 15065, and 15382 and Appendix G. (The classifications of levels of environmental impact significance in this Draft EIR are described in Section 4.0.2 below.) The thresholds are used to evaluate the potential primary and secondary environmental effects of the Proposed Project, including potential effects of mitigation measures.

Revisions to Appendix G of the State *CEQA Guidelines* became effective December 28, 2018 and were intended to reflect recent changes to the CEQA statutes and court decisions. Many of these recent changes and decisions are already reflected in the City's adopted thresholds, which have been used to determine the significance of potential impacts in this Draft EIR. To the extent that the topics or questions in the 2018 revised Appendix G are not reflected in the City's thresholds, these topics and questions have been taken into consideration in the impact analysis in this chapter. Where specific changes made to Appendix G are relevant and material to the analysis, they are discussed within the technical analysis of the applicable section in this chapter.

4.0.1.3 Environmental Impacts

The analysis in this chapter of the Draft EIR addresses the potential effects of the Proposed Project. Generally, the impact analysis is conducted at a level of detail commensurate with the level of detail available for the Proposed Project components. The significance levels of impacts that the Proposed Project may have on the environment, as analyzed in this Draft EIR, are described in Section 4.0.2 below (following the description of key factors related to the level of impact classifications).

As required by Section 15126.2(a) of the State *CEQA Guidelines*, the impact analysis addresses direct, indirect, short-term, long-term, on-site, and as applicable, off-site impacts. Under CEQA, economic or social changes by themselves are not considered to be significant impacts but may be considered in linking a project to a physical environmental change, or in determining whether any physical changes caused by a project are significant.

This Draft EIR addresses potential adverse effects of the Proposed Project on the environment pursuant to CEQA. Potential effects of the environment on a project are generally not required to be analyzed or mitigated under CEQA standards (see *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369). However, if a proposed project impact exacerbates an existing environmental hazard or condition, an agency must analyze the potential impact of such hazards on the project (such as future residents or users). Nevertheless, in some instances, this document analyzes potential effects of the environment on the Proposed Project that are not required to be analyzed under CEQA, solely to provide information to the public and decision-makers.

Impact statements have an alphabetic designation that corresponds to the environmental topic, such as Impact "AES" for aesthetics. A number follows the alphabetic designation to designate the sequence of the impact. For example, "Impact AES-1" is the first aesthetics impact identified. All impact statements are in bold text; the impact statements also indicate the number of the significance threshold/criterion number to which the impact statement refers, and then states the level of impact classification, as discussed in Section 4.0.2 below.

4.0.1.4 Oakland Standard Conditions of Approval

The City adopted Standards and Conditions of Approval (SCAs) on November 3, 2008 (Ordinance No. 12899 C.M.S), and revised the SCAs through December 16, 2020, pursuant to Public Resources Code Section 21083.3 and State *CEQA Guidelines* Section 15183 (and now Section 15183.3). The SCAs address three aspects of a project: (1) General administrative aspects of the project approval; (2) environmental protection measures that are incorporated into a project and are designed to, and will, substantially mitigate environmental effects; and (3) other SCAs containing requirements to substantially reduce non-environmental effects of a project.

As specified in the City's SCA document, in this Draft EIR, the SCAs are included in the regulatory setting discussion of the applicable environmental topic and incorporated into the CEQA analysis. As applicable, the SCAs are adopted as requirements of an individual project when approved by the City, and they are designed to (and do) substantially mitigate environmental effects. As such, the applicable SCAs that reduce environmental impacts are considered requirements of a project imposed under the City's regulatory authority and are not mitigation measures.

In reviewing project applications, the City determines which SCAs are applied, based on zoning district, community plan, and the type(s) of permit(s)/approvals(s) required. Depending on the specific characteristics of the project type and/or project site, the City determines which SCAs apply to a specific project; for example, SCAs related to creek protection permits are only applied to projects on Creekside properties. For the Proposed Project, all relevant SCAs have been incorporated as part of the project. Because these SCAs are mandatory City requirements, the impact analysis assumes that they will be imposed and implemented by the future development under the Proposed Project. If an SCA would reduce a potentially significant impact to less than significant, the impact is determined to be less than significant, and no mitigation is imposed.

4.0.1.5 Mitigation Measures

Mitigation measures are identified throughout the environmental analysis and are actions to be taken to avoid or reduce the magnitude of a significant impact. All mitigation measures will be (1) adopted as conditions of approval for the Proposed Project; and (2) subject to monitoring and reporting requirements of CEQA and the terms of the discretionary approvals for the Proposed Project. In cases where a mitigation measure may have secondary environmental effects resulting from its implementation, those effects are also disclosed, including any measures to reduce its potential environmental impact.

Mitigation measures are formatted in the same manner described above for impact statements, and the numbering of each mitigation corresponds with its impact. Where multiple mitigation measures are identified for a particular impact, they are numbered sequentially. Generally, all mitigation measures are indented with the main titles and headings in bold text. The level of Proposed Project impact after the incorporation of identified mitigation measures is stated following all mitigation measures.

4.0.2 Section Format

Chapter 4 is divided into technical sections (e.g., Section 4.1, *Aesthetics*) that present the physical environmental setting, regulatory setting, significance criteria, methodology and assumptions, and impacts on the environment for each environmental resource issue area. Where required, potentially feasible mitigation measures are identified to lessen or avoid potentially significant impacts. Each section includes an analysis of Proposed Project and cumulative impacts for each issue area.

The resource topic areas addressed in this Draft EIR Chapter are listed below, and the abbreviations for each resource topic that are used in the naming of impact statements and mitigation measures are shown in parentheses:

- Section 4.1: Aesthetics, Shadow, and Wind (AES)
- Section 4.2: Air Quality (AIR)
- Section 4.3: Biological Resources (BIO)
- Section 4.4: Cultural Resources (CUL)
- Section 4.5: Energy (ENE)
- Section 4.6: Geology, Soils, and Paleontological Resources (GEO)
- Section 4.7: Greenhouse Gas Emissions (GHG)
- Section 4.8: Hazards and Hazardous Materials (HAZ)
- Section 4.9: Hydrology and Water Quality (HYD)
- Section 4.10: Land Use and Planning (LUP)
- Section 4.11: Noise and Vibration (NOI)
- Section 4.12: Population and Housing (POP)
- Section 4.13: Public Services (PUB)
- Section 4.14: Recreation (REC)
- Section 4.15: Transportation and Circulation (TRA)
- Section 4.16: Tribal Cultural Resources (TRI)
- Section 4.17: Utilities and Service Systems (UTL)
- Section 4.18: Wildfire (WLD)
- Section 4.19: Effects Found Not to Be Significant

The technical environmental sections each begin with a description of the Proposed Project's **Environmental Setting** and the **Regulatory Setting** as it pertains to a particular issue. The environmental setting discussion addresses the baseline conditions as described above and in Chapter 3, *Project Description*. This setting establishes the baseline by which the Proposed Project and Project alternatives are measured for environmental impacts. The regulatory setting presents relevant information about federal, State, regional, and/or local laws, regulations, plans or policies that pertain to the environmental resources addressed in each section.

Next, each section presents **Significance Criteria**, which identify the standards used by the City to determine the significance of the environmental effects of the Proposed Project.

An **Approach to Analysis/Methodology** discussion in each section presents the analytical methods and key assumptions used in the evaluation of effects of the Proposed Project and is followed by an **Impacts of the Project** discussion. The Impacts of the Project portion of each section includes impact statements, prefaced by a number in bold-faced type. An explanation of each impact is followed by an analysis of its significance. The subsection concludes with a statement that the impact, following implementation of the mitigation measure(s) and/or the continuation of existing policies and regulations, would be reduced to a less-than-significant level or would remain significant and unavoidable.

The analysis of environmental impacts considers potential impacts of the actions described as the "Proposed Project" in Chapter 3, *Project Description*, including potential impacts of future construction and occupancy of the *Buildout Program*. As required by Section 15126.2(a) of the *CEQA Guidelines*, direct, indirect, short-term, long-term, onsite, and/or off-site impacts are addressed, as appropriate, for the environmental issue area being analyzed. Under CEQA, economic or social changes by themselves are not considered to be significant impacts but may be considered in linking the implementation of a project to a physical environmental change, or in determining whether the physical change is significant.

Where enforcement exists and compliance can be reasonably anticipated, this Draft EIR assumes that the Proposed Project would meet the requirements of applicable laws and other regulations.

Mitigation measures pertinent to each individual impact, if available, appear after the impact discussion section. The magnitude of reduction of an impact and the potential effect of that reduction in magnitude on the significance of the impact is also disclosed. Where appropriate, one or more potentially feasible mitigation measures are described. A statement of the significance of the impact following implemented mitigation measure(s) is included with an explanation of the measure(s) effectiveness if necessary.

4.0.3 Cumulative Impacts

An analysis of cumulative impacts follows the Proposed Project impacts and mitigation measures evaluation in each section and starts by describing the geographic context in which cumulative impacts are analyzed.

A cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in an EIR together with other past, present and reasonably foreseeable projects causing related impacts (*CEQA Guidelines* Section 15355). Per *CEQA Guidelines* Section 15130(b)(1), cumulative impacts may be analyzed using either a "list of past, present, and probable future projects" or "a summary of projections contained in an adopted local, regional, or statewide plan or related planning document." This Draft EIR primarily uses the projections-based approach, as described below.

The Proposed Project is a plan which provides the potential for increased residential development in specific locations across a broad geography. The use of growth projections as a basis for a cumulative analysis is appropriate when the project being analyzed is a proposed plan that involves a broad geography and specific information about development that may occur as a result of the plan is not available, and other regional changes outside the planning area cannot be predicted with any specificity. In this case, the amount of development anticipated in the *Buildout Program* is used to analyze impacts, but specific information about how and when those sites might develop is not known at this time. Even the precise location of housing inventory sites and densities may evolve based on public outreach and the results of the analysis that is being conducted in parallel to preparation of this Draft EIR.

Thus, this Draft EIR analyzes growth in housing combined with other, cumulative growth using projections from *Plan Bay Area 2040*, which was the Bay Area's Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) until *Plan Bay Area 2050* was adopted in October 2021. *Plan Bay Area 2050* is not used because it does not at this point contain growth projections specific to individual jurisdictions. It is anticipated to take up to three years for the regional agencies to develop a detailed growth forecast for *Plan Bay Area 2050* and integrate that forecast into MTC's transportation model, after which updates to each county's transportation model will be required. Thus, *Plan Bay Area 2040* represents the best available source of information to form the foundation for long range population, housing and employment projections.

As noted above, where a cumulative impact is significant when compared to existing or baseline conditions, the analysis addresses whether the project's contribution to the significant cumulative impact is "considerable." If the contribution of the project is considerable, then the EIR identifies potentially feasible measures that could avoid or reduce the magnitude of the project's contribution to a less-than-considerable level. If the project's contribution is not considerable, it is considered less than significant, and no mitigation of the project contribution is required (*CEQA Guidelines* Section 15130(a)(2).

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4.1 Aesthetics, Shadow, and Wind

This section describes conditions and potential environmental effects of the Proposed Project pertaining to visual character, scenic resources, scenic vistas, light and glare, shadow and wind. The section discusses relevant existing environmental conditions of the Plan Area and regulations pertinent to this section, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts to the physical environment that could result from implementation of the Proposed Project and its associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that would reduce potential impacts to this environmental topic are identified; both existing and proposed updated/new General Plan policies and SCAs are considered. This section incorporates relevant information from the General Plan Update Map Atlas prepared in support of the Proposed Project (see Appendix A). No scoping comments related to aesthetics resources were received in response to the NOP (Notice of Preparation) of this Draft EIR.

4.1.1 Environmental Setting

4.1.1.1 Regional and Local Setting

Oakland is located on the eastern shore of the San Francisco Bay and at the geographic center of the Bay Area. It is located in the San Francisco Bay Bioregion, which has a mild Mediterranean climate with generally warm, dry summers and cool, wet winters. This region includes marine, freshwater, and terrestrial resources from Point Arena to the Santa Cruz Mountains and extends from the continental shelf to the delta of the Sacramento and San Joaquin Rivers.[1,2] The City is bordered to the west by the San Francisco Bay and to the east by the San Pablo Ridge Range, one of the Southern Coast Ranges running from the East San Francisco Bay Area south to Santa Barbara County. Topographically, Oakland rises from an elevation of sea level at its western edge to approximately 1,760 feet in the northeast Oakland Hills. The terrain flattens out toward the western and southwestern parts of the City as well as north of I-980; these relatively flat areas include Downtown, West Oakland, most of North Oakland, the Port and Airport, and most of East Oakland. The Plan Area's visual character stems largely from urban form intermixed with open spaces, as discussed below.

Visual Character Overview

Visual resources typically involve prominent, unique, and identifiable natural features in the environment (e.g., trees, rock outcroppings, islands, ridgelines, and aesthetically appealing open spaces) and cultural features or resources (e.g., regional or architecturally distinctive buildings or structures that serve as focal points of interest). The City is framed by the ridgeline of the Oakland Hills on the east and the estuary shoreline and Bay on the west. The ridgeline runs in a northwest-southeast direction; therefore, the City's topography generally slopes down in a

1 U.S. Geological Survey (USGS). 2017. Western Ecological Research Center (WERC). Bioregions of the Pacific U.S. Available at https://www.usgs.gov/ centers/werc/science/bioregions-pacific-us. Accessed December 22, 2021.

2 There are numerous sources for bioregions. The USGS Western Ecological Research Center defined their Bioregions of the Pacific U.S. by adopting a slightly modified version of the Forest Service's National Hierarchical Framework of Ecological Units.

southwesterly direction towards the Bay. Topography has had dramatic effects on the overall form of the City. Within the City, individual neighborhoods and districts are defined by creeks, ridges, canyons, and hills, and by railroads, freeways, and major thoroughfares.

Oakland features an array of humanmade elements, discussed in the Scenic Resources section below, which result in incompatibilities of visual character in various parts of the City, including visual contrast and juxtaposition of urban and natural form. These features are prominent visual landmarks that contribute to the City's overall character. For example, there are strong distinctions in the visual character in the flatland neighborhoods versus hill neighborhoods and the residential areas versus non-residential areas. In the older residential neighborhoods, there is a contrast between high density development and single-family housing; there are also varying architectural styles, and front yard landscapes and streetscapes. Industrial or commercial uses are interspersed with residential development. A discussion of the visually significant natural features in the City is also discussed below.

Along the waterfront, visual character varies from intense maritime activities at the Port of Oakland to natural scenes along San Leandro Bay. However, in general, Oakland's waterfront has an industrial character, reflecting its long history for shipping, manufacturing, military, and aviation use. The Oakland Port is the fourth largest container port in the western US, with 99 percent of the containerized goods in Northern California flowing through the port. Construction of the airport, harbor, and Nimitz Freeway (Interstate 880) effectively divided the City from the waterfront, creating a physical and visual barrier that persists in many areas today.

Scenic Resources

Scenic resources can be defined as physical and built features that act as visual landmarks and contribute to the City's character. Significant built features include the Claremont Hotel, the Mormon Temple, the Bay Bridge, the County Courthouse, container cranes at the Port, the Coliseum, factory towers at Con Agra, the former Safeway headquarters, Highland Hospital, the Kaiser and Ordway Buildings, the Federal Building, City Hall, the Tribune tower, and the former APL tower. Clusters of office buildings on Pill Hill and near the Oakland Airport, as well as new towers built in Downtown Oakland, provide additional visual landmarks within the City.

Significant natural landmarks in the City include Lake Merritt, the Oakland Hills (including Dimond and Leona canyons located in the Oakland Hills), and the Emeryville Crescent, Oakland Estuary and San Leandro Bay shore. The hills as a whole provide orientation but appear as a monolithic "wall" from the flatlands below rather than a discrete landmark. Individual peaks and knolls within the hills are perceivable from some neighborhoods. These include the "Sugarloaf" beside Merritt College, Dunsmuir Ridge, and the King Estates "mound."

Some of the most identifiable Oakland landmarks are not in the City at all but are visible from many neighborhoods and trafficways. These include the UC Berkeley campanile, the cluster of high-rise buildings in Emeryville, the San Francisco skyline, Mount Tamalpais, Treasure Island, and Alcatraz.

In addition to the aforementioned scenic resources, trees contribute to the visual framework of the City by providing scale, color, silhouette, and mass. Trees also provide screens and buffers to separate land uses, landmarks of the city's history, and represent a critical element of nature in the midst of urban settlement.

Scenic Vistas

Scenic vistas may be generally described as panoramic views of a large geographic area for which the field of view can be wide and extend into the distance. Under CEQA, scenic vistas are those that are experienced from publicly accessible locations and include urban skylines, valleys, mountain ranges, or large bodies of water. The irregular topography in the City provides opportunity for expansive views. Scenic views identified in the Open Space, Conservation and Recreation Element of the Oakland General Plan include:

- Views of Santa Cruz Mountains, Napa Valley, and the Farallon Islands from open hillsides and roadside clearings;
- Views of the Oakland Hills from the flatlands and Skyline Ridge;
- Views of Mount Tamalpais and San Francisco from the flatlands;
- Views of downtown and Lake Merritt;
- Views of the shoreline; and
- Panoramic views from Skyline Boulevard, Grizzly Peak Boulevard, and other hillside locations.

The City of Oakland General Plan's Open Space, Conservation and Recreation (OSCAR) Element strives to protect long-range views of San Francisco, Mount Tamalpais, and Lake Merritt. In addition, the OSCAR Element includes objectives to enhance underutilized visual resources, including the waterfront, creeks, San Leandro Bay, and architecturally significant buildings or landmarks, and major thoroughfares.

Scenic Highways

Scenic highways or scenic routes can be described as distinctively attractive roadways that traverse the City and the visual corridors which surround them. Current and future scenic routes may include officially designated State scenic highways, municipally designated City roadways or informally recognized local scenic byways. Within Oakland, I-580 from the San Leandro city limit to State Route (SR) 24 (post miles 34.5 to 45.1) is an officially designated State scenic highway. The entire length of I-580 within Oakland is identified as a designated scenic route in the City of Oakland General Plan. Skyline Boulevard/Grizzly Peak Boulevard has been an unofficial scenic route since the 1930's when most of the existing right-of-way was acquired.

Light and Glare

There are two types of artificial, or human-made, light sources: (1) direct sources (e.g., illuminated signage, street light poles, vehicle headlights); and (2) indirect sources of reflected light (e.g., reflective or light-colored surfaces). The effect produced by direct and indirect light sources that is perceived as excessive brightness is commonly referred to as "glare." The effect of direct and indirect sources of light are addressed in the analysis of nighttime illumination impacts,

and is referred to as spill light. Additionally, both direct and indirect sources are addressed in the analysis of daytime and nighttime glare impacts.

The Plan Area is mostly a built-out urban environment that has existing sources of light and glare associated with land uses typical for an urban setting. Primarily associated with uses in Downtown Oakland, light and glare are emitted upward and outward by high-rise buildings. They may also be emitted in a broader, lower level in large parking lots and from institutional uses, such as Laney College, as well as from commercial uses and vehicular use. Light and glare are also associated with streetlights and luminaries on major arterials and interstate highways such as I-980 and I-880.

Shadow

Shadow influences the visual character of an area. Shadow conditions in the Plan Area are typical of developed urban environments. The Plan Area encompasses 78 square miles of land, which houses a variety of buildings that range in height and shadow potential, depending on their respective use and neighborhood. Shadows are more pronounced near the Downtown and Uptown neighborhoods, where most mid- and high-rise buildings are located. By nature, mid- and high-rise buildings shade nearby public and private properties, especially during the morning and afternoon hours during late fall and early winter, when the sun is lowest on the horizon.

Solar Panels and Solar Collectors

Solar panels, also known as photovoltaic solar panels, absorb sunlight as a source of energy to generate electricity. Likewise, solar collectors gather the sun's energy, transform its radiation into heat, then transfer that heat to water, solar fluid, or air. The solar thermal energy can be used in solar water heating systems, solar pool heaters, and solar space-heating systems. Solar collectors can be mounted anywhere but need to face the sun and be clear of shadows during peak daylight hours. In the northern hemisphere, a south-facing roof is ideal. Solar collectors and passive solar design features are located throughout the City.

Public Open Spaces

Public parks are publicly developed and managed open spaces that are part of the City's open space system. Traditionally, such parks include grass, lawns, gardens, and trees located in traditional centers, often including playgrounds and sports facilities, community centers, and places for active and passive recreation. Small urban parks, often bounded by buildings, may also include fountains, water features, smaller lawns, or other attractions. Quasi-public parks often include similar amenities as public parks, though "quasi" denotes the property is privately-owned, though the amenities and space are available for public use. Exposure to extensive shadow and sunlight deprivation can impair beneficial use and enjoyment of these areas; as such, the City considers casting of shadows on these areas to be a CEQA threshold of significance. As of 2022, the City of Oakland has 166 parks totaling 4,927 acres. Oakland parks and open spaces are shown in Figure 4.14-1 in Section 4.14, *Recreation*.

Historic Resources

Historic Architectural Resources include buildings, structures, objects, and historic districts (see Section 4.4, *Cultural Resources*). The *CEQA Guidelines* define an historical resource as: (1) a resource in the California Register of Historic Resources (California Register); (2) a resource

included in a local register of historical resources as defined in Public Resources Code (PRC) Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

Historical structures and sites are located in different areas and neighborhoods throughout the City (see Section 4.4, *Cultural Resources*). Integrity is the authenticity of a historical resource's physical identity as shown by the survival of characteristics that existed during the period of significance. While access to light is not typically an important characteristic of most historic buildings, it may be of historic places of worship where the light, specifically the light through stained-glass windows, contributes to its architectural historical significance or historic buildings with design elements that depend on the contrast between light and dark (e.g., open galleries, arcades, or recessed entries or balconies).

Wind

The Plan Area lies within a climatological sub region of the San Francisco Bay Area Air Basin where the marine air that travels through the Golden Gate, as well as across San Francisco and the San Bruno Gap, is a dominant weather factor. The Oakland Hills cause the westerly flow of marine air to split off to the north and south of Oakland; this phenomenon tends to diminish wind speeds in Oakland. Wind flow is generally from the west, and average wind speeds vary from season to season with the strongest average winds occurring during summer and the lightest average winds during winter. The windier part of the year lasts for 5.5 months, from about mid-March to late August, with average wind speeds of more than 8.2 miles per hour. The windiest month of the year in Oakland is June, with an average hourly wind speed of 9.4 miles per hour. The calmer time of year lasts for 6.5 months, from about late August to mid-March. The calmest month of the year in Oakland is October, with an average hourly wind speed of 7.0 miles per hour (Weather Spark, 2023). Together, the west, north-northwest and south-southeast winds are the most frequent winds that exceed 25 miles per hour (mph).

Wind conditions within the City result from the interaction of the approaching wind with the physical features of the environment—buildings, topography and landscape. In cities, groups of structures tend to slow the winds near ground level, due to the friction and drag of the structures themselves, but this leaves the air mass that flows well overhead to continue with little slowing. However, a building that is much taller than surrounding buildings will intercept and redirect winds that might otherwise flow overhead and bring those winds down the vertical face of the building to ground level, where they create ground-level wind and turbulence. These redirected winds can be relatively strong and relatively turbulent and can be incompatible with the intended uses of nearby ground level spaces such as plazas and sidewalks. Moreover, structure designs that present projecting tall flat surfaces square to strong winds can create ground-level winds that can be hazardous to pedestrians. Conversely, a building with a height that is similar to the heights of surrounding buildings typically would cause little or no additional ground-level wind acceleration and turbulence.

Thus, wind impacts are generally caused by large building masses extending substantially above their surroundings, and by buildings oriented so that a large wall catches a prevailing wind, particularly if such a wall includes little or no articulation. In general, new buildings less than approximately 100 feet in height are unlikely to result in substantial adverse effects on ground-level winds such that pedestrians would be uncomfortable or hazardous wind conditions would result. Such winds may occur under existing conditions, but shorter buildings typically do not cause substantial changes in ground-level winds.

Wind Effects on People

The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed. Winds up to about 4 mph (average wind speed) have no noticeable effect on pedestrian comfort. With speeds from 4 to 8 mph, wind is felt on the face. Winds from 8 to 12 mph will disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. Winds from 13 to 18 mph will raise loose paper, dust, and dry soil, and will disarrange hair. For winds from 19 to 24 mph, the force of the wind will be felt on the body. With 25 to 31 mph winds, umbrellas are used with difficulty, hair is blown straight, there is difficulty in walking steadily, and wind noise is unpleasant. Winds over 31 mph cause noticeable inconvenience due to the effort expended during walking, while winds greater than 38 mph make it nearly impossible to walk into the wind and increase difficulty with balance, and stronger gusts at average speeds above 38 mph can blow people over.

4.1.2 Regulatory Setting

This section provides the relevant State, regional, and local regulations applicable to the Proposed Project.

4.1.2.1 State

California Scenic Highway Program

The California Scenic Highway Program protects scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to identified scenic highways. “Officially Designated State Scenic Highways” must have a scenic corridor protection program or its equivalent adopted by the local jurisdiction to preserve the scenic quality of the corridor and address land use, development density, earthmoving, landscaping, building design, and outdoor advertising, including billboards, within the corridor.

California Building Standards Code Title 24

Parts 1 and 6 – Outdoor Lighting Zones

In 2001, the California Legislature passed a bill requiring the California Energy Commission (CEC) to adopt energy-efficient standards for outdoor lighting for both the public and private sector. In November 2003, the CEC adopted changes to the Building Energy Efficiency Standards within Title 24. The standards specify outdoor lighting requirements for residential and nonresidential development, and are on a three-year update and renewal cycle, along with the other parts of Title 24. The intent of these standards is to improve the quality of outdoor lighting and reduce the impacts of light pollution, light trespass and glare. The standards regulate lighting characteristics,

such as maximum power and brightness, shielding, and use of sensor controls to turn lighting on and off. Different lighting standards have been established for four lighting zone classifications. Based on population figures in the 2000 Census, areas can be designated by this State specification system as LZ1 (dark), LZ2 (low), LZ3 (medium), or LZ4 (high). Lighting standards for dark and rural areas are stricter for example, to provide appropriate protection from new sources of light pollution and light trespass. According to the U.S. Census Bureau, the entire Plan Area is defined as an urban area and is therefore designated as LZ3 per the CEC classification standards (CEC, 2008).

Part 11 – California Green Building Standards Code

The 2016 California Building Standards Code, Part 11, provides requirements for lighting and control equipment and further addresses light trespass and glare. This section also regulates uplighting allowances for fixtures using the "BUG" Backlight Uplight Glare rating method.

4.1.2.2 Local Plans, Ordinances and Policies

City of Oakland General Plan

Land Use and Transportation Element (LUTE)

The following policies and actions are included in the existing LUTE, adopted in 1998. The LUTE is being updated as part of the General Plan Phase II; no new policies are being proposed as part of the Proposed Project. The following policies and actions are relevant to the aesthetics, lighting, shadow, and wind impacts of the Proposed Project:

> ***Policy W3.2: Enhancing the Quality of the Natural and Built Environment.*** The function, design, and appearance, and supplementary characteristics of all uses, activities, and facilities should enhance, and should not detract from or damage the quality of, the overall natural and built environment along the waterfront.
>
> ***Policy W3.4: Preserving Views and Vistas.*** Buildings and facilities should respect scenic viewsheds and enhance opportunities for visual access of the waterfront and its activities.
>
> ***Policy W12.7: Defining Design Criteria.*** Development in this area should be designed to enhance direct access to and along the water's edge, maximize waterfront views and vistas, and make public pedestrian access and spaces inviting. Development and amenities must be sensitive to immediate surroundings.
>
> ***Policy T6.2: Improving Streetscapes.*** The City should make major efforts to improve the visual quality of streetscapes. Design of the streetscape, particularly in neighborhoods and commercial centers, should be pedestrian-oriented and include lighting, directional signs, trees, benches, and other support facilities.
>
> ***Policy T6.5: Protecting Scenic Routes.*** The City should protect and encourage enhancement of the distinctive character of scenic routes within the City, through prohibition of billboards, design review, and other means.
>
> ***Policy N3.8: Required High-Quality Design.*** High-quality design standards should be required of all new residential construction.
>
> ***Policy N3.9: Orienting Residential Development.*** Residential developments should be encouraged to face the street and to orient their units to desirable sunlight and views, while avoiding unreasonably blocking sunlight and views for neighboring buildings.

Policy N9.5: Marking Significant Sites. Identify locations of interest and historic significance by markers, signs, public art, landscape, installations, or by other means.

Policy N8.2: Making Compatible Interfaces between Densities. The height of development in urban residential and other higher density residential areas should step down as it nears lower density residential areas to minimize conflicts at the interface between the different types of development.

Policy N3.9: Orienting Residential Development. Residential developments should be encouraged to face the street and to orient their units to desirable sunlight and views, while avoiding unreasonably blocking sunlight and views for neighboring buildings.

Policy W12.7: Defining Design Criteria. Development in this area should be designed to enhance direct access to and along the water's edge, maximize waterfront views and vistas, and make public pedestrian access and spaces inviting. Development and amenities must be sensitive to immediate surroundings.

Open Space, Conservation and Recreation Element (OSCAR)

The OSCAR promotes the preservation and good design of open space, and the protection of natural resources to improve aesthetic quality in Oakland. The following OSCAR objectives and policies are relevant to the aesthetics, shadow, and wind impacts of the Proposed Project:

Action OS-3.6.1: Landscape Screening Along Freeways. Require retention of existing landscape screening as a condition of development approval for any property adjacent to Highway 13, I-580, or Highway 24.

Policy OS-7.3: Waterfront Appreciation. Promote a greater appreciation of the Oakland waterfront by preserving and enhancing waterfront views.

Objective OS-9: Landform. To retain Oakland's natural features and topography wherever possible and recognize their important role in defining the character and image of the City and its neighborhoods.

Policy OS-9.3: Gateway Improvements. Enhance neighborhood and city identity by maintaining or creating gateways. Maintain view corridors and enhance the sense of arrival at the major entrances to the city, including freeways, BART lines, and the airport entry. Use public art, landscaping, and signage to create stronger City and neighborhood gateways. Objective OS-10: Scenic Resources. Protect scenic views and improve visual quality.

Policy OS-10.1: View Protection. Protect the character of existing scenic views in Oakland, paying particular attention to: (a) views of the Oakland Hills from the flatlands; (b) views of downtown and Lake Merritt; (c) views of the shoreline; and (d) panoramic views from Skyline Boulevard, Grizzly Peak Road, and other hillside locations.

Policy OS-10.2: Minimizing Adverse Visual Impacts. Encourage site planning for new development which minimizes adverse visual impacts and takes advantage of opportunities for new vistas and scenic enhancement.

Policy OS-10.3: Underutilized Visual Resources. Enhance Oakland's underutilized visual resources, including the waterfront, creeks, San Leandro Bay, architecturally significant buildings or landmarks, and major thoroughfares.

Objective OS-11: Civic Open Spaces. To maintain and develop plazas, pocket parks, pedestrian walkways, and rooftop gardens in Oakland's major activity centers, and enhance the appearance of these and other public spaces with landscaping and art.

Policy OS-11.2: New Civic Open Space. Create new civic open spaces at BART Stations, in neighborhood commercial areas, on parking garages, and in other areas where high intensity redevelopment is proposed.

Policy OS-11.3: Public Art Requirements. Continue to require public art as a part of new public buildings or facilities. Consider expanding the requirement or creating voluntary incentives to private buildings with substantial public spaces.

Action OS-11.3.1: Expanded Private Role in Providing Public Art. Study possible approaches to expanding the private sector's role in the city's public art program. Options should include development incentives (density bonuses) and an in-lieu fee based on square footage for major downtown development.

Policy OS-11.4: Siting Public Art. Site public art with sensitivity to its surroundings. Locate public art in a manner which does not reduce useable open space in City parks or impede recreational activities.

Objective OS-12: Street Trees. "Green" Oakland's residential neighborhoods and commercial areas with street trees.

Policy OS-12.1: Street Tree Selection. Incorporate a broad and varied range of tree species which is reflected on a city-maintained list of approved trees. Street tree selection should respond to the general environmental conditions at the planting site, including climate and micro-climate, soil types, topography, existing tree planting, maintenance of adequate distance between street trees and other features, the character of existing development, and the size and context of the tree planting area.

Historic Preservation Element

In March 1994, the Oakland City Council adopted the Historic Preservation Element of the Oakland General Plan (amended July 21, 1998). The following Historic Preservation Element goals address historic resources and visual resources. The goals are supported by 5 objectives, 25 policies and 66 actions designed to prevent damage or destruction of those resources and maintain their aesthetic, cultural, and practical value for the purposes stated in the goals.

Goal 1: To use historic preservation to foster economic vitality and quality of life in Oakland by maintaining and enhancing throughout the City the historic character, distinct charm, and special sense of place provided by older properties; establishing and retaining positive continuity with the past thereby promoting pride, a sense of stability and progress, and positive feelings for the future; and preserving and encouraging a city of varied architectural styles and environmental character, and

Goal 2: To preserve, protect, enhance, perpetuate, use, and prevent the unnecessary destruction or impairment of properties or physical features of special character or special historic, cultural, educational, architectural or aesthetic interest or value. Such properties or physical features include buildings, building components, structures, objects, districts, sites, natural features related to human presence, and activities taking place on or within such properties or physical features.

Scenic Highways Element

The Scenic Highways Element of the Oakland General Plan seeks to protect and enhance the distinctive character of scenic routes within the City. I-580 is identified as a designated scenic route in the Scenic Highways Element.

The following City of Oakland Scenic Highways Element policies are relevant to the aesthetics, lighting, shadow, and wind impacts of the proposed Project:

Goal: To protect and enhance the distinctive character of scenic routes within the City.

Goal: To improve Oakland's physical environment and to preserve the natural qualities of Oakland's' setting.

General Policies

***General Policy 3*.** Urban development should be related sensitively to the natural setting.

***General Policy 4*.** High standards for preserving and enhancing natural landforms and vegetation should be established and maintained to regulate all activities related to earthwork and the removal of trees, shrubs or ground cover.

Specific Policies Related to MacArthur Freeway (I-580)

***Specific Policy Related to the MacArthur Freeway 2*.** Visual intrusions within the scenic corridor should be removed, converted, buffered or screened from the motorist's view.

***Specific Policy Related to the MacArthur Freeway 3*.** Panoramic views and interesting views now available to the motorist should not be obliterated by new structures.

***Specific Policy Related to the MacArthur Freeway 4*.** New construction within the scenic corridor should demonstrate architectural merit and a harmonious relationship with the surrounding landscape.

Oakland Outdoor Lighting Standards

The City of Oakland Outdoor Lighting Standards are applicable to private development projects on public rights-of-way. As such, the requirements in the standard are assumed to apply to all new roadways constructed within the Project boundaries. Requirements include general glare, light trespass, and light pollution mitigation measures such as using full-cutoff luminaires wherever available and avoiding bare light sources (bulbs). In addition, the standard provides specific lighting equipment guides relevant to street and pedestrian light pole heights.

Specific Plans

The City uses specific plans to coordinate development and infrastructure improvements on large sites or series of parcels. Specific plans must be consistent with the General Plan and are typically used to establish development plans and standards to achieve the design and development objectives for a particular area.

Downtown Oakland Specific Plan (In Progress)

The Downtown Oakland Specific Plan encompasses 930 acres of land bounded by the Oakland Estuary to the south, Lake Merritt to the east, I-980 to the west, and 27th Street/Grand Avenue to the north. This plan seeks to create policy guidance as Downtown Oakland continues to redevelop, focusing on economic opportunity, housing needs and homelessness, transportation, cultural arts, public space, and social equity.

Coliseum Area Specific Plan (2015)

The Coliseum Area Specific Plan seeks to transform 800 acres of underutilized land around the Oakland-Alameda County Coliseum (centered around I-880, north of Hegenberger Road) into a state-of-the-art district with a sports, entertainment, and science and technology focus. In tandem with this goal, the plan seeks to expand employment opportunities, create a pedestrian-friendly environment, and provide housing. At the time this plan was prepared, the area was home to three professional sports teams - the Oakland Raiders, Golden State Warriors, and Oakland A's. Both the Warriors and Raiders have since departed to locations outside Oakland, and the future plans of the Oakland A's are currently in flux. It includes policies in relation to preservation of views of the adjacent shoreline, the Bay, as well as existing scenic views of the Oakland Hills. Other policies are in relation to the inclusion of public art and trees to enhance the visual quality of streets and other public spaces, taking into consideration views of the Plan Area from the freeways when designing new buildings, and avoiding the casting of shadows on parks and adjacent development.

West Oakland Specific Plan (2014)

The West Oakland Specific Plan is a comprehensive approach to developing vacant or underutilized commercial and industrial parcels in West Oakland, a 1,900-acre area bounded by I-580 to the north, I-980 to the east, and I-880 wrapping around the south and west. It additionally identifies necessary transportation improvements and seeks to improve the quality of life for residents by reducing blight and creating 22,000 living-wage jobs through the development of commercial, office, and industrial space. It also supports transit-oriented, mixed-use development around the West Oakland BART station to supply 1,325-2,300 new housing units. The West Oakland Specific Plan also includes design guidelines for new development that aim to retain West Oakland's unique and diverse character.

Lake Merritt Station Area Specific Plan (2014)

The Lake Merritt Station Area Specific Plan encompasses generally a half-mile radius around the Lake Merritt BART Station. This includes Chinatown, Laney College, the channel connecting Lake Merritt to the Oakland Estuary, and Oakland and Alameda County civic buildings. This plan seeks to: reduce auto use and increase multimodal transportation use (transit, biking, walking); increase housing near the Lake Merritt BART station; streamline the real estate development process; increase jobs, services, and retail; support existing businesses; and increase recreational space. It includes policies related to visual resources such as improvements to the public realm in the form of streetscape improvements, park improvements, and the creation of new public spaces; new development of towers to allow sunlight, air and views between towers; as well as preserving key views of Lake Merritt (e.g. along 14th Street) and of the Estuary.

Broadway Valdez District Specific Plan (2014)

The Broadway Valdez District Specific Plan includes approximately 95 acres, encompassing the Broadway corridor between West Grand Avenue and Interstate 580, including stretches of 27th and Valdez streets, where many of the City's auto dealers were formerly located. The goal of this plan is to transform this area, located directly north of Downtown and near two BART stations, into a pedestrian-friendly retail and employment destination for the region. Additionally, the plan seeks to promote a diverse array of housing, medical services, and dining options. It includes objectives and policies in relation to preserving Webster Street's visual character, create visual gateways, preservation of historic character of the corridor, and the inclusion of aesthetic roof and facade elements for buildings that are visible from I-580.

Central Estuary Area Plan (2013)

The Central Estuary Area Plan includes 416 acres and is composed of the estuary shoreline and surrounding neighborhoods, roughly from 19th Avenue south to 54th Avenue between the estuary (west) and I-880 (east). This plan was developed in response to increased development interest. The Plan addresses conflicting land use priorities and infrastructure deficiencies with the goal of developing a vibrant destination that supports a mix of uses. It recommends several transportation improvements and street redesigns for safer, pedestrian-oriented streets, and many objectives focus on public space and public access to the Estuary shoreline. It includes objectives and policies in relation to the enhancement of visual corridors to surrounding inland areas to make the Estuary shoreline more accessible, as well as encouraging new open spaces to provide views from and of the estuary, and provisions to reduce visual conflicts between residential and industrial uses.

Oakland Municipal Code

Development under the Proposed Project would be subject to the following titles and chapters of the Oakland Municipal Code with regard to aesthetics, lighting, shadow, and wind impacts.

Title 8: Health and Safety

Chapter 8.10: Graffiti. The intent of this chapter is to protect public and private property from acts of defacement by graffiti.

Chapter 8.24: Property Blight. This chapter requires a level of maintenance of residential, commercial, and industrial property that will protect and preserve the livability, appearance, and social and economic stability of the City.

Title 9: Public Peace, Morals, and Welfare

Chapter 9.16.060: Lighting. Approval of the City before energy is supplied. This section mandates that no person shall make any electric service connection to, or supply any electrical energy to, any ornamental street lighting installation until the Electrical Department shall have inspected and approved such installation as conforming to this code and to ordinances, rules, and regulations of the City.

Title 12: Streets, Sidewalks and Public Places

Chapter 12.32: Street Trees. This chapter outlines the provisions for protecting street trees. No new development shall make any tree or shrub improvement, or destroy, deface, or mutilate any tree or shrub along a public street without having first obtained a written permit from the City of Oakland Director of Parks and Recreation.

Chapter 12.36: Protected Trees. It is the interest of the City of Oakland and the community to protect and preserve trees by regulating their removal; to prevent unnecessary tree loss and minimize environmental damage from improper tree removal; to encourage appropriate tree replacement plantings; to effectively enforce tree preservation regulations; and to promote the appreciation and understanding of trees.

Title 15: Buildings and Construction

Chapter 15.52.040: Obstruction of view corridors. The planting of vegetation which will obstruct the view plane from the road within any protected public view corridor is prohibited. Trees or vegetation which obstruct a protected public view corridor shall be removed or altered to eliminate or minimize view obstruction in conjunction with development of said property per the vegetation management prescriptions for the North Oakland Hill Area Specific Plan.

For parklands, preserves or other types of open spaces, obstructions of protected public view corridors shall be eliminated or minimized in accordance with said management prescriptions.

Title 17: Planning. Title 17 includes design review procedures and also outlines sign limitations, height restrictions, usable open space requirements, and minimum yards for residential developments located in each zone. The following would apply to the Proposed Project:

Chapter 17.124: Landscaping and Screening Standards. This chapter prescribes standards for development and maintenance of planting, fences, and walls; for the conservation and protection of property; and through improvements of the appearance of individual properties, neighborhoods, and the City.

Chapter 17.136: Design Review Procedure. In accordance with Chapter 17.136 of the Oakland Planning Code, future individual cumulative development projects would be subject to Design review. Design review considers the visible features of a project and the project's relationship to its physical surroundings. Although independent of CEQA and the EIR process, design review is focused on ensuring quality design, and on avoiding potentially adverse aesthetic effects. Projects are evaluated based on site, landscaping, height, bulk, arrangement, texture, materials, colors, appurtenances, potential shadowing effects on adjacent properties, and other characteristics.

4.1.2.3 City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to reducing impacts related to Aesthetics are listed below. All SCAs would be adopted as enforceable conditions of approval and required, as applicable, to be implemented during construction and operation of future development under the Proposed Project to help ensure less-than-significant impacts related to Aesthetics. The SCAs are incorporated and required as part of the Proposed Project, so they are not listed as mitigation measures.

- **SCA 16: Trash and Blight Removal**

  Requirement: The project applicant and his/her successors shall maintain the property free of blight, as defined in chapter 8.24 of the Oakland Municipal Code. For nonresidential and multifamily residential projects, the project applicant shall install and maintain trash receptacles near public entryways as needed to provide sufficient capacity for building users.

- **SCA 17: Graffiti Control**

  Requirement: During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation:

  i. Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces.

  ii. Installation and maintenance of lighting to protect likely graffiti-attracting surfaces.

  iii. Use of paint with anti-graffiti coating.

  iv. Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED).

  v. Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement.

  The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include:

  i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system.

  ii. Covering with new paint to match the color of the surrounding surface. iii. Replacing with new surfacing (with City permits if required).

Monitoring/Inspection: Bureau of Building

- **SCA 18: Landscape Plan**

  a. Landscape Plan Required

  Requirement: The project applicant shall submit a final Landscape Plan for City review and approval that is consistent with the approved Landscape Plan. The Landscape Plan shall be included with the set of drawings submitted for the construction-related permit and shall comply with the landscape requirements of Chapter 17.124 of the Planning Code.

  b. Landscape Installation

  Requirement: The project applicant shall implement the approved Landscape Plan unless a bond, cash deposit, letter of credit or other equivalent instrument acceptable to the Director of City Planning, is provided. The financial instrument shall equal the greater of $2,500 or the estimated cost of implementing the Landscape Plan based on a licensed contractor's bid.

  c. Landscape Maintenance

  Requirement: All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. The property owner shall be responsible for maintaining planting in adjacent public rights-of-way. All required fences, walls, and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.

- **SCA 19: Lighting**

  Requirement: Proposed new exterior lighting fixtures shall be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties.

- **SCA 83: Underground Utilities**

  Requirement: The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.

4.1.3 Environmental Analysis

4.1.3.1 Significance Criteria

The City of Oakland has established thresholds of significance for CEQA impacts, which incorporate those in Appendix G of the *CEQA Guidelines* (City of Oakland, 2020). The Proposed Project would have a significant adverse impact related to aesthetics if it would:

1. Have a substantial adverse effect on a public scenic vista [NOTE: Only impacts to scenic views enjoyed by members of the public generally (but not private views) are potentially significant.];
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, located within a state or locally designated scenic highway;
3. Substantially degrade the existing visual character or quality of the site and its surroundings;
4. Create a new source of substantial light or glare which would substantially and adversely affect day or nighttime views in the area;
5. Introduce landscape that would now or in the future cast substantial shadows on existing solar collectors (in conflict with California Public Resource Code sections 25980-25986);
6. Cast shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors;
7. Cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space;
8. Cast shadow on an historic resource, as defined by CEQA Guidelines section 15064.5(a),6 such that the shadow would materially impair the resource's historic significance by materially altering those physical characteristics of the resource that convey its historical significance and that justify its inclusion on or eligibility for listing in the National Register of Historic Places, California Register of Historical Resources, Local Register of historical resources, or a historical resource survey form (DPR Form 523) with a rating of 1-5;
9. Require an exception (variance) to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code, and the exception causes a fundamental conflict with policies and regulations in the General Plan, Planning Code, and Uniform Building Code addressing the provision of adequate light related to appropriate uses; or

10. Create winds that exceed 36 mph for more than one hour during daylight hours during the year. [NOTE: The wind analysis only needs to be done if the project's height is 100 feet or greater (measured to the roof) and one of the following conditions exist: (a) the project is located adjacent to a substantial water body (i.e., Oakland Estuary, Lake Merritt or San Francisco Bay); or (b) the project is located in Downtown. Downtown is defined in the Land Use and Transportation Element of the General Plan (page 67) as the area generally bounded by West Grand Avenue to the north, Lake Merritt and Channel Park to the east, the Oakland Estuary to the south and I-980/Brush Street to the west. The wind analysis must consider the project's contribution to wind impacts to on- and off-site public and private spaces. Only impacts to public spaces (on- and off-site) and off-site private spaces are considered CEQA impacts. Although impacts to on-site private spaces are considered a planning-related non-CEQA issue, such potential impacts still must be analyzed.]

The changes to Appendix G of the *CEQA Guidelines* effective in December 2018 were intended to reflect recent changes to the CEQA statutes and court decisions. Many of these recent changes and decisions are already reflected in the City's adopted significance thresholds, which have been used to determine the significance of potential impacts. To the extent that the topics or questions in Appendix G are not reflected in the City's thresholds, these topics and questions have been taken into consideration in the impact analysis below, even though the determination of significance relies on the City's thresholds. Specifically, the discussion of visual character and quality in topic "3" pertains to public views in non-urbanized areas, whereas for projects in urbanized areas, Appendix G suggests that the analysis consider whether the project would conflict with applicable zoning and other regulations governing scenic quality.

4.1.3.2 Approach to Analysis / Methodology

This is a program-level EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Impacts relative to aesthetics, shadow and wind are evaluated using the criteria listed above and based on information included in the City of Oakland General Plan, Map Atlas, and the documents listed in Section 4.10.6, *References – Population and Housing.*

The Proposed Project does not propose specific public or private developments, but for the purposes of environmental review, establishes the Proposed Project *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future development under the Proposed Project, this EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas and analyzes the impacts of housing development through the projection period ending in 2030.

Under CEQA Section 21099(d)(1), "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment."[3] Accordingly, aesthetics is no longer considered in determining if a project has the potential to result in significant environmental effects for projects that meet all three of the following criteria:

[3] CEQA Section 21099(d)(1)

- The project is in a transit priority area[4]
- The project is on an infill site.[5]
- The project is residential, mixed-use residential, or an employment center.[6]

Several of the areas of proposed change meet these criteria, including around the Rockridge, West Oakland, and Coliseum BART stops. See "Zoning Changes" below for more information on these locations.

Given the size of the Plan Area and the programmatic nature of the Proposed Project, preparation of a site-specific shadow analysis or visual simulation was not feasible. However, the analysis considers the general locations of public scenic vistas and resources, parks, or historic resources and their proximity to change areas identified in the Proposed Project and evaluates the significance of these potential impacts.

4.1.3.3 Proposed 2045 General Plan Policies, Land Use and Zoning

The following Zoning changes pertaining to aesthetics, shadow, and wind are proposed as a part of the HEI in the Proposed Project.

Zoning Changes

As described in Section 3.5.1 of the Project Description, the Proposed Project would implement several Housing Action Plan actions that include zoning and height changes that would further increase housing production capacity and unlock additional opportunities for affordable and missing middle housing in high resource neighborhoods and affirmatively further fair housing by opening up exclusionary neighborhoods. A table of these height increases is available in Tables 1 and 2 of Appendix J of the 2023-2031 Housing Element.

The Proposed Project would also upzone and increase the height limits of key corridors in the City. The Proposed Project would increase permitted height along key corridors such as International, Foothill, College, Claremont, and MacArthur Boulevards to increase housing density, in addition to areas in close proximity to high-capacity transit, including areas near Rockridge BART and International Boulevard BRT Stations.

As shown in **Figure 4.1-1**, corridor heights permitted as part of proposed zoning range from an increase of 5 feet, to an increase of 90 feet in some parts of West Oakland and increase of 140 feet in Rockridge. This could result in buildings up to 250 feet tall in West Oakland, and buildings up to 175 feet tall in Rockridge. However, these height increases around the West Oakland and Rockridge BART stations are exempt from aesthetics impacts under CEQA Section 21099(d).

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4 CEQA Section 21099(a)(7) defines a "transit priority area" as an area within one-half mile of an existing or planned major transit stop. A "major transit stop" is defined in CEQA Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the a.m. and p.m. peak commute periods.

5 CEQA Section 21099(a)(4) defines an "infill site" as either (1) a lot within an urban area that was previously developed; or (2) a vacant site where at least 75 percent of the site perimeter adjoins (or is separated by only an improved public right-of-way from) parcels that are developed with qualified urban uses.

6 CEQA Section 21099(a)(1) defines an "employment center" as a project situated on property zoned for commercial uses with a floor area ratio of no less than 0.75 and located within a transit priority area.

Regardless, impacts of these height increases are discussed in "Impacts" in accordance with City thresholds of significance.

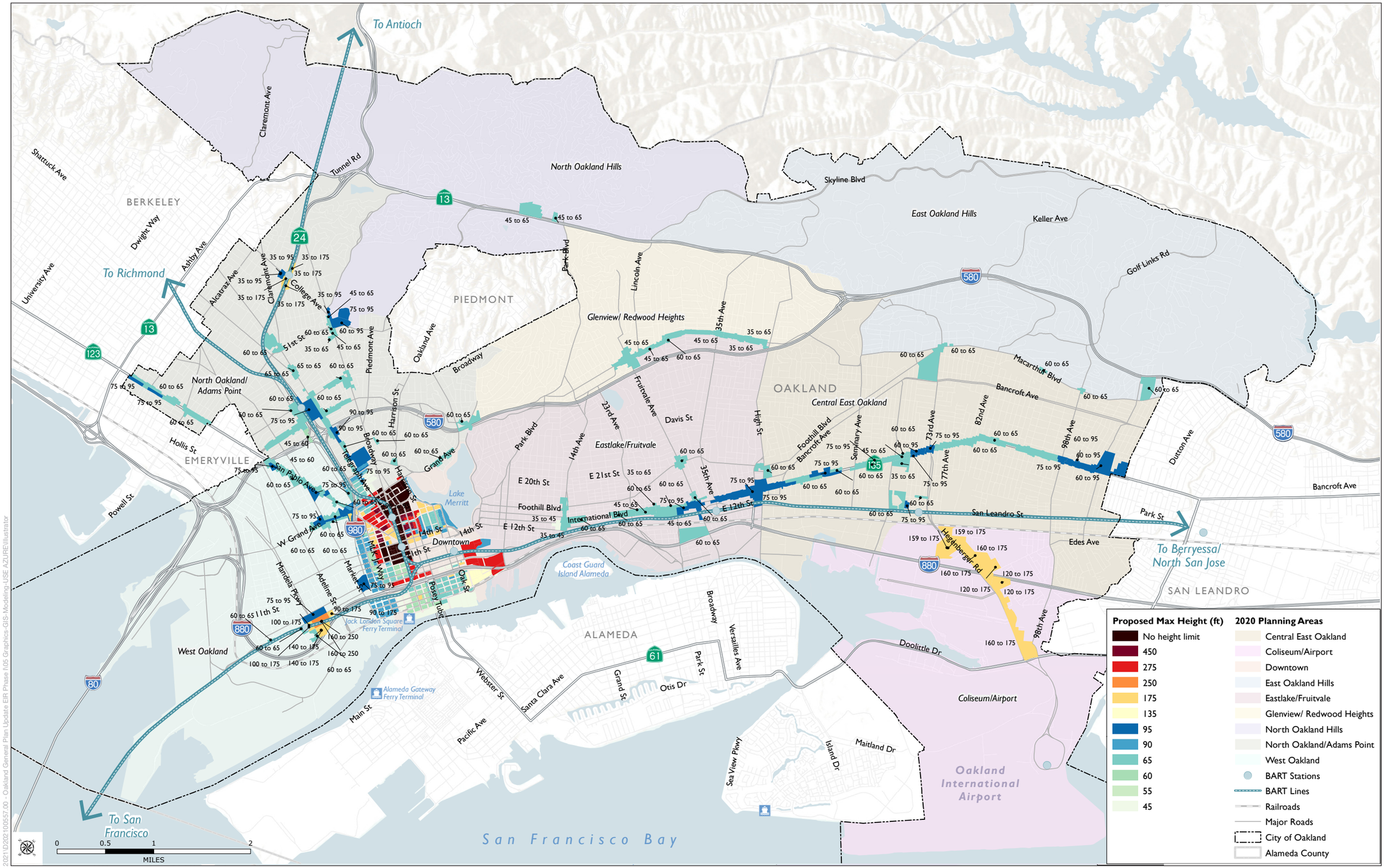
Additionally, the Affordable Housing Overlay Zone would allow for a bonus height for eligible 100 percent affordable housing projects (AHO Zone projects), as well as relaxation of other listed development standards and an elimination of any maximum residential density standards. Bonus height increases would permit two additional stories or at least a height of 65 feet, depending on the zone. The AHO Zone is applied on top of existing Hillside Residential-4 (RH-4), Detached Unit Residential (RD), Mixed Housing Type Residential (RM), Urban Residential (RU), Housing and Business Mix Commercial (HBX), Central Estuary District (D-CE), Neighborhood Center Commercial (CN), Community Commercial (CC), Central Business District (CBD), Regional Commercial (CR), Transit-Oriented Development Commercial (S-15), Broadway Valdez District (D-BV), Lake Merritt District (D-LM), and Coliseum Area District (D-CO) zones. The tallest AHO projects could potentially result in downtown Oakland, where major height increases are already anticipated and analyzed as part of the DOSP. The AHO Zone height addition would not apply in areas with established historical significance known as Areas of Primary Importance, or if the site contains a structure that contributes to the Area of Primary Importance. Projects in these areas must meet certain design requirements and preserve structures that contribute to the Area of Primary Importance. In addition, AHO Zone projects would be subject to a ministerial approval process.

4.1.4 Impacts of the Project

Impact AES-1: Adoption of the Proposed Project would not have a substantial adverse effect on a public scenic vista or substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, located within a state or locally designated scenic highway. (Criteria 1 and 2) (*Less than Significant*)

As described in the Environmental Setting section, scenic vistas may be generally described as panoramic views of a large geographic area for which the field of view can be wide and extend into the distance. Under CEQA, scenic vistas are those that are experienced from publicly accessible locations and include urban skylines, valleys, mountain ranges, or large bodies of water. Private views as seen from private sites are not protected under the City of Oakland General Plan and are specifically excluded under City of Oakland CEQA thresholds of significance. As such, scenic views seen from the individual housing sites are not discussed further. In addition, height increases around the Rockridge and West Oakland BART stations are exempt from aesthetics impacts under CEQA Section 21099(d), as discussed in the Approach to Analysis/Methodology section and are not discussed further.

Scenic views identified in the OSCAR Element include views of the Oakland Hills from the flatlands, views of Downtown and Lake Merritt, views of the shoreline, and panoramic views from Skyline Boulevard and Grizzly Peak Boulevard. Additionally, scenic highways can be described as distinctively attractive roadways that traverse the city and the visual corridors that surround them. The Plan Area has one officially designated State scenic highway, I-580 (also known as the MacArthur Freeway) as per the Scenic Highways Element.



2021\D2021005570 - Oakland General Plan Update EIR Phase II\05 Graphics-GIS-Modeling-USE AZL\RE\Illustrator

SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 4.1-1
Resulting Height Allowance

ESA

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The Proposed Project includes several zoning and height changes that would further increase housing production capacity. This could result in height changes near Rockridge BART Station/in the Rockridge neighborhood, near the West Oakland BART Station, and along Hegenberger Road, as shown in Figure 4.1-1 of this chapter. Development of the Proposed Project prompts height changes adjacent to the West Oakland BART station to increase from 160 to 250 feet, heights taller than those analyzed in the West Oakland Specific Plan. Development of the Proposed Project would also prompt height changes to increase from 35 to up to 175 feet near the Rockridge BART station and from 35 to 95 feet in the Rockridge neighborhood. Implementation of the Proposed Project would also increase height along Hegenberger Road from 120 to up to 175 feet. At International Boulevard and 105th Avenue, and at Broadway and 51st streets, allowable heights increase from 60 feet to 95 feet. While the AHO Zone could increase heights, it is not anticipated that two-story additions for 100 percent affordable projects would have a substantial adverse impact on publicly available scenic vistas as defined above in Environmental Setting. Impacts on aforementioned scenic vistas and highway from build-out of this Proposed Project would be limited to those targeted height change areas.

Views of Shoreline, Downtown, and Lake Merritt from Skyline Boulevard, Grizzly Peak, and I-580

Views of the shoreline, Downtown, and Lake Merritt have been identified by the existing General Plan as scenic vistas and can be seen from Skyline Boulevard, Grizzly Peak Boulevard, and designated scenic highway I-580. These are largely panoramic views that extend into the distance. Increased heights at West Oakland BART and Hegenberger Road could potentially affect vistas of the shoreline from Skyline and Grizzly Peak boulevard. Elsewhere in the Planning Area beyond viewpoints from the hills, flat topography limits the availability of long-range views to the shoreline. West Oakland and Hegenberger Road are 7 miles and 4.5 miles away from the vantage point of Skyline Boulevard, respectively, while West Oakland and Hegenberger Road are 6.2 miles and 9.3 away from the scenic vista of Grizzly Peak Boulevard. Because West Oakland and Hegenberger are of such distance from the Skyline and Grizzly Peak hillside vantage points, future development under the Proposed Project would not substantially disrupt the overall panoramic view of the shoreline.

From Grizzly Peak and Skyline boulevards, Downtown and Lake Merritt are both approximately five miles away from both points. From the sightline of Grizzly Peak and Skyline, proposed building height increases downtown would add additional complimentary elements to the established Downtown skyline. Proposed building height increases in the sightline from Grizzly Peak and Skyline boulevards to Lake Merritt would be imperceptible.

On I-580, views to the shoreline and downtown are visible where I-580 crosses SR-24. These shoreline views are punctuated by shipping container cranes (approximately 230 feet tall), the approximately 130-foot tall Apollo Housing buildings, and the 145-foot tall Pacific Coast Shredded Wheat Company tower. Allowed heights of up to 250 feet near West Oakland BART towers could potentially affect views to the shoreline from I- 580, though they would not result in a substantial adverse effect or full obstruction to shoreline views from these vantage points.

Proposed height changes in the Rockridge neighborhood could introduce development that includes taller buildings and structures. Rockridge is 2.6 miles from the vantage point of Grizzly Peak Boulevard, and about 5.7 miles away from the scenic vista Skyline Boulevard. However, height changes in the Rockridge neighborhood are close enough to the vantage points of Skyline Road and Grizzly Peak Boulevard scenic vistas and far enough away from the shoreline that the buildings would not obscure the visible boundary/edge of the shoreline, Downtown, or Lake Merritt, and the overall panoramic view of these areas would not be disrupted.

Views of the Oakland Hills from the Flatlands

Views of the Oakland Hills from the flatlands have been identified by the existing General Plan as a scenic vista. This scenic vista is a largely panoramic view that extends into the distance and can be seen from various neighborhoods throughout the Plan Area, including North, West, and East Oakland. Impacts on the view of the Oakland Hills from the flatlands due to development of the Proposed Project would be limited to the targeted height change areas, which include areas adjacent to the Rockridge BART Station/in the Rockridge neighborhood, adjacent to the West Oakland BART Station, along Hegenberger Road, and around International Boulevard. Additionally, the Proposed Project would not include any changes to the street grid and existing view corridors that align with public streets would not be obstructed.

Proposed height changes in the Rockridge neighborhood could introduce development that includes taller buildings and structures. From the vantage point of Rockridge, the Oakland Hills are about 4.6 miles away. Parcels where the 175-foot height limit are being considered are limited to two small parcels around Rockridge BART and have potential to obstruct views to the Oakland Hills from some street-level public vantage points in the neighborhood. At 51st and Broadway, proposed height changes of up to 95 feet could also potentially interrupt views to the hills. However, the hills would remain visibly accessible in both areas.

Proposed height changes along Hegenberger Road could also introduce development that includes taller buildings of up to 175 feet. These height changes could result in potentially obstructed or altered views to the Oakland Hills as sites are redeveloped, particularly views from Martin Luther King Shoreline Park. Height changes along 105th Avenue and International Boulevard to the hills could also partially obscure views, especially as existing buildings in this corridor are only approximately three to four stories. For all areas described above, development in height change areas could introduce visual elements that could dominate or intrude upon the overall quality of views. More modest height increases along corridors outside of those described would not provide major obstruction of Oakland Hills views from other neighborhoods in the Plan Area.

New development must demonstrate consistency with the existing General Plan, which contains policies to ensure that opportunities to enjoy scenic views and scenic resources are either preserved or enhanced. The General Plan policies and conditions that would apply to future development under the Proposed Project in relation to preserving scenic vistas and resources are described below.

Existing policies in the General Plan's LUTE include guidance to enhance the quality of the natural and built environment (Policy W3.2), maximize waterfront views and vistas (W12.7), and to protect distinctive character of scenic routes within the city (T6.5). Existing policies in the

General Plan's OSCAR Element call for view protection, particularly including views of downtown and Lake Merritt, the waterfront and topography, among others (Policy OS-10.1, OS-7.3, OS-9.3) and minimizing adverse visual impacts through site planning (Policy OS-10.2). Policies also require landscape screening as a condition of approval for properties adjacent to I-580 (O-3.6.1). Title 15 prohibits planting of vegetation that could obstruct any protected public view corridor. Additionally, several SCAs have been established that help bring about attractive streetscapes, including requirements for a landscape plan (SCA 18) and for placing all new utilities underground (SCA 83) where they would not obstruct views. Compliance with these General Plan policies and standards of conditions would help to reduce potential impacts.

Mitigation: None required.

Summary

While proposed building height increases in certain areas have the potential to partially obstruct views of the hills and shoreline, the change would not be considered significant as views of these scenic resources from public vantage points would still be available and accessible. In addition, future development under the Proposed Project would be required to adhere to the General Plan policies and SCAs described in the Regulatory Setting, above, that would guide future development and further protect views of scenic resources.

Impact AES-2: Adoption of the Proposed Project would not substantially degrade the existing visual character or quality of the site and its surroundings. (Criterion 3) (*Less than Significant*)

New development under the Proposed Project could increase massing and remove vegetation in areas of the City that feature harmonious character and are aesthetically pleasing. Moreover, during construction, streetscape and views from residences along those streets, could temporarily be dominated by construction activities and equipment within the sites. In addition to potential changes in streetscape changes, impacts to overall visual character for new development could also affect the existing visual character of significant physical and built features, vegetation, natural landmarks, or protected trees.

As described under the Environmental Setting, the City's built environment features disparate structures with varied scales and architectural styles in many areas. Development consists of old and new residential uses interspersed with commercial and industrial uses, as well as buildings built under zoning regulations that have changed and evolved over time. Development is also visually incoherent in many areas, as there are signs of urban blight in the City. Visual variances and incoherency is an existing condition. Additional differences in height, massing, or building style resulting from future development under the Proposed Project would not create new visual incompatibilities that could exacerbate these existing conditions, and would not result in significant degradation of existing visual character.

Within neighborhoods, infill development and redevelopment of vacant, underutilized, or blighted properties and facilities, improvements to streetscapes and the public realm, and new

landscaping and street trees would improve the overall aesthetic quality of individual project sites and their surroundings. Proposed height increases would largely be consistent with Oakland's existing eclectic urban character. However, height increases in various neighborhoods, including adjacent to Rockridge BART station, adjacent to West Oakland BART station, and in parts of East Oakland (around International Boulevard and 105th Avenue) would create potential for new buildings that may be dramatically out of scale with existing development. For example, most existing development along the College Avenue commercial corridor in Rockridge is approximately three to four stories; additions of buildings up to 175 feet tall near the BART station would be approximately 16-18 stories. While individual projects developed at heights/scale contemplated around BART stations could change the visual character in the vicinity, these impacts would not be considered significant impacts on the environment pursuant to SB 743. The proposed height increases are also consistent with the Proposed Plan's direction for more transit-oriented development around transit stations and increased densities along corridors.

Additionally, SCA 18 includes requirements for a landscape plan, which would contribute to an attractive streetscape. In addition, Titles 8 and 12 require property and street tree maintenance which help to improve existing character. Title 17.124 currently prescribes standards for development and maintenance of planting, fences, and walls; for the conservation and protection of property; and through improvements of the appearance of individual properties, neighborhoods, and the City.

Mitigation: None required.

Summary

Despite the change in visual character that could result from future development under the Proposed Project, height changes are consistent with the City's vision for more dense housing in these areas. While future development around BART stations may alter the visual character in the vicinity, these changes are not considered significant pursuant to SB 743. Additionally, development under the Proposed Project would be required to comply with aforementioned LUTE and OSCAR Element policies from the General Plan, SCAs, and Titles 8, 12, and 17.124 of the Municipal Code; as such, there is propensity to improve existing vacant and underutilized properties and contribute to improved visual character of a neighborhood. Therefore, impacts to the degradation of existing neighborhood character is less than significant.

Impact AES-3: Adoption of the Proposed Project would not create a new source of substantial light or glare which could substantially and adversely affect day or nighttime views in the area. (Criterion 4) (*Less than Significant*)

Development facilitated by the Proposed Project could result in new residential development in existing urban areas. Future development facilitated by the Proposed Project could increase light and glare in the Plan Area by removing vegetation that provides shade, introducing reflective surfaces, and increasing interior and exterior nighttime lighting that would affect daytime and nighttime views.

Proposed changes to the Planning Code to support higher density development could result in increased sources of light and glare by increasing the number of units per acre and the number of cars that would be traveling in the Plan Area. Future development under the Proposed Project could require streetscape improvements such as new lighting at crosswalks, that would also increase the amount of light in the Plan Area. However, upzoning is proposed in existing built environments with existing light sources, and any new sources would be consistent with the existing light and glare conditions in the area. Individual developments would not be expected to substantially change or affect day or nighttime views as a result of increased light or glare.

Exterior lighting associated with larger residential development projects could negatively affect sensitive receptors if not properly designed. In particular, light-emitting diode (LED) lighting can negatively affect humans by increasing nuisance light and glare, in addition to increasing ambient light glow, if proper shielding is not provided and blue-rich white light lamps (BRWL) are used (American Medical Association 2016; International Dark-Sky Association 2010a, 2010b, 2015). Studies have found that a 4000K white LED light causes approximately 2.5 times more light pollution than high pressure sodium lighting with the same lumen output, which would affect sensitive receptors and more than double the perceived brightness of the night sky (Aubé et al. 2013; Falchi et al. 2011, 2016). This would result in a substantial source of nighttime light and glare that would adversely affect nighttime views in the area if lighting were not properly designed and shielding is not employed.

The Proposed Project could facilitate new sources of glare resulting from increases in reflective surfaces such as building and car windows, lighting, and replacement of vegetation with built features. Glare would be more pronounced if very light and bright or reflective materials are used. Windows in multi-level and high-rise buildings would introduce large reflective surfaces that could affect passing traffic and nearby viewers. This glare could be dangerous for drivers, especially in late fall and winter when lower sun angles increase the potential for such glare, even though building design may reduce the effects of glare to a degree by using elements such as building overhangs.

Under California's 2022 Building Energy Efficiency Standards, all new or altered residential and nonresidential buildings in California must meet a set of mandatory requirements for lighting systems and lighting controls that are designed to help limit light pollution and ensure light levels are appropriate for the area served (e.g., undeveloped, rural, parks/open space, or urban). These requirements include elements such as controls that turn lights off when buildings are unoccupied, and limitations on backlight, uplight, and glare in nonresidential settings, and motion sensors or timers on outdoor residential lighting. Oakland's Outdoor Lighting Standards would require any projects on public right-of-way include mitigation measures for any glare, light trespass, or light pollution on public right-of-way. Chapter 9.16.060 in the Municipal code would require project inspection of ornamental street lighting for Code conformance. Future development under the Proposed Project would be required to adhere to SCA 19, Lighting Plan, which would reduce glare and spill over from exterior lighting.

Mitigation: None required.

Summary

Compliance with the Oakland Outdoor Lighting Standards, Titles 9 and 17 of the Municipal Code, and SCA 19 would reduce light and glare impacts to a less than significant level.

Impact AES-4: Adoption of the Proposed Project and future development under the Proposed Project could result in substantial new shadow that would shade solar collectors, passive solar heaters, public open space, or historic resources, or otherwise result in inadequate provision of adequate light. (Criterion 5 through 9) (*Significant and Unavoidable*)

Shade and shadow impacts occur when a structure's height or width (or a combination of these two characteristics) reduces the access to sunlight by a public open space area, solar collectors, solar heaters, or historic resources with sunlight-sensitive character defining features. In a built urban environment like the City of Oakland (Plan Area), nearly all land uses create shade and shadow for neighboring structures, and in turn, are subject to shade and shadows from those same structures. Future development under the Proposed Project could include mid- and high-rise buildings that may cast shadow on public open spaces, solar collector, and historic resources.

Given the size of the Plan Area, the amount of development anticipated under the Proposed Project and its programmatic nature, and the dispersed, extensive location of Oakland parks and historic resources (shown in Figures 4.14-1 in Section 4.14, *Recreation* and 4.4-1 in Section 4.4, *Cultural Resources*) preparing a detailed shadow analysis was not feasible. Below is a summary of the shadow trends in the Plan Area that could result from the Proposed Project *Buildout Program*.

Shadow from the new buildings would extend west in the mornings, north around the noon hour, and northeast to east in the afternoon. Winter shadow is the longest, and thus, during the winter months, some new shadow would extend the length of a full block or more, with the highest buildings casting the greatest amount of new shadow especially during winter mornings around 9:00 a.m. and winter afternoons around 3:00 p.m. While shadows during the summer, fall, and spring months are shorter than winter shadows, the shadow path is larger and reaches areas farther east and west. Shadows in summer start earlier and last longer than in winter months. In all seasons, the majority of the shading occurs during morning hours with shadows decreasing into the early afternoon, and afternoon hours. This shadow pattern would occur primarily near Uptown, Lake Merritt Office District, and Central Core, West Oakland, Rockridge, and Hegenberger Road, where existing and proposed height limits are the highest, as shown in Figure 4.1-1.

Given that there are not sufficient details available to analyze specific shadow impacts (beyond larger trends as described above), it cannot be known with certainty that development facilitated by the Proposed Project would not cause significant shadow impacts that impairs the function of a building using passive solar collection; impairs the beneficial use of a public or quasi-public park, lawn, garden, or open space; impacts the integrity of an historic resource with sunlight-sensitive character defining features, or otherwise results in inadequate provision of light.

The City's SCA do not specifically address shadow impacts, though potential adverse environmental impacts of proposed new landscaping on shadow-sensitive land uses and features of concern are routinely analyzed by City staff under SCA 18, Landscape Plan. As the City transitions to objective design review for residential and other environmental streamlining measures that would allow for greater numbers of ministerial-only project approvals, it is not certain that shadow impacts could feasibly be mitigated.

Therefore, impacts associated with implementation of the Proposed Project and reasonably foreseeable development expected to occur in the Plan Area are conservatively deemed significant and unavoidable related to shadows. It is noted that this impact results from specific CEQA thresholds adopted by the City rather than the aesthetics thresholds that exist in Appendix G of the *CEQA Guidelines*, which does not include any threshold pertaining to shadow impacts.

A mitigation measure substantially similar to the draft Downtown Oakland Specific Plan's Mitigation Measure AES-1: Shadow could be considered; however, it is noted that even with this mitigation measure it cannot be known with certainty that impacts would be mitigated, as such the impact is conservatively significant and unavoidable. Further, based on the City's proposal to adopt objective design review and other streamlining measures that would allow for greater numbers of ministerially approved projects, this mitigation measure may not be feasible[7] to impose on a project-by-project basis.

> **Mitigation Measure AES-1:** To minimize and/or avoid impacts related to shadows associated with new development under the Proposed Project cast upon solar collectors, passive solar heaters, public open space, or historic resources as described below, the City shall adopt a new application requirement or SCA that requires project sponsors with proposed projects with a height of 50 feet or greater (measured to the top of building roof at any point) to provide **one** of the following:
>
> a. The project sponsor shall provide an annotated aerial photo specifying the project site location, applicable building height, and potential shadow path demonstrating that none of the following resources are within the shadow path:
>
> i. A building with documented use of passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors;
>
> ii. A public or quasi-public park, lawn, garden or other open space as documented in the City of Oakland Planning and Zoning Map; or
>
> iii. A building or structure that meets the definition of "historical resources" contained in Section 15064.5 of the *CEQA Guidelines,* as documented in the City of Oakland Planning and Zoning Map, and that contains sunlight-sensitive character defining features;
>
> - OR -

[7] "Feasible" as defined in Public Resources Code Section 21061.1, means "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social and technological factors." The CEQA Guidelines add "legal" factors to the list (14 Cal Code Regs §§15021(b), 15364) because an agency's authority to impose mitigation measures must be based on legal authority other than CEQA. Pub Res C §§21004, 21081(a)(3).

b. The project sponsor shall prepare a site-specific shadow study. A shadow study shall address the following:

   i. For buildings using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors; the shadow study shall evaluate if the new project shadow would affect the productivity of the solar units (in terms of how much of the year solar collectors are shaded and what portion of the solar units are shaded), and provide support to determination of whether or not the new project shadow would substantially impair the function of the affected building(s).

   ii. For public or quasi-public parks, lawn, garden or open spaces, the shadow study shall evaluate how the new project shadow would impact the beneficial use (in terms of how much of the year and what portion of the year the resource is shaded), and provide support to determine whether or not the new project shadow would substantially impair the beneficial use of any public or quasi-public park, lawn, garden, or open space.

   iii. For Historical Resources, as defined by CEQA Guidelines Section 15064.5(a), that contain a sunlight-sensitive character defining feature; the shadow study shall evaluate how the new project shadow would affect the building or structure, and provide support to a determine whether or not the new project shadow would materially impair the resource's historic significance by materially altering those physical characteristics of the resource that convey its historical significance and that justify its inclusion on or eligibility for listing in the National Register of Historic Places, California Register of Historical Resources, Local Register of historical resources, or a historical resource survey form (DPR Form 523) with a rating of 1-5. The shadow study shall be carried out by a professional who meets the Secretary of Interior's Standards of Historic Properties and Guidelines for Preserving, Rehabilitation, Restoring and Reconstructing Historic Buildings (SOIS) for Architectural History (NPS, 1995). The shadow study shall consider the SOIS, which require the preservation of character defining features which convey a building's historical significance and offers guidance about appropriate and compatible alterations to such structures. The results of the shadow study shall be submitted as a Historic Architectural Assessment Report to the City of Oakland. Once the report is reviewed and approved by the City, a copy of the report shall be submitted to the Northwest Information Center (NWIC) at Sonoma State University, an information center affiliated with the State of California Office of Historic Preservation (OHP).

If the shadow study provides support to determine that the new project shadow would not adversely affect the resources as described above, no further study would be required.

If the shadow study provides support to determine that the proposed project building design would adversely affect the resources as described above, the project sponsor shall modify the building design and placement and provide a revised shadow study to support the determination that the revised new project shadow would minimize and/or avoid shadow effects adversely affecting the resources as described above.

Significance after Mitigation: Significant and Unavoidable.

Summary

Adoption of the Proposed Project, with adherence to the aforementioned SCAs and mitigation measure, would result in a significant and unavoidable impact related to shadows.

Impact AES-5: Adoption of the Proposed Project would not require an exception (variance) to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code, and the exception causes a fundamental conflict with policies and regulations in the General Plan, Planning Code, and Uniform Building Code addressing the provision of adequate light related to appropriate uses. (Criterion 9) (*Less than Significant*)

There are no policies in the General Plan related to the provision of shadow or adequate sunlight with which the Proposed Project could conflict. State law does not permit variances to the General Plan. Also, all future development under the Proposed Project would be required to meet the Building Code.

Mitigation: None required.

Summary

The Proposed Project would not have any conflicts with the General Plan related to the provision of adequate light related to appropriate uses and the impact with respect to shadow is less than significant.

Impact AES-6: Adoption of the Proposed Project could create winds that exceed 36 mph for more than one hour during daylight hours during the year. (Criterion 10) (*Significant and Unavoidable*)

Future development under the Proposed Project could include structures that are 100 feet or greater (measured to the roof) that are located adjacent to a substantial water body or in the Downtown area. The City of Oakland requires wind analysis for proposed structures that are 100 feet or greater (measured to the roof) and one of the following conditions exist: (a) the project is located adjacent to a substantial water body (i.e., Oakland Estuary, Lake Merritt or San Francisco Bay); or (b) the project is located in Downtown. Downtown is defined in the LUTE as the area generally bounded by West Grand Avenue to the north, Lake Merritt and Channel Park to the east, the Oakland Estuary to the south and I-980/Brush Street to the west.

Based on the City of Oakland's CEQA thresholds, buildings over 100 feet located next to a body of water have the potential to redirect or alter wind speeds and could substantially increase wind speeds potentially creating interim wind-hazard impacts. These interim wind-hazard impacts could occur with new residential development and may or may not occur as newer projects are built because winds redirected by one building can interact with winds redirected by another building. In addition, design measures and landscape features, such as podium setbacks, terraces, architectural canopies or screens, vertical or horizontal fins, chamfered corners, and other articulations to the building façade, as well as ground-level fences or screens, shrubs and trees,

and/or street furniture, could offer protection from hazardous winds. While the Proposed Project increases allowable heights in certain corridors, as shown in **Figure 4.1-1** none of these areas of height increase are located within 100 feet of a body of water. However, the Proposed Project does increase heights and anticipates construction of residential buildings taller than 100 feet in Downtown, the impacts of which are analyzed in the Downtown Oakland Specific Plan EIR and determined to be conservatively significant and unavoidable even with mitigation.

Mitigation Measure AES-2: Wind could be considered; however, it is noted that even with this mitigation measure it cannot be known with certainty that impacts would be mitigated; as such the impact is conservatively significant and unavoidable. Based on the City's proposal to adopt objective design review and other streamlining measures that would allow for greater numbers of ministerially approved projects, this mitigation measure may not be feasible to impose on a project-by-project basis.

> **Mitigation Measure AES-2:** To avoid impacts related to wind hazards associated with new development under the Proposed Project, the City shall adopt a new application requirement or SCA that requires project sponsors to complete a site-specific wind analysis when individual projects are proposed. This shall be required for proposed projects with a height of 100 feet or greater (measured to the top of building roof at any point) and one of the following conditions exist:
>
> - The project is located adjacent to a substantial water body (i.e., Oakland Estuary, Lake Merritt or San Francisco Bay); or
> - The project is located in Downtown. (Downtown is defined in the Land Use and Transportation Element of the General Plan (page 67) as the area generally bounded by West Grand Avenue to the north, Lake Merritt and Channel Park to the east, the Oakland Estuary to the south and I-980/Brush Street to the west.)
>
> If a wind analysis is required, it shall be conducted by a qualified wind consultant approved by the Oakland Department of Planning & Building. The consultant shall conduct an analysis of the proposed building using a model that represents the proposed building in the context of then-existing conditions to reflect actual building designs known at the time. The testing shall include test points deemed appropriate by the consultant and agreed upon by the Oakland Department of Planning & Building to determine the wind performance of the building, such as building entrances and sidewalks, and the consultant's report shall be submitted to the Oakland Department of Planning & Building.
>
> If the wind analysis demonstrates that the building design would not create a net increase in hazardous wind hours or locations, compared to then-existing conditions, no further review would be required.
>
> If the wind analysis determines that the building's design would increase the hours of wind hazard (36 mph for one hour of the year) or the number of test points subject to hazardous winds, compared to then-existing conditions, the wind consultant shall notify the City and the project sponsor. The project sponsor shall work with the wind consultant to identify feasible mitigation strategies, including design changes (e.g., setbacks, rounded/chamfered building corners, stepped facades, landscaping and/or installation of canopies along building frontages), to eliminate increased hours of wind hazards.

Such mitigation strategies shall be tested and presented in a wind report to demonstrate a reduction in wind hazards, defined as wind speeds of or exceeding the 36-mph wind hazard criterion for a single hour of the year, as compared to the then-existing conditions; but in no event shall the proposed building(s) result in increases in the number of hours or number of locations of hazard exceedances compared to then-existing conditions. The proposed building(s) shall be wind-tunnel-tested using a model that represents the proposed building in the context of then-existing conditions, updated to reflect the mitigation strategies.

Significance after Mitigation: Significant and Unavoidable.

Summary

Implementation of a wind analysis could reduce the severity of wind impacts under partial buildout conditions. It cannot be stated with certainty whether the wind analysis would reduce impacts to a less-than-significant level because there are not sufficient details available to analyze specific impacts. Therefore, the impact is conservatively deemed significant and unavoidable. It is noted that this impact results from specific CEQA thresholds adopted by the City rather than those that exist in Appendix G of the *CEQA Guidelines*.

4.1.5 Cumulative Impacts

This section presents an analysis of the cumulative effects of future development under the Proposed Project in combination with other past, present, and reasonably foreseeable future development that could cause cumulatively significant impacts. Significant cumulative impacts related to aesthetics could occur if the incremental impacts of future development under the Proposed Project combined with the incremental impacts of cumulative development would be significant, and if the Proposed Project's contribution would be considerable.

Impact AES-7: Future development under the Proposed Project, combined with cumulative development, could result in significant cumulative impacts to aesthetics, wind, and shadow (*Conservatively Significant and Unavoidable)*

Geographic and Temporal Context

The geographic context for cumulative visual impacts that would occur under the General Plan update is the Plan Area and those areas in the immediate vicinity of the City boundaries which are visible from or have a clear view of the City, including the City of Emeryville, the City of San Leandro, the City of Berkeley, and the Oakland Hills. However, the primary contributor to potential visual changes in and surrounding the City is the future development under the Proposed Project.

Reasonably foreseeable growth within the Bay Area region, including Oakland, could have cumulative effects on the region's aesthetic character. The Plan Area is characterized by industrial uses, residential neighborhoods, public facilities, and parks. Development to accommodate new residents may impact scenic vistas should it encroach on the hills and shoreline in areas surrounding Oakland. The State-designated scenic highway, MacArthur

Freeway/Highway 580, also runs through San Leandro and Emeryville, and coupled with reasonably foreseeable growth in these cities could result in a potentially cumulative impact on scenic resources within a State scenic highway.

Future development under the Proposed Project could impact scenic vistas of the hills and shoreline in areas surrounding Oakland. However, the cumulative effects would not result in a significant adverse aesthetics impact, due to past, present and future developments' adherence to the General Plan policies, SCAs, and Municipal Code described earlier in the Setting section. Given such regulations, the contribution of the Project to a cumulative impact related to scenic vistas, federally designated scenic highways, and visual character in a non-urbanized area would not be cumulatively considerable. Present and reasonably foreseeable development would be generally consistent with adopted plans and the overall vision of the City and the region as a whole.

Future development facilitated by the Proposed Project could increase light and glare in the Plan Area by removing vegetation that provides shade, introducing reflective surfaces, and increasing interior and exterior nighttime lighting that would affect nighttime views. However, the cumulative effects would not result in a significant adverse aesthetics impact, due to past, present and future developments' adherence to the Oakland Outdoor Lighting Standards, Titles 9 and 17 of the Municipal Code, and SCA 19. Given such regulations, the contribution of the future development under the Proposed Project to a cumulative impact related to light and glare would not be cumulatively considerable.

Additionally, due to the uncertainty and feasibility concerns of available mitigation, adoption and development under the Proposed Project would result in significant and unavoidable impacts related to shadows and wind. Therefore, future development under the Proposed Project when combined with other cumulative development in and around the Plan Area, would contribute to cumulative shadow and wind effects and would result in significant and unavoidable cumulative shadow and wind impacts.

Significance after Mitigation: Significant and Unavoidable.

Summary

Adoption of the Proposed Project, with adherence to the aforementioned SCAs, mitigation measures, and other regulatory compliance, would result in a less than significant impact to cumulative effects on the region's aesthetic character and scenic vistas, federally designated scenic highways, and visual character in non-urbanized areas. Adoption of the Proposed Project would result in a conservatively significant and unavoidable cumulative impact to wind and shadow.

4.1.6 References – Aesthetics, Shadow, and Wind

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4.2 Air Quality

This section describes conditions and potential environmental effects of the Proposed Project pertaining to air quality. The section discusses relevant existing environmental conditions of the Plan Area and regulations pertinent to this section, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts to the physical environment that could result from implementation of the Proposed Project and future associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that substantially reduce potential impacts to this environmental topic are identified, and both existing and proposed updated/new General Plan policies and SCAs are considered. Mitigation measures to address potentially significant impacts are also identified, where necessary.

This section incorporates relevant information from the *Phase I Oakland 2045 General Plan Update* Map Atlas (see Appendix A) prepared in support of the Proposed Project. No scoping comments related to air quality were received in response to the NOP (Notice of Preparation) of this Draft EIR.

4.2.1 Environmental Setting

4.2.1.1 Climate and Meteorology

Air quality is affected by the rate and location of pollutant emissions as well as meteorological conditions that influence movement and dispersal of pollutants. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients, along with local topography, provide the link between air pollutant emissions and air quality. The Proposed Project is located within the City of Oakland (the City), which falls within the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara Counties, as well as the southwest portion of Solano County and the southeast portion of Sonoma County.

More precisely, the Plan Area lies within the Northern Alameda and Western Contra Costa Counties climatological subregion. This subregion extends from Richmond to San Leandro with San Francisco Bay as its western boundary, and its eastern boundary defined by the Oakland Hills. In this subregion, marine air traveling through the Golden Gate, as well as across San Francisco and the San Bruno Gap (a gap in the Coastal Range between the ocean and the San Francisco Airport), is a dominant weather factor. Average wind speeds vary from season to season with the strongest average winds occurring during summer and the lightest average winds during winter. Summer temperatures in Oakland average at a low of 57 degrees Fahrenheit and a high of 72 degrees Fahrenheit, while winter temperatures average at a low of 46 degrees Fahrenheit and a high of 59 degrees Fahrenheit. Rainfall is highly variable and confined almost exclusively to the “Wet Season” period from early November to mid-April. The City averages 24 inches of precipitation annually, but because much of the area’s rainfall is derived from the fringes of mid-latitude storms, a shift in the annual storm track of a few hundred miles can mean the difference between a very wet year and near drought conditions.

4.2.1.2 Air Pollutants of Concern

Air pollutants of concern within the SFBAAB include certain criteria air pollutants and toxic air contaminants (TACs). These are described below.

Criteria Air Pollutants

As required by the federal Clean Air Act (CAA) passed in 1970, the United States Environmental Protection Agency (USEPA) has identified six criteria air pollutants that are pervasive in urban environments, and for which State and national health-based ambient air quality standards have been established. The USEPA calls these pollutants "criteria air pollutants" because the agency has regulated them by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. Ozone, carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter (PM), nitrogen dioxide (NO_2), and lead are the six criteria air pollutants originally identified by the USEPA. Since that time, subsets of particulate matter have also been identified for which permissible levels have been established. These include particulate matter less than 10 microns in diameter (PM_{10}) and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). See Section 4.2.2, *Regulatory Setting*, for further discussion of specific pollutants and their attainment status within the air basin with respect to State and federal air quality standards.

Ozone

Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG, also sometimes referred to as volatile organic compounds [VOC] by some regulating agencies) and nitrogen oxides (NO_x). These pollutants are often referred to as ozone precursors. The main sources of ozone precursors are combustion processes (including motor vehicle engines) and the evaporation of solvents, paints, and fuels. In the SFBAAB, automobiles are the single largest source of ozone precursors. Ozone forms in greater quantities on hot, sunny, calm days. Ozone is referred to as a regional air pollutant because it is generally formed downwind from sources or ROG and NOx under the influence of wind and sunlight. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases, such as asthma, bronchitis, and emphysema.

Carbon Monoxide (CO)

CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles with the highest emissions occurring during low travel speeds, stop-and-go driving, cold starts, and hard acceleration. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue; impair central nervous system function; and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal; however, ambient levels of CO have decreased substantially due to improved vehicle fuel efficiency.

Sulfur Dioxide (SO_2)

SO_2 is produced by such stationary sources as coal and oil combustion, steel mills, refineries, and pulp and paper mills, as well as by the combustion of fuel containing sulfur. The major adverse health effects associated with SO_2 exposure pertain to the upper respiratory tract. SO_2 is a respiratory irritant with constriction of the bronchioles occurring with inhalation of SO_2 at 5 parts

per million or more. On contact with the moist mucous membranes, SO_2 produces sulfurous acid, which is a direct irritant. Concentration rather than duration of the exposure is an important determinant of respiratory effects. Exposure to high SO_2 concentrations may result in difficulty breathing or harm to the respiratory system. (USEPA, 2022a)

Most of the SFBAAB's SO_2 comes from petroleum refineries. Bay Area refineries are the largest source of sulfur oxide (SO_X) emissions, emitting approximately 5,000 tons per year and ranking 350 on the list of top SO_2 emitters in the nation (CARB 2011). Despite these major sources, the overall concentration of SO_2 in the region is low. Over the past 10 years, the Bay Area has not experienced any exceedances of either the national or the State SO_2 standard.

Particulate Matter (PM_{10} and $PM_{2.5}$)

Particulate matter is not a single pollutant, but instead a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from human-made and natural sources. Particulate matter regulated by the State and federal CAAs is measured in two size ranges: coarse PM, or PM_{10}, for particles less than 10 microns in diameter, and fine particulate matter, or $PM_{2.5}$, for particles less than 2.5 microns in diameter. In the SFBAAB, motor vehicles generate about one-half of the air basin's particulates through tailpipe emissions as well as brake pads and tire wear. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of fine particulates.

Large dust particles (diameter greater than 10 microns) settle out rapidly and are easily filtered by human breathing passages. This large dust is of more concern as a soiling nuisance rather than as a health hazard. However, PM_{10} and $PM_{2.5}$ represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. According to CARB, studies in the United States and elsewhere "have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks," and studies of children's health in California have demonstrated that particle pollution "may significantly reduce lung function growth in children" (CARB 2022a).

$PM_{2.5}$ (including diesel exhaust particles) is thought to have greater effects on health because these particles are so small and thus can penetrate to the deepest parts of the lungs. Epidemiological studies have demonstrated that people who live near freeways and high-traffic roadways have poorer health outcomes, including increased asthma symptoms and respiratory infections, and decreased pulmonary function and lung development in children (San Francisco Department of Public Health, 2008). New studies are also showing that long-term average exposure to $PM_{2.5}$ is associated with an increased risk of death from the novel coronavirus 2019 disease (COVID-19) in the United States. One study found that an increase of one microgram per cubic meter ($\mu g/m^3$) in $PM_{2.5}$ is associated with an 8 percent increase in the COVID-19 death rate (Wu et al., 2020). Increases in wildfire smoke may also be associated with increased risks of COVID-19 cases and deaths (Zhou, et al., 2021).

Nitrogen Dioxide (NO_2)

NO_2 is a reddish-brown gas that is a byproduct of combustion processes mainly from automobiles and industrial operations. Aside from its contribution to ozone formation, NO_2 can increase the

risk of acute and chronic respiratory disease and reduce visibility. NO_2 may be visible as a coloring component of the air on high pollution days, especially in conjunction with high ozone levels. In 2010, the USEPA implemented the current one-hour NO_2 standard (0.10 ppm) (see *Regulatory Setting,* below). On November 15, 2012, CARB approved a revision to the State Implementation Plan (SIP) for implementing the 2010 federal NO_2 standards. All areas in California are designated as attainment/unclassified for the federal NO_2 standards (CARB, 2012).

Toxic Air Contaminants

In addition to criteria air pollutants, plans and individual projects may directly or indirectly emit toxic air contaminants (TACs). TACs are airborne substances that can cause short-term (acute) and/or long-term (chronic and/or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). For evaluation purposes, TACs are separated into carcinogens and noncarcinogens based on the nature of the physiological effects associated with exposure to TACs. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. Cancer risk from carcinogens is expressed as excess cancer cases per 1 million exposed individuals, typically over a lifetime of exposure. Noncarcinogens differ in that there is a safe level at which it is generally assumed that no negative health impacts would occur. These levels are determined on a pollutant-by-pollutant basis. Human health effects of TACs can include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity that may be emitted from a variety of common sources including gasoline stations, automobiles, diesel engines, dry cleaners, industrial operations, and painting operations. Thus, individual TACs vary greatly in the health risk they present; and at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

Unlike criteria air pollutants, TACs do not have ambient air quality standards but instead are regulated by the Bay Area Air Quality Management District (BAAQMD or air district) using a risk-based approach to determine which sources and pollutants to control as well as the degree of control. Quantitative estimates of the risks associated with TACs are determined using a health risk assessment (HRA). A HRA is an analysis in which human health exposure to toxic substances is estimated and considered together with information regarding the toxic potency of the substances.[1] Exposure assessment guidance published by the air district in January 2016 adopts the assumption that residences would be exposed to air pollution 24 hours per day, 350 days per year, for 30 years (BAAQMD, 2016a). Therefore, assessments of air pollutant exposure to residents typically result in the greatest adverse health outcomes of all population groups.

Although not a TAC, exposure to $PM_{2.5}$ is strongly associated with mortality, respiratory diseases, and reductions in lung development in children, and other endpoints such as hospitalization for cardiopulmonary disease (San Francisco Department of Public Works, 2008). In addition to $PM_{2.5}$, diesel particulate matter (DPM) is also of concern. CARB identified DPM as a TAC in 1998, primarily based on evidence demonstrating cancer effects in humans (CARB, 1998a). The

[1] In general, a health risk assessment is required if the air district concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggest a potential public health risk. The applicant of the project that would emit TACs is required to conduct a health risk assessment for the source in question. Such an assessment generally evaluates chronic, long-term effects, estimating the increased risk of cancer as a result of exposure to one or more TACs.

estimated cancer risk from exposure to diesel exhaust is much higher than the risk associated with any other TAC routinely measured in the region. Health risks from DPM are highest in areas of concentrated DPM emissions, such as near ports, rail yards, freeways, or warehouse distribution centers (Metropolitan Transportation Commission and Association of Bay Area Governments 2021). According to CARB, diesel engine emissions are responsible for the majority of California's known cancer risk from outdoor air pollutants. Those most vulnerable individuals to DPM exposure are children, whose lungs are still developing, and the elderly, who may have other serious health problems. Based on numerous studies, CARB has also stated that DPM is a contributing factor for premature death from heart and/or lung diseases. In addition, DPM reduces visibility and is a strong absorber of solar radiation that contributes to global warming (BAAQMD 2012).

Despite notable emission reductions since CARB's 2000 Diesel Risk Reduction Plan, CARB recommends that proximity to sources of DPM emissions (e.g., a freeway) be considered in the siting of new sensitive land uses (CARB, 2000). CARB notes that these recommendations are advisory and should not be interpreted as defined "buffer zones," and that local agencies must balance other considerations, including transportation needs, the benefits of urban infill, community economic development priorities, and other quality of life issues. With careful evaluation of exposure, health risks, and affirmative steps to reduce risk where necessary, CARB's position is that infill development, mixed use, higher density, transit-oriented development, and other concepts that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level (CARB, 2005).

Visibility-Reducing Particles

Visibility-reducing particles are any particles in the atmosphere that obstruct the range of visibility by creating haze (CARB, 2022e). These particles vary in shape, size and chemical composition, and come from a variety of natural and human-made sources including windblown metals, soil, dust, salt, and soot. Other haze-causing particles are formed in the air from gaseous pollutant (e.g., sulfates, nitrates, organic carbon particles) which are the major constituents of fine PM, such as $PM_{2.5}$ and PM_{10}, and are caused from the combustion of fuel. CARB's standard for visibility reducing particles is not based on health effects, but rather on welfare effects, such as reduced visibility and damage to materials, plants, forests, and ecosystems. The health impacts associated with $PM_{2.5}$ and PM_{10} are discussed above under Particulate Matter.

4.2.1.3 Air Pollution Sources

Sources of air pollution in the Plan Area are generally categorized as mobile sources, stationary sources, and area sources. Air pollution sources contributing to emissions within the Plan Area include sources described below.

Mobile Sources

Mobile sources of air pollution include on-road motor vehicles (cars and trucks) and off-road vehicles and equipment (such as aircraft, trains, and ocean-going vessels) and are Oakland's leading source of air pollution. Mobile sources are responsible for nearly 90 percent of the City's total nitrogen oxide emissions in 2018 and over 98 percent of the city's total DPM emissions

(Reid, 2021). Emission standards for mobile sources are established by State and federal agencies, such as the CARB and the USEPA. The State of California has developed statewide programs to encourage cleaner cars and cleaner fuels.

Stationary Sources

Stationary sources also contribute to air pollution in the air basin. Stationary sources include industrial facilities, gasoline stations, power plants, dry cleaners, waste disposal, and other commercial and industrial processes. Stationary sources resulted in 26 percent of the City's total $PM_{2.5}$ emissions in 2018 (Reid, 2021). BAAQMD, which is the local air pollution control district for the air basin and the City of Oakland, regulates stationary sources of air pollution.

Area Sources

In addition to mobile and stationary sources, area sources are also a major contributor to air pollution in the Plan Area. Area sources include solvent evaporation (such as from aerosol consumer products and paints), residential fuel combustion (such as natural gas heating and cooking), road dust from on-road and off-road vehicles and equipment, and fires. In 2018, area sources produced nearly 40 percent of the City's ROG emissions, over half of the City's $PM_{2.5}$ emissions, and over 70 percent of the City's PM_{10} emissions (Reid, 2021).

Sources of DPM

The main sources of DPM emissions in the Plan Area are heavy-duty truck activity along Interstates 80, 580, 880, and 980 (42 percent); ocean-going vessels and commercial harbor craft at the Port of Oakland (26 percent); off-road equipment (25 percent); and diesel locomotives (3 percent). The main sources of $PM_{2.5}$ in the Plan Area are residential fuel combustion (24 percent), industrial processes (22 percent), road dust from on-road vehicle travel (11 percent), on-road vehicle exhaust (11 percent), and cooking (9 percent). Permitted stationary sources of TACs within the Plan Area include industrial facilities, gasoline stations, power plants, dry cleaners, waste disposal facilities (such as landfills and wastewater treatment plants), and other commercial and industrial processes (such as metal processing and chemical manufacturing) (City of Oakland, 2022; Reid, 2021).

4.2.1.4 Existing Ambient Air Quality

Criteria Air Pollutants

BAAQMD operates a regional monitoring network that measures the ambient concentrations of the six criteria air pollutants, along with other pollutants. Existing and probable future levels of air quality in Oakland can generally be inferred from historical ambient air quality data based on measurements conducted by BAAQMD at its nearby monitoring stations. There are three monitoring stations in the City: the Oakland West station at 1100 21st Street, the Laney College station at East 8th Street, and the Oakland-9925 station at 9925 International Boulevard. **Table 4.2-1** shows the most recent monitoring data for criteria air pollutants ozone, $PM_{2.5}$, and NO_2, for the years 2019 through 2021. Table 4.2-1 does not include PM_{10} concentrations because this pollutant is not monitored at any of the monitoring sites in the Plan Area. Nor does the table include CO or SO_2, as these are not pollutants of concern for the region. The SFBAAB attains the

CO standard due to decreasing emissions over the last several years from improved vehicle efficiency. Monitors are not required for SO_2 in the SFBAAB, as it has never been designated as non-attainment for SO2. Table 4.2-1 also compares the measured pollutant concentrations to the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CCAQS). Concentrations shown in bold indicate an exceedance of the standard for the air basin.

TABLE 4.2-1
SUMMARY OF AIR QUALITY MONITORING DATA (2019-2021)

Pollutant	Applicable Standard	Number of Days Standards Were Exceeded and Maximum Concentrations Measured		
		2019	2020	2021
Ozone				
Days 1-Hour State Standard Exceeded		1	0	0
Maximum 1-Hour Concentration (ppm)	0.09 ppm[b]	**0.101**	0.084	0.067
Days 8-hour State/National Standard Exceeded		1	0	0
Maximum 8-hour Concentration (ppm)	0.07 ppm[b,c]	**0.072**	0.056	0.047
Fine Particulate Matter ($PM_{2.5}$)				
Days 24-hour National Standard Exceeded		0	7	0
Maximum 24-hour Concentration (µg/m3)	35 µg/m3[c]	28.5	**160.3**	25.2
Annual Average (µg/m3)	12 µg/m3[b,c]	7.4	10.1	8.7
Nitrogen Dioxide (NO_2)				
Days 1-hour State/National Standard Exceeded		0	0	0
Maximum 1-hour Concentration (ppm)	0.18 ppm[b] / 0.100 ppm[c]	0.058	0.058	0.051
Annual Average (µg/m3)	0.030 ppm[b] / 0.053 ppm[c]	0.015	0.013	0.012

NOTES:
Bold values are in excess of applicable standard.
ppm = parts per million.
µg/m3 = micrograms per cubic meter.

[a] Ozone data was collected at the Oakland-West station; $PM_{2.5}$ and NO_2 data was collected at the Laney College station.
[b] State standard, not to be exceeded.
[c] National standard, not to be exceeded.

SOURCE: CARB, 2022d.

Ambient $PM_{2.5}$ Concentrations

As discussed above, $PM_{2.5}$ is a pollutant of particular concern due to its associated health risks. **Figure 4.2-1**, *$PM_{2.5}$ Concentrations*, shows total annual average $PM_{2.5}$ concentrations throughout the Plan Area for the year 2018 in terms of micrograms per cubic meter (μ/m^3).[2] The grid squares shown in the map are 1-by-1-kilometer squares, which is the modeling resolution of BAAQMD's regional pollutant transport model. Concentrations range from 6.2 μ/m^3 in the Oakland Hills east of Interstate 13 to 13.6 μ/m^3 near Interstate 880 at 29th Avenue. Concentrations of $PM_{2.5}$ are generally correlated with emissions sources since direct $PM_{2.5}$ disperses with distance from a source.

[2] PM 2.5 is shown in the figure because it is considered by far to be the most harmful air pollutant in the air basin.

However, it is important to understand that this figure shows total cumulative $PM_{2.5}$ concentrations from *all emissions sources within the air basin*, not just sources located within the City. For example, emissions from San Francisco and Richmond contribute to these concentrations.

Toxic Air Contaminants

In addition to monitoring criteria air pollutants, both BAAQMD and CARB operate TAC monitoring networks in the SFBAAB. These stations measure 10 to 15 TACs depending on the specific station. The monitoring stations are in areas where there are expected to be the highest concentrations of TACs, and the TACs selected for monitoring at these stations are those that have traditionally been found in the highest concentrations in ambient air and therefore tend to produce the most substantial risk. TACs are monitored at both the Oakland West station at 1100 21st Street and the Oakland-9925 station at 9925 International Boulevard in the City.

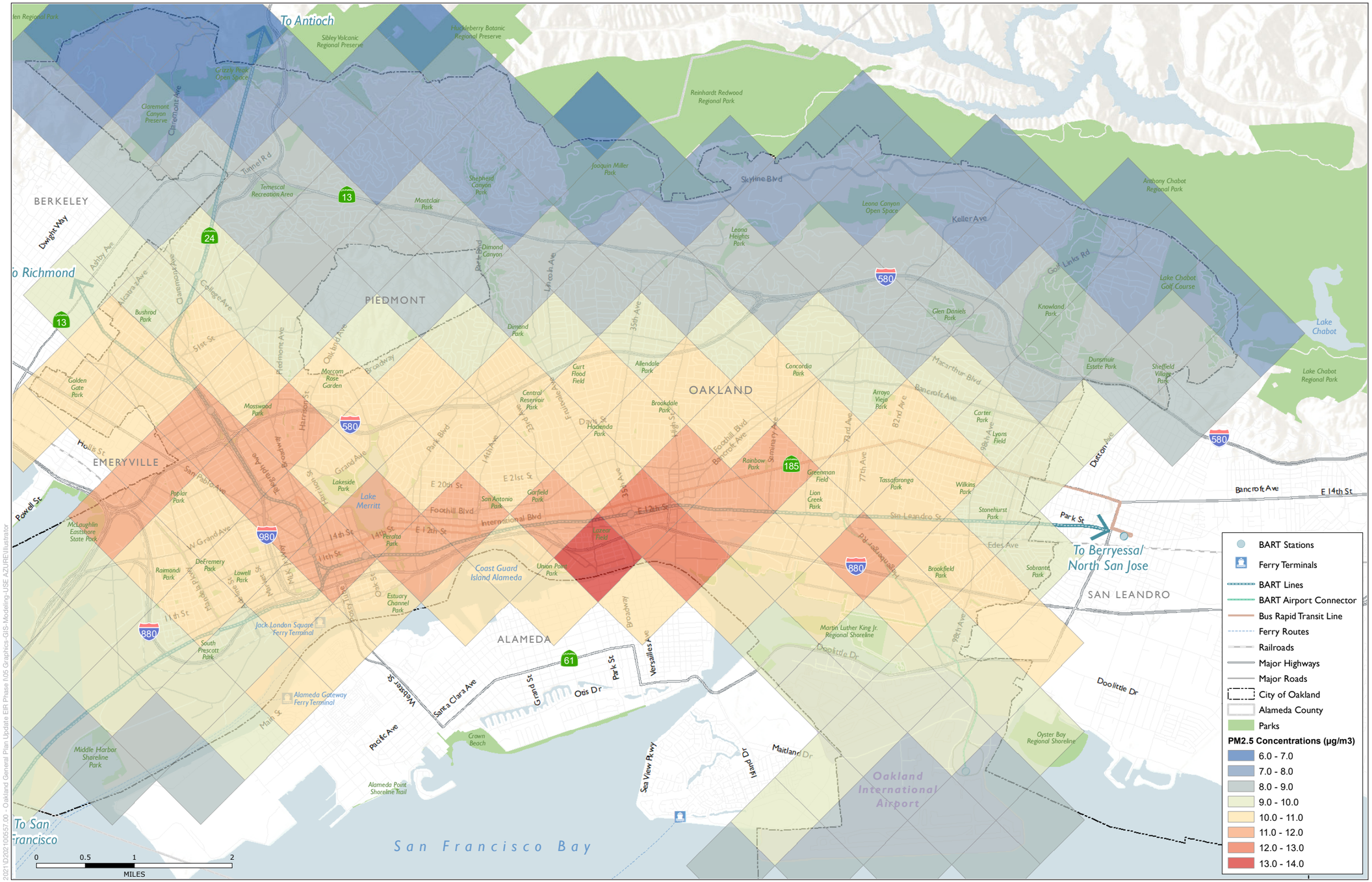
4.2.1.5 Existing Health Risk

Air Quality Index

The USEPA developed the Air Quality Index (AQI) scale to make the public health impacts of air pollution concentrations easily understandable. The AQI, much like an air quality "thermometer," translates daily air pollution concentrations into a number on a scale between 0 and 500. The numbers in the scale are divided into six color-coded ranges, with numbers 0–500 as outlined below:

- **Green (0-50)** indicates "good" air quality. No health impacts are expected when air quality is in the green range.
- **Yellow (51-100)** indicates air quality is "moderate." Unusually sensitive people should consider limited prolonged outdoor exertion.
- **Orange (101–150)** indicates air quality is "unhealthy for sensitive groups." Active children and adults, and people with respiratory disease, such as asthma, should limit outdoor exertion.
- **Red (151–200)** indicates air quality is "unhealthy." Active children and adults, and people with respiratory disease, such as asthma should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
- **Purple (201–300)** indicates air quality is "very unhealthy." Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit outdoor exertion.
- **Maroon (301-500)** indicates that the air quality is "hazardous." This indicates a health warning of emergency conditions and everyone is more likely to be affected.

The AQI numbers refer to specific amounts of pollution in the air and are based on the federal air quality standards for ozone, CO, NO_2, SO_2, PM_{10}, and $PM_{2.5}$. It can be unhealthy for the public should the concentration of any of these pollutants rises above its respective standard. In determining the air quality forecast, local air districts use the anticipated concentration measurements for each of the major pollutants, converts them into AQI numbers, and determines the highest AQI for each zone in a district. Readings below 100 on the AQI scale would not



SOURCE: Dyett & Bhatia, 2022

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Figure 4.2-1
$PM_{2.5}$ Concentrations

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typically affect the health of the general public (although readings in the moderate range of 50 to 100 may affect unusually sensitive people). Levels above 300 rarely occur in the United States, and readings above 200 have not occurred in the SFBAAB in decades, with the exception of the October 2017 and November 2018 wildfires north of San Francisco and the August/September 2020 complex wildfires that occurred throughout the SBFBAAB (BAAQMD, 2022).

Wildfires appear to be occurring with increasing frequency in California and the Bay Area as climate changes. Since 2000, 18 of the State's 20 largest wildfires and 18 of the State's 20 most destructive fires on record have occurred (California Department of Forestry and Fire Protection [CAL FIRE], 2022a; CAL FIRE, 2022b). As a result of these fires in Bay Area counties (Napa and Sonoma) and counties north and east of the Bay Area (e.g., Butte, Lassen, Plumas, and Shasta), the AQI in the Bay Area reached the "very unhealthy" and "hazardous" designations, ranging from values of 201 to above 350. During those periods, the air district issued "Spare the Air" alerts and recommended that individuals stay inside with windows closed and refrain from significant outdoor activity.

AQI statistics over recent years indicate that air quality in the SFBAAB is predominantly in the "Good" or "Moderate" categories and healthy on most days for most people. Historical data Figure 4.2-1, *PM2.5 Concentrations* indicate that Alameda County experienced air quality in the red level (unhealthy) on 12 days between 2019 and 2021. As shown in **Table 4.2-2**, the County had a total of 25 orange-level (unhealthy or unhealthy for sensitive groups) days between 2019 and 2021. A number of these days are attributable to the increasing frequency of wildfires. This table also shows that Alameda County experienced one purple level (very unhealthy) day in between 2019 and 2021.

TABLE 4.2-2
AIR QUALITY INDEX STATISTICS FOR ALAMEDA COUNTY

AQI Statistics for Alameda County	Number of Days by Year		
	2019	2020	2021
Unhealthy for Sensitive Groups (Orange)	8	8	9
Unhealthy (Red)	0	11	1
Very Unhealthy (Purple)	0	1	0

SOURCE: USEPA, 2022b.

Cancer Risk

Figure 4.2-2, **Cancer Risk**, shows the total estimated cancer risk within Oakland from all TACs modeled and inventoried by BAAQMD.[3] This figure shows total cumulative cancer risk from *all TAC emissions sources within the air basin,* not just sources located within the City. Cancer risk ranges from 133 per million in the Oakland Hills east of State Route 13 to 1,117 per million near Jack London Square, Howard Terminal, and the Port of Oakland. The cancer risk values in

[3] Total cancer risk is shown in the figure because it represents the major negative health effect of exposure to all TACs within the City of Oakland. Although other pollutants like ozone contribute to additional negative health effects, such as asthma and other respiratory illnesses, BAAQMD was unable to provide ozone mapping data or related health outcome data for the City of Oakland.

Figure 4.2-2, represent the chance of contracting cancer per million individuals. For example, a cancer risk value of 1,000 per million (such as near Jack London District) means exposure to TACs at this location increases an individual's risk of contracting cancer by 1 in 1,000 (or 0.1 percent). These numbers can be compared to the rate of new cancer cases per year from all causes in the air basin of 4,280 per million for men and 3,820 per million for women, and the lifetime risks of contracting cancer in the United States of 387,000 per million for women and 401,400 per million for men (UCSF, 2019; American Cancer Society, 2020; CARB, 2019).[4,5]

4.2.1.6 Odorous Emissions

Odors are generally regarded as an annoyance rather than a health hazard. The ability to detect odors varies considerably among the population and is subjective. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors. Odor impacts should be considered for any proposed new odor sources located near existing receptors, as well as any new sensitive receptors located near existing odor sources. Odor sources typically include wastewater treatment plants, landfills, confined animal facilities, composing stations, food manufacturing plants, refineries, and chemical plants (BAAQMD, 2017b). Sources of odors in the Plan Area include various waste, recycling, and transfer facilities; the East Bay Municipal Utility District Wastewater Treatment Plant and other wastewater treatment and pump stations; auto body shops with spray booths; and coffee roasters.

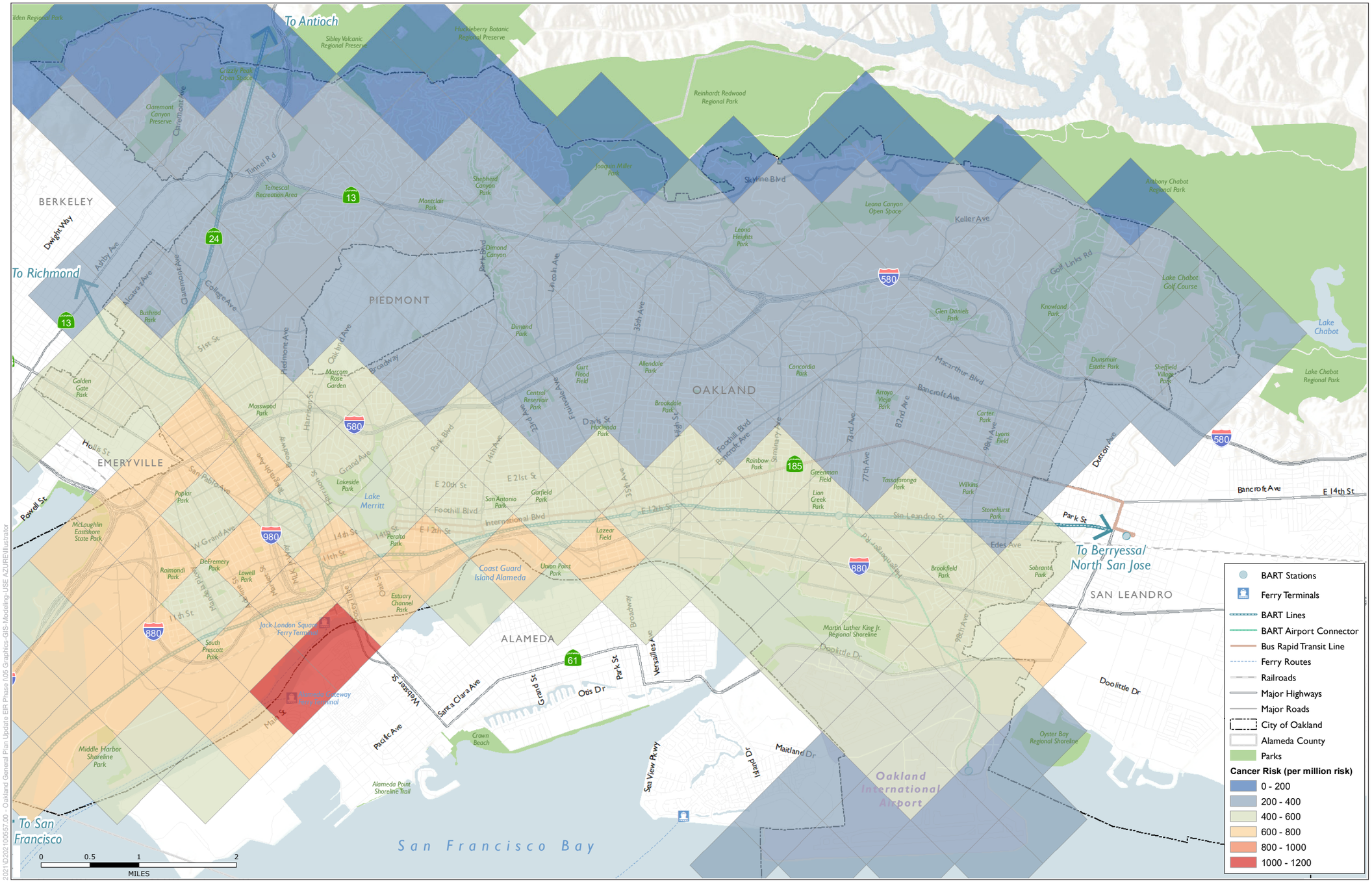
4.2.1.7 Sensitive Receptors

Air quality does not affect every individual in the population in the same way, and some groups are more sensitive than others to air pollution. Reasons for greater sensitivity can include existing health problems, duration of exposure to air pollutants, or certain peoples' increased susceptibility to pollution-related health problems due to factors such as age. Population subgroups sensitive to the health effects of air pollutants include: the elderly and the young; population subgroups with higher rates of respiratory disease such as asthma and chronic obstructive pulmonary disease; and populations with other environmental or occupational health exposures (e.g., indoor air quality) that affect cardiovascular or respiratory diseases. The factors responsible for variations in exposure are also often similar to factors associated with greater susceptibility to air quality health effects. For example, lower income residents may be more likely to live near industrial or roadway sources of pollution and may also be more likely to live in substandard housing.

BAAQMD defines sensitive receptors as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants. Land uses such as schools, children's day care centers, hospitals, and nursing and convalescent homes are considered to be sensitive to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Residential uses are considered sensitive because these

4 This is the *rate* of new cancer cases per year per million individuals, not the lifetime risk of an individual to develop cancer.

5 These numbers are average lifetime risks for the overall United States population. An individual's risk may be higher or lower than these numbers, depending on particular risk factors. In addition to exposure to ambient airborne sources of carcinogenic substances, individuals' lifetime risks of contracting cancer vary based on a wide number of factors, such as genetics, sex, age, diet, lifestyle (e.g., obesity, tobacco use, alcohol use), exposure to carcinogens, and pre-existing conditions.



SOURCE: Dyett & Bhatia, 2022

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Figure 4.2-2
Cancer Risk

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individuals could be present, and people in residential areas are often at home for extended periods of time, so they can be exposed to pollutants for extended periods. Workers are generally not considered sensitive receptors because all employers must follow regulations set forth by the Occupation Safety and Health Administration to ensure the health and well-being of their employees (BAAQMD 2014). However, BAAQMD is in the process of updating their health risk assessment guidelines; this update may recommend that lead agencies consider offsite workers as sensitive receptors in health risk assessments for projects.

In April 2005, CARB released the Air Quality and Land Use Handbook, which encourages local land use agencies to consider the risks from air pollution prior to making decisions that approve the siting of new sensitive receptors (e.g., schools, homes, and daycare centers) near sources of pollution, such as major roadways and freeways. There are a variety of sensitive receptors that are located within the Plan Area including residences, schools, daycares, hospitals, and convalescent homes. Many sensitive receptors, including UCSF Benioff Children's Hospital Oakland, Emerson Elementary School, Lakeview Elementary School, Prescott School, Lincoln Elementary School, La Escuelita Elementary School, Allendale Elementary School, Redwood Heights Elementary School, Advance Day Care Center, Alegria Daycare, Sakura Daycare, Gloria's Daycare, Eden Child Daycare Home, and many other daycares and schools are also located in close proximity to the City's major highways including I-580, I-880, I-980, SR-13, and SR-24, all of which generate high pollutant levels from automobile traffic.

4.2.2 Regulatory Setting

Regulation of air pollution is achieved through both national and State ambient air quality standards through emissions limits on individual sources of air pollutants.

4.2.2.1 Federal

Criteria Air Pollutants

The 1970 Clean Air Act (most recently amended in 1990) requires that regional planning and air pollution control agencies prepare a regional air quality plan to outline the measures by which both stationary and mobile sources of pollutants will be controlled in order to achieve all ambient air quality standards by the deadlines specified in the act. These ambient air quality standards are intended to protect the public health and welfare, and they specify the concentration of pollutants (with an adequate margin of safety) to which the public can be exposed without adverse health effects. They are designed to protect those segments of the public most susceptible to respiratory distress, including asthmatics, the very young, the elderly, people weakened from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels that are somewhat above ambient air quality standards before adverse health effects are observed. **Table 4.2-3** presents current State (California Ambient Air Quality Standards, or CAAQS) and national (National Ambient Air Quality Standards, or NAAQS) ambient air quality standards.

TABLE 4.2-3
STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS AND MAJOR SOURCES

Pollutant	Averaging Time	CAAQS	NAAQS	Major Pollutant Sources
Ozone	1 hour	0.09 ppm	---	Formed when reactive organic gases (ROG) and nitrogen oxides (NO_X) react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
	8 hour	0.070 ppm	0.070 ppm	
Carbon Monoxide	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hour	9.0 ppm	9 ppm	
Nitrogen Dioxide	1 hour	0.18 ppm	100 ppb	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	Annual Avg.	0.030 ppm	0.053 ppm	
Sulfur Dioxide	1 hour	0.25 ppm	75 ppb	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 hour	---	0.5 ppm[1]	
	24 hour	0.04 ppm	0.14 ppm	
	Annual Avg.	---	0.030 ppm	
Respirable Particulate Matter (PM_{10})	24 hour	50 ug/m^3	150 ug/m^3	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Avg.	20 ug/m^3	---	
Fine Particulate Matter ($PM_{2.5}$)	24 hour	---	35 ug/m^3	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO_X, sulfur oxides, and organics.
	Annual Avg.	12 ug/m^3	12.0 ug/m^3	
Lead	Monthly Ave.	1.5 ug/m^3	---	Present source: lead smelters, battery manufacturing and recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	---	1.5 ug/m^3	
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	Geothermal power plants, petroleum production and refining
Sulfates	24 hour	25 ug/m^3	No National Standard	Produced by the reaction in the air of SO_2.
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	See $PM_{2.5}$.
Vinyl chloride	24 hour	0.01 ppm	No National Standard	Polyvinyl chloride and vinyl manufacturing.

NOTE:
ppb = parts per billion; ppm = parts per million; ug/m^3 = micrograms per cubic meter.
[1] Secondary national standard.
SOURCES: CARB, 2016a.

NAAQS and CAAQS have been set at levels considered safe to protect public, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. As explained by CARB, "an air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without any harmful effects on people or the environment" (CARB, 2017). That is, if a region is in compliance with the ambient air quality standards, its regional air quality can be considered protective of public health. The NAAQS are statutorily required to be set by

the USEPA at levels that are "requisite to protect the public health."[6] Therefore, the closer a region is to attaining a particular ambient air quality standard, the lower the human health impact is from that pollutant. See Section 4.2.2, above, for a brief description of the health effects of exposure to criteria air pollutants. Pursuant to the 1990 federal CAA Amendments, the USEPA classifies air basins (or portions thereof) as "attainment", "nonattainment", or "unclassified" for each criteria air pollutant, based on whether the national standards had been achieved. An unclassified designation indicates that air quality and other relevant information is insufficient to determine whether the area is attainment or nonattainment (CARB, 1998b). As shown in **Table 4.2-4**, at the federal level, the SFBAAB is designated as a nonattainment area for the federal 8-hour ozone standard and the federal 24-hour $PM_{2.5}$ standard. The SFBAAB is in attainment for all other federal ambient air quality standards. State-level attainment status of the SFBAAB is discussed further below.

TABLE 4.2-4
2022 SAN FRANCISCO BAY AREA AIR BASIN ATTAINMENT STATUS

Pollutant	Averaging Time	Designation/Classification	
		State Standards	Federal Standards
Ozone	8 Hour	Nonattainment	Nonattainment
	1 Hour	Nonattainment	--
Carbon Monoxide	8 Hour	Attainment	Attainment
	1 Hour	Attainment	Attainment
Nitrogen Dioxide	1 Hour	Attainment	--
	Annual Arithmetic Mean	--	Attainment
Sulfur Dioxide	24 Hour	Attainment	--
	1 Hour	Attainment	--
	Annual Arithmetic Mean	--	--
Respirable Particulate Matter (PM_{10})	Annual Arithmetic Mean	Nonattainment	--
	24 Hour	Nonattainment	Unclassified
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	Nonattainment	Unclassified/Attainment
	24 Hour	--	Nonattainment
Sulfates	24 Hour	Attainment	--
Lead	30 Day Average	--	Attainment
	Calendar Quarter	--	Attainment
	Rolling Month Average	--	--
Hydrogen Sulfide	1 Hour	Unclassified	--
Vinyl Chloride	24 Hour	No information available	--
Visibility Reducing Particles	8 Hour	Unclassified	--

SOURCE: BAAQMD, 2017a; USEPA, 2022c.

6 See https://www.law.cornell.edu/uscode/text/42/7409.

The federal CAA Amendments requires each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The federal CAA Amendments added requirements for states containing areas that violate the national standards to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The USEPA has the responsibility to review all SIPs to determine if they conform to the mandates of the federal CAA Amendments and will achieve air quality goals when implemented.

4.2.2.2 State

Criteria Air Pollutants

Although the federal CAA established the NAAQS, individual states retain the option to adopt more stringent standards and to include other pollution sources. California had already established its own air quality standards when federal standards were established, and because of the unique meteorological challenges in California, there are differences between the State and national ambient air quality standards, as shown in Table 4.2-4. California ambient standards tend to be at least as protective as national ambient standards or are often more stringent.

In 1988, California passed the California CAA (California Health and Safety Code section 39600 et seq.), which, like its federal counterpart, called for designation of areas as "attainment", "nonattainment", or "unclassified" with respect to the State standards. The SFBAAB is currently designated as nonattainment for the State 8-hour and 1-hour ozone standards, the State average and 24-hour PM_{10} standards, and the State average $PM_{2.5}$ standards. The SFBAAB is designated as attainment or unclassified with respect to the other State standards.

In 2003, the California Legislature enacted SB 656 (Chapter 738, Statutes of 2003), codified as Health and Safety Code Section 39614, to reduce public exposure to PM_{10} and $PM_{2.5}$. SB 656 required CARB, in consultation with local air pollution control and air quality management districts (air districts), to develop and adopt, by January 1, 2005, a list of the most readily available, feasible, and cost-effective control measures that could be employed by CARB and the air districts to reduce PM_{10} and $PM_{2.5}$ (collectively referred to as PM). The legislation established a process for achieving near-term reductions in PM throughout California ahead of federally required deadlines for $PM_{2.5}$ and provided new direction on PM reductions in those areas not subject to federal requirements for PM. Measures adopted as part of SB 656 complement and support those required for federal $PM_{2.5}$ attainment plans, as well as for State ozone plans. This ensures continuing focus on PM reduction and progress toward attaining California's more health protective standards. This list of air district control measures was adopted by CARB on November 18, 2004.

Toxic Air Contaminants

The Health and Safety Code defines TACs as air pollutants that may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. The State Air Toxics Program was established in 1983 under AB 1807 (Tanner). The program involves a two-step process: risk identification and risk management. A total of 243

substances have been designated TACs under California law, including the 189 (federal) Hazardous Air Pollutants.

Off-road Diesel Emissions

The CARB In-Use Off-Road Diesel-Fueled Fleets Regulation (Off-Road Regulation) applies to all self-propelled off-road diesel vehicles 25 horsepower or greater used in California and most two-engine vehicles (except on-road two-engine sweepers). This includes vehicles that are rented or leased (rental or leased fleets). CARB's goal is to gradually reduce the state-wide construction vehicle fleet's emissions through turnover, repower, or retrofits. New engine emissions requirements were grouped into tiers based on the year in which the engine was built (CARB, 2022b). In 2014, new engines were required to meet Tier 4 Final standards which, to date, are the most stringent emissions standards for off-road vehicle engines. The goal of the In-Use Off-Road Diesel-Fueled Fleets Regulation is to reduce particulate matter (PM_{10} and $PM_{2.5}$) and NO_x emissions from off-road heavy-duty diesel vehicles in California (CARB, 2022a). This regulation also limits idling to five minutes, requires a written idling policy for larger vehicle fleets, and requires that fleet operators provide information on their engines to CARB and label vehicles with a CARB-issued vehicle identification number.

CARB recommends that proximity to sources of DPM emissions be considered in the siting of new sensitive land uses. As discussed above, CARB published the Air Quality and Land Use Handbook: A Community Health Perspective in April 2005. This handbook is intended to give guidance to local governments in the siting of sensitive land uses near sources of air pollution. Recent studies have shown that public exposure to air pollution can be substantially elevated near freeways and certain other facilities such as ports, rail yards, and distribution centers. Sensitive receptor siting recommendations for applicable uses in the City of Oakland are listed in **Table 4.2-5** below. As noted above, CARB recognizes that these recommendations are advisory and that local agencies must balance other considerations when siting sensitive uses. With careful evaluation of exposure, health risks, and affirmative steps to reduce risk where necessary CARB's position is that infill development, mixed use, higher density, transit-oriented development, and other concepts that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level (CARB, 2005).

TABLE 4.2-5
RECOMMENDATIONS FOR SITING NEW SENSITIVE LAND USES

Source Category	Advisory Recommendations of Locations to Avoid
Freeways and High-Traffic Roads	500' of a freeway or urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.
Rail Yards	1,000 feet of a major service and maintenance rail yard. Consider possible siting limitations and mitigation approaches within one mile of a rail yard.
Ports	Immediately downwind of ports in the most heavily impacted zones
Dry Cleaners Using Perchloroethylene	300' of any dry cleaning operation. For operations with two or more machines, provide 500'. For operations with three or more machines, consult the local air district. Also, do not site new sensitive receptors in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	300' of a large gas station, defined as a facility with a throughput of 3.6 million gallons per year or greater. A 50' separation is recommended for typical gas dispensing facilities.

SOURCE: CARB, 2005.

Community Air Protection Program (AB 617)

AB 617 was promulgated into State law in 2017. The purpose of this legislation is for CARB to establish the Community Air Protection Program (CAPP). CARB's objective in implementing the CAPP is to reduce human health risk levels by reducing air toxics exposure in communities most impacted by TAC emissions. CARB requires that air districts "must initiate community partnerships and undertake a robust public process in developing and implementing the community emissions reduction programs." There have been 10 initial designated communities throughout the State targeting emissions reductions, community monitoring or both. Most AB 617 communities have both reduction and monitoring designations.

The State legislature has provided a funding mechanism to support early actions allowing for deployment of cleaner technologies for designated communities such as West Oakland as well as grants to promote community participation in both the monitoring and emissions reductions aspects of the program. Other aspects of the program include accelerated retrofit of pollution controls on industrial stationary sources, an increase in financial penalties, and increased transparency and availability of emissions and air quality information thereby driving air pollution control efforts statewide with a goal of improved intra-air district communication and cooperation.

West Oakland is a designated CAPP community and a steering committee has been formed consisting of the community, BAAQMD, and CARB, to develop the West Oakland Community Action Plan (WOCAP). The WOCAP includes a list of proposed measures to reduce air pollution and resident exposure to TACs (see *Local Plans, Ordinances, and Policies* section below for a list of measures) (BAAQMD and WOEIP, 2019). A draft Action Plan and the accompanying draft EIR were released in July 2019. The EIR was certified as final and the action plan was adopted by BAAQMD on October 2, 2019 (BAAQMD and WOEIP, 2019). CARB adopted the action plan on December 5, 2019, per Resolution 19-29.[7] Details specific to the WOCAP are summarized in the *Local Plans, Ordinances, and Policies* section below.

In February 2022, East Oakland was designated a CAPP community by CARB. CARB voted in support BAAQMD's partnering with the East Oakland community to conduct a Community Emissions Reduction Plan, or CERP, process. The community-based steering committee is responsible for developing a CERP, which will serve as a blueprint for improving air quality in East Oakland. East Oakland was selected amongst high priority communities in the Bay Area due to longstanding air quality challenges, environmental justice issues, and health inequities. East Oakland organizations have partnered with BAAQMD to build community capacity, increase understanding of local air pollution and environmental justice issues, and bring together cross-agency partnerships necessary for improving environmental health and local air quality improvement.

California Building and Energy Efficiency Standards (Title 24)

The California Energy Commission first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the State. Although not originally intended

[7] CARB Resolution 19-29 is available at: https://ww3.arb.ca.gov/board/res/2019/res19-29.pdf.

to reduce emissions of criteria pollutants or TACs, increased energy efficiency and reduced consumption of natural gas and other fuels would result in fewer criteria pollutant and TAC emissions from residential and non-residential buildings subject to the standard. The standards are updated periodically (typically every three years) to allow for the consideration and inclusion of new energy efficiency technologies and methods (California Energy Commission, 2018).

The most recent update to the Title 24 energy efficiency standards (2022 standards) went into effect on January 1, 2023. Future development under the Proposed Project would adhere to the applicable version of Title 24 as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits.

California Green Standards Building Code

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards (CALGreen) Code. The CALGreen Code is intended to encourage more sustainable and environmentally friendly building practices, require low-pollution emitting substances that cause less harm to the environment, conserve natural resources, and promote the use of energy-efficient materials and equipment.

Since 2011, the CALGreen Code has been mandatory for all new residential and non-residential buildings constructed in the State. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code was most recently updated in 2019 to include new mandatory measures for residential and non-residential uses; the new measures took effect on January 1, 2020.

Advanced Clean Cars Program

In January 2012, pursuant to Recommended Measures T-1 and T-4 of the Scoping Plan, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model years 2017 through 2025. In response to a midterm review of the standards in March 2017, CARB directed staff to begin working on post-2025 model year vehicle regulations (Advanced Clean Cars II) to research additional measures to reduce air pollution from light-duty and medium-duty vehicles. Additionally, as described earlier, in September 2020, Governor Newsom signed EO N-79-20 that established a goal that 100 percent of California sales of new passenger car and trucks be zero-emission by 2035 and directed CARB to develop and propose regulations toward this goal. The primary mechanism for achieving these targets for passenger cars and light trucks is the Advanced Clean Cars II Program. CARB adopted the ACC II regulations on August 25, 2022.

Mobile Source Strategy

In May 2016, CARB released the updated Mobile Source Strategy that demonstrates how the State can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risk from transportation emissions, and reduce petroleum consumption over the next 15 years. The strategy promotes a transition to zero-emission and low-emission vehicles, cleaner transit systems and reduction of vehicle miles traveled (VMT). The Mobile Source Strategy calls for 1.5 million Zero Emission Vehicles (ZEVs) (including plug-in hybrid electric, battery-electric, and hydrogen fuel cell vehicles) by 2025 and 4.2 million ZEVs by 2030. The strategy also calls for more-stringent GHG requirements for light-duty vehicles beyond 2025 as

well as GHG reductions from medium-duty and heavy-duty vehicles and increased deployment of zero emission trucks primarily for class 3 through 7 "last mile" delivery trucks in California. Statewide, the Mobile Source Strategy would result in a 45 percent reduction in GHG emissions from mobile sources and a 50 percent reduction in the consumption of petroleum-based fuels (CARB, 2016b).

Similar to the 2016 Mobile Source Strategy, the 2020 Strategy is a framework that identifies the levels of cleaner technologies necessary to meet the many goals and high-level regulatory concepts that would allow the State to achieve the levels of cleaner technology. The 2020 Strategy will inform the development of other planning efforts including the SIP which will translate the concepts included into concrete measures and commitments for specific levels of emissions reductions, the 2022 Climate Change Scoping Plan (2022 Scoping Plan Update), and Community Emissions Reduction Plans (CERPs) required for communities selected as a part of CARB's Community Air Protection Program. Central to all of these planning efforts, and CARB actions on mobile sources going forward, will be environmental justice as CARB strives to address longstanding environmental and health inequities from elevated levels of toxics, criteria pollutants, and secondary impacts of climate change (CARB, 2021). The 2020 Mobile Source Strategy illustrates that an aggressive deployment of ZEVs will be needed for the State to meet federal air quality requirements and the State's climate change targets.

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, CARB adopted the Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling to reduce public exposure to diesel particulate matter emissions (13 CCR Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure prohibits diesel-fueled commercial vehicles from idling for more than five minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in GHG reduction and energy savings in the form of reduced fuel consumption from unnecessary idling.

Airborne Toxic Control Measure for Stationary Compression Ignition Engines

In 2004, CARB adopted an Airborne Toxic Control Measure to reduce public exposure to emissions of diesel particulate matter and criteria pollutants from stationary diesel-fueled compression ignition engines (17 CCR Section 93115). The measure applies to any person who owns or operates a stationary compression ignition engine in California with a rated brake horsepower greater than 50, or to anyone who either sells, offers for sale, leases, or purchases a stationary compression ignition engine. This measure outlines fuel and fuel additive requirements; emissions standards; recordkeeping, reporting and monitoring requirements; and compliance schedules for compression ignition engines.

4.2.2.3 Regional

Bay Area Air Quality Management District

The air district has the responsibility to monitor ambient air pollutant levels throughout the region and to develop and implement strategies to attain the applicable federal and State standards.

BAAQMD Clean Air Plan

Local Air Quality Management Districts and Air Pollution Control Districts are responsible for demonstrating attainment of State air quality standards through the adoption and enforcement of Attainment Plans. BAAQMD *2017 Clean Air Plan: Spare the Air, Cool the Climate* (2017 Clean Air Plan) was adopted on April 19, 2017 by the air district in cooperation with the Metropolitan Transportation Commission, the San Francisco Bay Conservation and Development Commission, and the Association of Bay Area Governments to provide a regional strategy to improve air quality within the SFBAAB and meet public health goals (BAAQMD, 2017c). The control strategy described in the 2017 Clean Air Plan includes a wide range of control measures designed to reduce emissions and lower ambient concentrations of harmful pollutants, safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, and reduce greenhouse gas emissions (GHGs) to protect the climate.

The 2017 Clean Air Plan addresses four categories of pollutants including ground-level ozone and its key precursors: ROG and NO_x; PM, primarily $PM_{2.5}$, and precursors to secondary $PM_{2.5}$; air toxics; and GHG emissions. The control measures are categorized based on the economic sector framework including stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, and water.

The air district is the regional agency with jurisdiction over the nine-county region located in the air basin. The Association of Bay Area Governments, the Metropolitan Transportation Commission, regional transportation agencies, cities and counties, and various non-governmental organizations also participate in the efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs. The air district is responsible for attaining and/or maintaining air quality in the region within federal and State air quality standards. Specifically, the air district has the responsibility to monitor ambient air pollutant levels throughout the region and to develop and implement strategies to attain the applicable federal and State standards. The air district has permit authority over most types of stationary emission sources and can require stationary sources to obtain permits, and can impose emission limits, set fuel or material specifications, or establish operational limits to reduce air emissions. The air district also regulates new or expanding stationary sources of TACs and requires air toxic control measures for many sources emitting TACs.

BAAQMD Rules and Regulations

The air district rules that would be most applicable to the future development under the Proposed Project pertain mostly to permits for emergency generators including Rules 2-1, 2-2, and 2-5. The air district regulates stationary-source emissions of TACs through Rule 2-1 (General Permit Requirements), Rule 2-2 (New Source Review), and Rule 2-5 (New Source Review of Toxic Air

Contaminants). Under these rules, all stationary sources that have the potential to emit TACs above a certain level are required to obtain permits from the air district. These rules provide guidance for the review of new and modified stationary sources of TAC emissions, including evaluation of health risks and potential mitigation measures. Sources must apply Best Available Control Technology (BACT) to reduce emissions, and the air district recently updated its BACT requirement for emergency generators greater than 1,000 horsepower (hp) to achieve EPA Tier 4 standards (BAAQMD, 2019).

Regulation of Odors

BAAQMD regulation 7 places general limitations on odorous substances and specific emission limitations on certain odorous compounds. The regulation limits the "discharge of any odorous substance which causes the ambient air at or beyond the property line … to be odorous and to remain odorous after dilution with four parts of odor-free air." BAAQMD must receive odor complaints from 10 or more complainants within a 90-day period in order for the limitations of this regulation to go into effect. If this criterion has been met, an odor violation can be issued by the air district if a test panel of people can detect an odor in samples collected periodically from the source.

BAAQMD CEQA Guidelines and Thresholds of Significance

BAAQMD California Environmental Quality Act Air Quality Guidelines (CEQA Guidelines) is an advisory document that provides lead agencies, consultants, and project proponents with procedures for assessing air quality impacts and preparing environmental review documents. The document describes the criteria that BAAQMD uses when reviewing and commenting on the adequacy of environmental documents. It recommends thresholds for use in determining whether projects and plans would have significant adverse environmental impacts, describes methods for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts.

In May 2011, BAAQMD adopted an updated version of its thresholds of significance for use in determining the significance of environmental effects under CEQA and published its CEQA Guidelines for consideration by lead agencies. The 2011 CEQA Guidelines also included methods for evaluating risks and hazards for the siting of new sensitive receptors based on nearby, existing sources of risk (e.g., freeways).

BAAQMD resolution adopting the significance thresholds in 2011 was set aside by the Alameda County Superior Court on March 5, 2012. On August 13, 2013, the California Court of Appeals issued a full reversal of the Superior Court's judgment, and on December 17, 2015, the California Supreme Court reversed in part the appellate court's judgment and remanded the case for further consideration consistent with the Supreme Court opinion. The California Supreme Court ruled unanimously that CEQA review is focused on a project's impact on the environment "and not the environment's impact on the project" (*California Building Industry Association v. Bay Area Air Quality Management District* [December 17, 2015] 62 Cal.4th 369). The Supreme Court confirmed that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future residents or users." The Court also held that when a project has "potentially significant exacerbating effects on existing environmental hazards",

those impacts are properly within the scope of CEQA because they can be viewed as impacts of the project on "existing conditions" rather than impacts of the environment on the project.

BAAQMD most recently updated its CEQA Guidelines in May 2017 (BAAQMD, 2017b). These guidelines provide recommended quantitative significance thresholds along with direction on recommended analysis methods. BAAQMD states that the quantitative significance thresholds are "advisory and should be followed by local governments at their own discretion," and that lead agencies are fully within their authority to develop their own thresholds of significance. However, BAAQMD offers these thresholds for lead agencies to use in order to inform environmental review for development projects in the Bay Area. Lead agencies may also reference the *CEQA Thresholds Options and Justification Report* developed by BAAQMD staff in 2009. This option provides lead agencies with a justification for continuing to rely on BAAQMD 2011 thresholds.

BAAQMD Planning Healthy Places Guidebook

BAAQMD prepared its *Planning Healthy Places* guidebook in May of 2016 that has an overarching goal of promoting infill development to reduce VMT within the region, thereby reducing emissions and associated exposure to air pollutants. The guidebook is intended to "assist local governments in addressing and minimizing potential air quality issues by providing tools and recommended best practices that can be implemented to reduce exposure and emissions from local sources of air pollutants." The guidebook recommends the following three primary strategies (BAAQMD, 2016b):

- Reduce or prevent emissions from pollution source(s) when possible;
- Implement best practices where appropriate to reduce exposure to harmful pollutants; and
- Perform a more detailed study of an area when necessary.

To support community planning efforts, the *Planning Healthy Places* guidebook includes information related to the location of communities and places throughout the region, including Oakland, that are estimated to have elevated $PM_{2.5}$ and TAC concentrations. These areas are identified in the *Planning Health Places* mapping tool as either needing "Best Practices" or needing "Further Study" (BAAQMD, 2021).

Areas that have been identified as needing best practices are based on a screening level, cumulative analysis of mobile and stationary sources that result in a cancer risk of greater than 100 in a million and or a PM concentration of greater than 0.8 micrograms per cubic meter, and/or are within 500 feet of a freeway, 175 feet of a major roadway (greater than 30,000 annual average daily traffic), or 500 feet of a ferry terminal. BAAQMD recommends that any area that meet the above criteria should implement Best Practices to Reduce Emissions of Local Air Pollution (see Appendix A of the *Planning Healthy Places* guidebook) and Best Practices to Reduce Exposure to Local Air Pollution (see Appendix B of the *Planning Healthy Places* guidebook).

Areas that are designated as needing further study are near "large and complex" sources. These include areas within 0.5 miles of a major airport (OAK, SFO, SJC), within 0.5 miles of an oil refinery, within 0.5 miles of the Port of Oakland, within 1,000 feet of any other seaports, within

1,000 feet of all railyards (except Caltrain yards in San Francisco and San Jose), within 150 feet of medium gas stations, or within 300 feet of large gas stations.

4.2.2.4 Local Plans, Ordinances and Policies

City of Oakland General Plan

Land Use and Transportation Element (LUTE)

The LUTE of the Oakland General Plan contains the following air quality objective and policies that would apply to the Project (City of Oakland, 1998):

Objective I/C4: Minimize land use compatibility conflicts in commercial and industrial areas through achieving a balance between economic development values and community values.

Policy I/C4.1: Protecting Existing Activities. Existing industrial, residential, and commercial activities and areas which are consistent with long term land use plans for the City should be protected from the intrusion of potentially incompatible land uses.

Policy I/C4.2: Minimizing Nuisances. The potential for new or existing industrial or commercial uses, including seaport and airport activities, to create nuisance impacts on surrounding residential land uses should be minimized through appropriate siting and efficient implementation and enforcement of environmental and development controls. Where residential development would be located above commercial uses, parking garages, or any other uses with a potential to generate odors, the odor-generating use should be properly vented (e.g., located on rooftops) and designed (e.g., equipped with afterburners) so as to minimize the potential for nuisance odor problems.

Objective T2: Provide mixed use, transit-oriented development that encourages public transit use and increases pedestrian and bicycle trips at major transportation nodes.

Policy T2.1: Encouraging Transit-Oriented Development: Transit-oriented development should be encouraged at existing or proposed transit nodes, defined by the convergence of two or more modes of public transit such as BART, bus, shuttle service, light rail or electric trolley, ferry, and inter-city or commuter rail.

Policy T2.2: Guiding Transit-Oriented Development. Transit-oriented developments should be pedestrian oriented, encourage night and day time use, provide the neighborhood with needed goods and services, contain a mix of land uses, and be designed to be compatible with the character of surrounding neighborhoods.

Objective T3: Provide a hierarchical network of roads that reflects desired land use patterns and strives for acceptable levels of service at intersections.

Policy T3.6: Incorporating Design Feature for Alternative Travel. The City will require new development, rebuilding, or retrofit to incorporate design features in their projects that encourage use of alternative modes of transportation such as transit, bicycling, and walking.

Policy T3.7: Resolving Transportation Conflicts. The city, in constructing and maintaining its transportation infrastructure, shall resolve any conflicts between public transit and single occupant vehicles in favor of the transportation mode that has the potential to provide the greatest mobility and access for people, rather than vehicles,

giving due consideration to the environment, public safety, economic development, health, and social equity impacts.

Objective T4: Increase use of alternative modes of transportation.

Policy T4.1: Incorporating Design Features for Alternative Travel. The City will require new development, rebuilding, or retrofit to incorporate design features in their projects that encourage use of alternative modes of transportation such as transit, bicycling, and walking.

Policy T4.2: Creating Transportation Incentives. Through cooperation with other agencies, the City should create incentives to encourage travelers to use alternative transportation options.

Policy T4.6: Making Transportation Accessible for Everyone. Alternative modes of transportation should be accessible for all of Oakland's population. Including the elderly, disable, and disadvantaged.

Objective T6: Make streets safe, pedestrian accessible, and attractive.

Policy T6.1: Posting Maximum Speeds. Collector streets shall be posted at a maximum speed (usually a maximum speed of 25 miles per hour), except where a lower speed is dictated by safety and allowable by law.

Policy T6.2: Improving Streetscapes. The City should make major efforts to improve the visual quality of streetscapes. Design of the streetscape, particularly in neighborhoods and commercial centers, should be pedestrian-oriented and include lighting, directional signs, trees, benches and other support facilities.

Objective D3: Create a pedestrian-friendly downtown.

Policy D3.2: Incorporating Parking Facilities. New parking facilities for cars and bicycles should be incorporated into the design of any project in a manner that encourages and promotes safe pedestrian activity.

Policy D10.6: Creating Infill Housing. Infill housing that respects surrounding development and the streetscape should be encouraged in the downtown to strengthen or create distinct districts.

Policy N3.2: Encouraging Infill Development. In order to facilitate the construction of needed housing units, infill development that is consistent with the General Plan should take place throughout the City.

Open Space, Conservation, and Recreation (OSCAR) Element

The OSCAR Element of the Oakland General Plan contains the following air quality objective and policies that would apply to the Project (City of Oakland, 1996):

Objective CO-12: Air Resources. To improve air quality in Oakland and the surrounding Bay Region.

Policy CO-12.1: Land Use Patterns Which Promote Air Quality. Promote land use patterns and densities which help improve regional air quality conditions by: (a) minimizing dependence on single passenger autos; (b) promoting projects which minimize quick auto starts and stops, such as live-work development, mixed use

development, and office development with ground floor retail space; (c) separating land uses which are sensitive to pollution from the sources of air pollution; and (d) supporting telecommuting, flexible work hours, and behavioral changes which reduce the percentage of people in Oakland who must drive to work on a daily basis.

Policy CO-12.4: Design of Development to Minimize Air Quality Impacts. Require that development projects be designed in a manner which reduces potential adverse air quality impacts. This may include: (a) the use of vegetation and landscaping to absorb CO and to buffer sensitive receptors; (b) the use of low-polluting energy sources and energy conservation measures; and (c) designs which encourage transit use and facilitate bicycle and pedestrian travel.

Policy CO-12.5: Use of Best Available Control Technology. Require new industry to use best available control technology to remove pollutants, including filtering, washing, or electrostatic treatment of emissions.

Policy CO-12.6: Control of Dust Emissions. Require construction, demolition, and grading practices which minimize dust emissions. These practices are currently required by the City and include the following:

- Avoiding earth moving and other major dust generating activities on windy days.
- Sprinkling unpaved construction areas with water during excavation, using reclaimed water where feasible (watering can reduce construction-related dust by 50 percent).
- Covering stockpiled sand, soil, and other particulates with a tarp to avoid blowing dust.
- Covering trucks hauling dirt and debris to reduce spills. If spills do occur, they should be swept up promptly before materials become airborne.
- Preparing a comprehensive dust control program for major construction in populated areas or adjacent to sensitive uses like hospitals and schools.
- Operating construction and earth-moving equipment, including trucks, to minimize exhaust emissions.

Policy CO-12.7: Regional Air Quality Planning. Coordinate local air quality planning efforts with other agencies, including adjoining cities and counties and the public agencies responsible for monitoring and improving air quality. Cooperate with regional agencies such as BAAQMD, MTC, ABAG, and the Alameda County Congestion Management Agency in developing and implementing regional air quality strategies. Continue to work with BAAQMD and the California Air Resources Board in enforcing the provisions of the California and federal Clean Air Acts, including the monitoring of air pollutants on a regular and ongoing basis.

Objective CO-13: Energy Resources. To manage Oakland's energy resources as effectively as possible, reduce consumption of non-renewable resources, and develop energy resources with reduce dependency on fossil fuels.

Policy CO13.2: Energy Efficiency. Support public information campaigns, energy audits, the use of energy-saving appliances and vehicles, and other efforts which help Oakland residents, businesses, and City operations become more energy efficient.

Policy CO13.3: Construction Methods and Materials. Encourage the use of energy-efficient construction and building materials. Encourage site plans for new development which maximize energy efficiency.

Policy CO13.4: Alternative Energy Sources. Accommodate the development and use of alternative energy resources, including solar energy and technologies which convert waste or industrial byproducts to energy, provided that such activities are compatible with surrounding land uses and regional air and water quality requirements.

Oakland Municipal Code

Per the City of Oakland Municipal Code, Title 15 Buildings and Construction, Chapter 15.36 Demolition Permits, Section 15.36.100 Dust Control Measures:

> *"Best Management Practices" shall be used throughout all phases of work, including suspension of work, to alleviate or prevent fugitive dust nuisance and the discharge of smoke or any other air contaminants into the atmosphere in such quantity as will violate any city or regional air pollution control rules, regulations, ordinances, or statutes. Water or dust palliatives or combinations of both shall be applied continuously and in sufficient quantity during the performance of work and at other times as required. Dust nuisance shall also be abated by cleaning and sweeping or other means as necessary. A dust control plan may be required as condition of permit issuance or at other times as may be deemed necessary to assure compliance with this section. Failure to control effectively or abate fugitive dust nuisance or the discharge of smoke or any other air contaminants into the atmosphere may result in suspension or revocation of the permit, in addition to any other applicable enforcement actions or remedies. (Ord. 12152 Section 1, 1999).*

The City of Oakland has implemented Green Building principles in city buildings through the following programs: Civic Green Building Ordinance (Ordinance No. 12658 C.M.S., 2005), requiring, for certain large civic projects, techniques that minimize the environmental and health impacts of the built environment through energy, water and material efficiencies and improved indoor air quality, while also reducing the waste associated with construction, maintenance and remodeling over the life of the building; Green Building Guidelines (Resolution No. 79871, 2006) which provides guidelines to Alameda County residents and developers regarding construction and remodeling; and Green Building Education Incentives for private developers. These actions reduce natural gas use in buildings, which reduces criteria pollutant emissions from natural gas combustion.

As of March 2017, Chapter 15.04, Part 11 of the City's Municipal Code requires all new multifamily and non-residential buildings to include full circuit infrastructure for plug-in electric vehicle (PEV) charging stations for at least 10 percent of the total parking spaces. In addition, inaccessible conduits for future expansion of PEV spaces must be installed for 90 percent of the total parking at multi-family buildings and 10 percent of the total parking at non-residential buildings. The new requirements are designed to accelerate the installation of vehicle chargers to address demand. The replacement of gasoline and diesel vehicles with electric vehicles will reduce criteria air pollutants associated with traditional vehicle fuel combustion.

As of December 1, 2020, the Oakland City Council voted to amend the City's Municipal Code to prohibit the use of fossil fuel gas in all newly constructed buildings. This includes the use of

natural gas in both residential and commercial buildings. The ordinance allows for developers who can demonstrate that it is not feasible for a new building to go 100 percent electric to apply for a waiver.

City of Oakland Equitable Climate Action Plan (ECAP)

In 2009, the Oakland City Council passed Resolution No. 82129 establishing GHG reduction targets for the City. Resolution No.82129 sets GHG reduction goals of 36 percent reduction by 2020 and 83 percent reduction by 2050, relative to 2005 levels. In addition, Resolution No. 84126 C.M.S., approved December 4, 2012, adopted the Energy and Climate Action Plan, which provided the City's strategy through 2020 and included Oakland's first GHG Emissions Inventory as an Appendix.

In October 2018, the Oakland City Council passed Resolution No. 87183 adopting an interim citywide GHG emissions reduction target of 56 percent below 2005 levels by the year 2030 to keep the City on track to meeting its 2050 target. In July 2020, via Resolution No. 88267, Oakland City Council adopted the 2030 Equitable Climate Action Plan (ECAP), which is a comprehensive plan to achieve the 2030 GHG reduction target and increase Oakland's resilience to the impacts of the climate crisis, both through a deep equity lens (City of Oakland, 2020b). Alongside the 2030 ECAP, the City Council also adopted a goal to achieve community-wide carbon neutrality no later than 2045 (City of Oakland, 2020c). Achieving carbon neutrality will require complete decarbonization (ensuring that all mechanical systems run on clean electricity) of Oakland's building sector. The 2030 ECAP includes a set of 40 Actions projected to result in a 60 percent reduction in GHG emissions by 2030, relative to Oakland's 2005 emission levels. Actions are split into seven sectors: Transportation and Land Use, Buildings, Material Consumption and Waste, Adaptation, Carbon Removal, City Leadership, and Port of Oakland.

The following 2030 ECAP Actions would affect private development in Oakland. Many of these actions would also reduce air quality emissions in addition to reducing GHG emissions such as:

> **TLU-1: Align all Planning Policies and Regulations with ECAP Goals and Priorities.** In the course of scheduled revisions, the City will amend or update the General Plan, Specific Plans, Zoning Ordinance, Subdivision Regulations, Parks Master Plan, and appropriate planning policies or regulations to be consistent with the GHG reduction, adaptation, resilience, and equity goals in this ECAP. Appropriate planning policies should study the following strategies and incorporate such policies that are found not to have adverse environmental or equity impacts:
>
> - Remove parking minimums and establish parking maximums where feasible, ensuring public safety and accessibility
> - Require transit passes bundled with all new major developments
> - Revise zoning such that the majority of residents are within 1/2-mile of the most essential destinations of everyday life
> - Provide density bonuses and other incentives for developments near transit that provide less than half of the maximum allowable parking

- Update the Transit Oriented Development (TOD) Guidelines to further prioritize development of housing near transit, including housing for low, very low, and extremely low-income levels
- Require structured parking be designed for future adaptation to other uses
- Institute graduated density zoning
- Remove barriers to and incentivize development of affordable housing near transit
- Incorporate policies addressing sea level rise, heat mitigation, and other climate risks into zoning standards and all long-range planning documents. Revise these policies every five years based on current science and risk projections
- Identify and remove barriers to strategies that support carbon reduction, adaptation, resilience, and equity goals, including community solar and energy storage

TLU-2: Align Permit and Project Approvals with ECAP Priorities. The City will amend Standard Conditions of Approval (SCAs), as well as mitigation measures and other permit conditions, to align with the ECAP's GHG reduction priorities. The City will explore adoption of a threshold of significance for GHG impacts to align with the ECAP. In applying conditions on permits and project approvals, the City will ensure that all cost-effective strategies to reduce GHG emissions from buildings and transportation are required or otherwise included in project designs, including infrastructure improvements like bicycle corridor enhancements, wider sidewalks, crossing improvements, public transit improvements, street trees and urban greening, and green stormwater infrastructure. Where onsite project GHG reductions are not cost-effective, prioritize local projects benefiting frontline communities.

TLU-5: Create a Zero Emission Vehicle (ZEV) Action Plan. Completion of the ZEV Action Plan by 2021 will increase adoption of electric vehicles and e-mobility while addressing equity concerns and prioritizing investment in frontline communities. The plan will set ambitious targets for ZEV infrastructure and be coordinated with other land use and mobility options so that ZEVs increase as a percentage of all vehicles while overall vehicle miles traveled decreases. The plan will address the following sectors: medium and heavy-duty vehicle electrification, including trucks and delivery vehicles; personal vehicle charging infrastructure in multifamily buildings, including affordable buildings; curbside charging; electric micromobility; workforce development; curbside charging in the public right-of-way; and City-owned parking facilities.

TLU-7: Rethink Curb Space. The City will prioritize use of curb space throughout the city by function. In order of priority, the City will allocate curb space for mobility needs for public transit and active transportation, such as walking and biking; access for people and commerce (loading zones and short-term parking); activation; and storage for long-term parking. The City's adopted Bike and Pedestrian Plans will be used to determine mobility needs. Where on-street parking is provided, the City will revise pricing, availability, and location of parking to encourage (in order of priority) active transportation, public transit, and clean vehicles, without increasing cost-burden to low-income residents and other sensitive populations such as seniors. The City will also require parking costs to be unbundled from residential and commercial leases.

TLU-8: Expand and Strengthen Transportation Demand Management Requirements. The City will increase TDM performance requirements for new developments where feasible to support the mode shifts necessary to achieve a low carbon transportation system. The City

will expand the TDM program to include requirements for existing employers, and fund ongoing monitoring and enforcement of TDM requirements.

B-1: Eliminate Natural Gas in New Buildings. By 2023, the City will prohibit new buildings and major renovations from connecting to natural gas infrastructure.

In addition, ECAP measures that may apply directly to private development include:

B-2: Plan for All Existing Buildings to be Efficient and All Electric by 2040. By 2022, the City will develop a policy roadmap to achieve decarbonization of the existing building stock by 2040, without additional cost burden or displacement risk to frontline communities.

MCW-6: Establish a Deconstruction Requirement. The City will establish a deconstruction requirement to reduce demolition waste from construction and renovation and facilitate material reuse. The City will regulate hauling and processing of construction and demolition debris to ensure that salvageable materials are identified and removed for reuse instead of being recycled or disposed to landfill.

A-6: Expand and Protect Green Infrastructure and Biodiversity. The City will fund and implement a green infrastructure program for the installation and maintenance of projects and existing civic resources such as the parks system and public spaces, to improve stormwater management, support biodiversity, reduce air pollution exposure, and increase access to natural spaces, including trees. The City will prioritize investment in frontline communities, and particularly in residential neighborhoods dominated by concrete and asphalt with limited green space and elevated air pollution, in Priority Conservation Areas, and in areas where green infrastructure, including trees and other types of vegetated buffers, can effectively address stormwater management issues and reduce air pollution exposure among sensitive populations.

West Oakland Community Action Plan

As discussed in the State regulatory section above, AB 617 known as the CAPP, requires that communities and air districts collaborate to reduce air pollution and associated health effects in certain impacted communities like West Oakland. Pursuant to AB 617, BAAQMD and the West Oakland Environmental Indicators Project (WOEIP) together developed a community emissions reduction plan for West Oakland, referred to as the WOCAP. The goal of the WOCAP is to improve community health by eliminating disparities in exposure to local air pollution; and the plan identifies 89 potential community-level strategies and control measures intended to reduce criteria pollutant and TAC emissions and decrease West Oakland residents' exposure to these TAC emissions. Specifically, the plan sets forth equity-based targets for cancer risk, DPM and $PM_{2.5}$ concentrations in seven "impact zones" that have the highest pollution levels in the City. These targets are: 1) by 2025, all neighborhoods in West Oakland have the same air quality as today's average West Oakland neighborhood; and 2) by 2030 all neighborhoods in West Oakland have the same air quality as today's "cleanest" West Oakland neighborhood (BAAQMD and WOEIP, 2019).

As discussed in the *Environmental Setting* section above, BAAQMD conducted a technical analysis to support the WOCAP pursuant to AB 617. This analysis spatially maps the contribution of emissions from major pollutant sources to pollutant concentrations within the community. The analysis evaluated $PM_{2.5}$ concentrations and potential health impacts (cancer risk) from directly

emitted $PM_{2.5}$ and TAC emissions (including DPM), which are the primary air pollutants that pose the greatest risk to the health of residents in West Oakland. This analysis includes many more existing sources of TAC emissions than the traditional CEQA screening tools discussed above.

The WOCAP CEQA document was certified on October 2, 2019 (BAAQMD and WOEIP, 2019). BAAQMD adopted the WOCAP on October 2, 2019, and CARB approved Resolution 19-29 adopting the WOCAP on December 5, 2019.[8] Specific strategies and emissions reduction measures are organized under the following categories: Health Programs, Land Use, Mobile Sources, and Stationary Sources.

Port of Oakland Seaport Air Quality 2020 and Beyond Plan

In June 2019, the Port of Oakland approved its *Seaport Air Quality 2020 and Beyond Plan* (2020 and Beyond Plan) to address emissions arising from equipment and operations at the Seaport, with a pathway towards zero emissions. The 2020 and Beyond Plan seeks to minimize emissions of criteria air pollutants and toxic air contaminants, including DPM, as well as GHG emissions. The 2020 and Beyond Plan has five goals:

1. Keep the Port competitive and financially sustainable, and ensure that the Port remains a catalyst for jobs and economic development.
2. Minimize emissions of criteria air pollutants and TACs, with a focus on reducing DPM emissions, thereby reducing community exposure to pollutants that are harmful to public health.
3. Reduce GHG emissions.
4. Build and strengthen partnerships among the Port, Port tenants, equipment manufacturers, equipment owners and operators, community organizations, regulatory agencies, and the public.
5. Provide opportunities for meaningful stakeholder engagement.

The 2020 and Beyond Plan goals and strategies are designed to complement concurrent and future plans and studies by federal, State, regional, and regulatory agencies and organizations to address air quality, community health risk, and climate change. It builds upon the Port's existing Maritime Air Quality Improvement Plan that was approved by the Board of Port Commissioners in 2009 (Port of Oakland, 2019). The 2020 and Beyond Plan includes three strategies that focus on actions that the Port can take to reduce GHG and DPM emissions, and three strategies that address the process of achieving a transition to a zero-emission Seaport. The strategies are put into effect through specific implementing projects or actions. The plan is to be implemented under three planning horizons—near-term (2019-2023), intermediate-term (2023-2030), and long-term (2030-2050).

4.2.2.5 City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) that are relevant to reducing impacts related to air quality are listed below. All SCAs would be adopted as enforceable conditions of approval and required, as applicable, to be implemented during construction and operation of future development under the Proposed Project to help ensure less-than-significant impacts related to

[8] California Air Resources Board Resolution 19-29 (December 5, 2019).

Air Quality. The SCAs are incorporated and required as part of the Proposed Project, so they are not listed as mitigation measures.

- **SCA 20: Dust Controls – Construction Related**

  Requirement: The project applicant shall implement all of the following applicable dust control measures during construction of the project:

  a) Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible.

  b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).

  c) 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.

  d) Limit vehicle speeds on unpaved roads to 15 miles per hour.

  e) All demolition activities (if any) shall be suspended when average wind speeds exceed 20 miles per hour.

  f) All trucks and equipment, including tires, shall be washed off prior to leaving the site.

  g) Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.

  [Enhanced Controls: All "Basic" controls listed above plus the following controls if the project involves: Extensive site preparation (i.e., the construction site is four acres or more in size); or Extensive soil transport (i.e., 10,000 or more cubic yards of soil import/export).]

  h) Apply and maintain vegetative ground cover (e.g., hydroseed) or non-toxic soil stabilizers to disturbed areas of soil that will be inactive for more than one month. Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).

  i) Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust off-site. Their duties shall include holidays and weekend periods when work may not be in progress.

  j) When working at a site, install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of the site, to minimize wind-blown dust. Windbreaks must have a maximum 50 percent air porosity.

  k) Post a publicly visible large on-site sign that includes the contact name and phone number for the project complaint manager responsible for responding to dust complaints and the telephone numbers of the City's Code Enforcement unit and the Bay Area Air Quality Management District. When contacted, the project complaint manager shall respond and take corrective action within 48 hours.

l) All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

- **SCA 21: Criteria Air Pollutant Controls – Construction Related**

Requirement: The project applicant shall implement all of the following applicable basic control measures for criteria air pollutants during construction of the project as applicable:

a) Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points.

b) Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off- Road Diesel Regulations").

c) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Equipment check documentation should be kept at the construction site and be available for review by the City and the Bay Area Air Quality District as needed.

d) Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall only be used if grid electricity is not available and propane or natural gas generators cannot meet the electrical demand.

e) Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings.

f) All equipment to be used on the construction site shall comply with the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") and upon request by the City (and the Air District if specifically requested), the project applicant shall provide written documentation that fleet requirements have been met.

Enhanced Controls

a) Criteria Air Pollutant Reduction Measures

Requirement: The project applicant shall retain a qualified air quality consultant to identify criteria air pollutant reduction measures to reduce the project's average daily emissions below 54 pounds per day of ROG, NOx, or PM2.5 or 82 pounds per day of PM10. Quantified emissions and identified reduction measures shall be submitted to the City (and the Air District if specifically requested) for review and approval prior to the issuance of building permits and the approved criteria air pollutant reduction measures shall be implemented during construction.

b) Construction Emissions Minimization Plan

Requirement: The project applicant shall prepare a Construction Emissions Minimization Plan (Emissions Plan) for all identified criteria air pollutant reduction measures. The Emissions Plan shall be submitted to the City (and the Air District if specifically requested) for review and approval prior to the issuance of building permits. The Emissions Plan shall include the following:

i. An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, and engine serial number. For all Verified Diesel Emissions Control Strategies (VDECS), the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date.

ii. A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract.

- **SCA 22: Diesel Particulate Matter Controls – Construction Related**

a) Diesel Particulate Matter Reduction Measures

Requirement: The project applicant shall implement appropriate measures during construction to reduce potential health risks to sensitive receptors due to exposure to diesel particulate matter (DPM) from construction emissions. The project applicant shall choose one of the following methods:

i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with current guidance from the California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment to determine the health risk to sensitive receptors exposed to DPM from project construction emissions. The HRA shall be submitted to the City (and the Air District if specifically requested) for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then DPM reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, DPM reduction measures shall be identified to reduce the health risk to acceptable levels as set forth under subsection b below. Identified DPM reduction measures shall be submitted to the City for review and approval prior to the issuance of building permits and the approved DPM reduction measures shall be implemented during construction.

-OR-

ii. All off-road diesel equipment shall be equipped with the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement) as certified by CARB. The equipment shall be properly maintained and tuned in accordance with manufacturer specifications. This shall be verified through an equipment inventory submittal and Certification Statement that the Contractor agrees to compliance and acknowledges that a significant violation of this requirement shall constitute a material breach of contract.

b) Construction Emissions Minimization Plan (if required by above)

Requirement: The project applicant shall prepare a Construction Emissions Minimization Plan (Emissions Plan) for all identified DPM reduction measures (if any). The Emissions Plan shall be submitted to the City (and the Bay Area Air Quality Management District if specifically requested) for review and approval prior to the issuance of building permits. The Emissions Plan shall include the following:

i. An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, and engine serial number. For all VDECS, the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date.

ii. A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract.

- **SCA 23: Exposure to Air Pollution (Toxic Air Contaminants)**
  - The project involves any of the following sensitive land uses:
    - Residential uses (new dwelling units, excluding secondary units); or
    - New or expanded schools, daycare centers, parks, nursing homes, or medical facilities; and
  - The project is located within 1,000 feet (or other distance as specified below) or one or more of the following sources of air pollution:
    - Freeway;
    - Roadway with significant traffic (at least 10,000 vehicles per day);
    - Rail line (except BART) with over 30 trains per day;
    - Distribution center that accommodates more than 100 trucks per day, more than 40 trucks with operating Transportation Refrigeration Units (TRUs) per day, or where the TRU nit operations exceed 300 hours per week;
    - Major rail or truck yard (such as the Union Pacific rail yard adjacent to the Port of Oakland);
    - Ferry terminal;
    - Stationary pollutant source requiring a permit from BAAQMD (such as a diesel generator);
    - Within 0.5 miles of the Port of Oakland or Oakland Airport;
    - Within 300 feet of a gas station; or
    - Within 300 feet of a dry cleaner with a machine using PERC (or within 500 feet of a dry cleaner with two or more machines using PERC); and

- The project exceeds the health risk screening criteria after a screening analysis is conducted in accordance with the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines.

a) Health Risk Reduction Measures

Requirement: The Project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to exposure of toxic air contaminants. The project applicant shall choose one of the following methods:

i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk of exposure of project residents/occupants/users to air pollutants. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. The approved risk reduction measures shall be implemented during construction and/or operations as applicable.

-OR-

ii. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:

    - Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 [insert MERV-16 for projects located in the West Oakland Specific Plan area] or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.

    - Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph).

    - Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible.

    - The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall be located as far away as feasible from a loading dock or where trucks concentrate to deliver goods.

    - Sensitive receptors shall be located on the upper-floors of buildings, if feasible.

    - Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (Pinus nigra var. maritima), Cypress (X Cupressocyparis

leylandii), Hybrid poplar (Populus deltoids X trichocarpa), and Redwood (Sequoia sempervirens).

- Sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible.
- Existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible.
- Emissions from diesel trucks shall be reduced through implementing the following measures, if feasible:
  - Installing electrical hook-ups for diesel trucks at loading docks.
  - Requiring trucks to use Transportation Refrigeration Units (TRUs) that meet Tier 4 emission standards.
  - Requiring truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels.
  - Prohibiting trucks from idling for more than two minutes.
  - Establishing truck routes to avoid sensitive receptors in the project. A truck route program, along with truck calming, parking, and delivery restrictions, shall be implemented.

b) Maintenance of Health Risk Reduction Measures

Requirement: The project applicant shall maintain, repair, and/or replace installed health risk reduction measures, including but not limited to the HVAC system (if applicable), on an ongoing and as-needed basis. Prior to occupancy, the project applicant shall prepare and then distribute to the building manager/operator an operation and maintenance manual for the HVAC system and filter including the maintenance and replacement schedule for the filter.

- **SCA 24: Stationary Sources of Air Pollution (Toxic Air Contaminants)**

  Requirement: The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to on-site stationary sources of toxic air contaminants. The project applicant shall choose one of the following methods:

  a) The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk associated with proposed stationary sources of pollution in the project. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City.

  -OR-

  b) The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the city for review and approval and be

included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:

i. Installation of non-diesel fueled generator, if feasible; or

ii. Installation of diesel generators with an EPA-certified Tier 4 engine or engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy, if feasible.

- **SCA 25: Truck-Related Risk Reduction Measures (Toxic Air Contaminants)**

  a) Truck Loading Docks

  Requirement: The project applicant shall locate proposed truck loading docks as far from nearby sensitive receptors as feasible.

  b) Truck Fleet Emissions Standards

  Requirement: The project applicant shall comply with all applicable California Air Resources Board (CARB) requirements to control emissions from diesel engines and demonstrate compliance to the satisfaction of the City. Methods to comply include, but are not limited to, new clean diesel trucks, higher-tier diesel engine trucks with added Particulate Matter (PM) filters, hybrid trucks, alternative energy trucks, or other methods that achieve the applicable CARB emission standard. Compliance with this requirement shall be verified through CARB's Verification Procedures for In-Use Strategies to Control Emissions from Diesel Engines.

- **SCA 26: Asbestos in Structures**

  Requirement: The project applicant shall comply with all applicable laws and regulations regarding demolition and renovation of Asbestos Containing Materials (ACM), including but not limited to California Code of Regulations, Title 8; California Business and Professions Code, Division 3; California Health and Safety Code sections 25915-25919.7; and Bay Area Air Quality Management District, Regulation 11, Rule 2, as may be amended. Evidence of compliance shall be submitted to the City upon request.

- **SCA 27: Naturally-Occurring Asbestos**

  Requirement: The project applicant shall comply with all applicable laws and regulations regarding construction in areas of naturally-occurring asbestos, including but not limited to, the Bay Area Air Quality Management District's (BAAQMD) Asbestos Airborne Toxic Control Measures for Construction, Grading, Quarrying, and Surface Mining Operations (implementing California Code of Regulations, section 93105, as may be amended) requiring preparation and implementation of an Asbestos Dust Mitigation Plan to minimize public exposure to naturally occurring asbestos. Evidence of compliance shall be submitted to the City upon request.

The following City SCAs indirectly apply to air quality impacts.

- **SCA 41: Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist** (see Section 4.7, *Greenhouse Gas Emissions*)
- **SCA 42: Greenhouse Gas (GHG) Reduction Plan** (see Section 4.7, *Greenhouse Gas Emissions*)
- **SCA 77: Plug-In Electric Vehicle (PEV) Charging Infrastructure** (see Section 4.15, *Transportation and Circulation*)

- **SCA 78: Transportation and Parking Demand Management** (see Section 4.15, *Transportation and Circulation*)

4.2.3 Environmental Analysis

This section analyzes impacts related to air quality that could occur from adoption of the Proposed Project. It describes the methods used to determine impacts and lists the thresholds that were used to conclude whether an impact would be significant. Mitigation measures are identified as necessary to reduce or avoid significant impacts.

4.2.3.1 Significance Criteria

The City of Oakland has established thresholds of significance for CEQA impacts which incorporate those in Appendix G of the *CEQA Guidelines* (City of Oakland, 2020a). The Proposed Project would have a significant adverse impact related to air quality impact if it would:

Plan-Level Impacts[9]

1. Fundamentally conflict with the primary goals of the Bay Area Clean Air Plan;
2. Fundamentally conflict with the Clean Air Plan because the plan does not demonstrate reasonable efforts to implement control measures contained in the Clean Air Plan or the plan conflicts with or obstructs implementation of any control measures in the Clean Air Plan;
3. Not include special overlay zones containing goals, policies, and objectives to minimize potential TAC impacts in areas located (a) near existing and planned sources of TACs and (b) within 500 feet of freeways and high-volume roadways containing 100,000 or more average daily vehicle trips;[10] or
4. Not identify existing and planned sources of odors with policies to reduce potential odor impacts.

Project-Level Impacts

5. During project construction, result in average daily emissions of 54 pounds per day of ROG, NO_x, or $PM_{2.5}$ exhaust; or 82 pounds per day of PM_{10} exhaust.
6. During project operation, result in average daily emissions of 54 pounds per day of ROG, NO_x, or $PM_{2.5}$; or 82 pounds per day of PM_{10}; or result in maximum annual emissions of 10 tons per year of ROG, NO_x, or $PM_{2.5}$; or 15 tons per year of PM_{10}.
7. Contribute to CO concentrations exceeding the CAAQS of 9 parts per million (ppm) averaged over 8 hours or 20 ppm over 1 hour.[11]

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9 The plan-level thresholds should be applied to long-range planning documents such as general plans, redevelopment plans, specific plans, area plans, and community plans.

10 Pursuant to BAAQMD Guidelines, the size of the overlay zones should be based upon the recommended buffer distances contained within the California Air Resources Board's (CARB's) 2005 Land Use Handbook.

11 Pursuant to BAAQMD CEQA Guidelines, localized CO concentrations should be estimated for projects in which: (a) project-generated traffic would conflict with an applicable congestion management program established by the county congestion management agency; or (b) project-generated traffic would increase traffic volumes at affected intersections to more than 44,000 vehicles per hour (or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited, such as tunnels, parking garages, bridge underpasses, natural or urban street canyons, and below-grade roadways). In Oakland, only the MacArthur Maze portion of Interstate 580 exceeds the 44,000 vehicles per hour screening criteria.

8. For new sources of TACs, during either project construction or project operation, expose sensitive receptors to substantial levels of TACs under project conditions resulting in:

   a. An increase in cancer risk level greater than 10 in one million;

   b. A non-cancer risk (chronic or acute) hazard index greater than 1.0; or

   c. Annual average PM2.5 of greater than 0.8 micrograms per cubic meter.[12]

   Or, under cumulative conditions resulting in,

   a. A cancer risk level greater than 100 in a million;

   b. A non-cancer risk (chronic or acute) hazard index greater than 10.0; or

   c. Annual average $PM_{2.5}$ of greater than 0.8 micrograms per cubic meter.[13]

9. Expose new sensitive receptors to substantial ambient levels of TACs resulting in

   a. A cancer risk level greater than 100 in a million;

   b. A non-cancer risk (chronic or acute) hazard index greater than 10.0; or

   c. Annual average $PM_{2.5}$ of greater than 0.8 micrograms per cubic meter.[14]

10. Frequently and for substantial duration, create or expose sensitive receptors to substantial objectionable odors affecting a substantial number of people.[15]

4.2.3.2 Approach to Analysis / Methodology

The following analysis is based on guidance from BAAQMD provided in the 2017 BAAQMD CEQA Guidelines (BAAQMD, 2017b). The air district's guidelines identify different approaches to analyzing plans versus projects.

This is a program-level EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Potential impacts of the Proposed Project are analyzed within the context of existing plans and policies, permitting requirements, local ordinances, and the City of Oakland's SCAs.

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future

[12] Pursuant to BAAQMD CEQA Guidelines, when siting new TAC sources, consider receptors located within 1,000 feet. For this threshold, sensitive receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers. The cumulative analysis would consider the combined risk from all TAC sources.

[13] Pursuant to BAAQMD CQA Guidelines, when siting new TAC sources consider receptors located within 1,000 feet. For this threshold, sensitive receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers. The cumulative analysis should consider the combined risk from all TAC sources.

[14] Pursuant to BAAQMD CEQA Guidelines, when siting new sensitive receptors, consider TAC sources located within 1,000 feet including, but not limited to, stationary sources, freeways, major roadways (10,000 or greater vehicles per day), truck distribution centers, airports, seaports, ferry terminals, and rail lines. For this threshold, sensitive receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers.

[15] For this threshold, sensitive receptors include residential uses, schools, daycare centers, nursing homes, and medical centers (but not parks).

development under the Proposed Project, this EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas and analyzes the impacts of housing development through the projection period ending in 2030.

Plan-Level Analysis

The Proposed Project is a planning document that would not directly result in physical changes to the existing environment. BAAQMD has adopted plan-level thresholds of significance to assist lead agencies in the evaluation and mitigation of plan-level air quality impacts under CEQA. BAAQMD's plan-level thresholds of significance, which the City of Oakland has adopted into their significance criteria, establishes criteria with which to evaluate plan-level impacts with respect to criteria air pollutants, health risks, and odors. Therefore, BAAQMD's CEQA Guidelines was used to determine potential plan-level impacts from the proposed *Phase I Oakland 2045 General Plan Update*. The BAAQMD thresholds of significance for plans are summarized in **Table 4.2-6**.

TABLE 4.2-6
BAAQMD THRESHOLDS OF SIGNIFICANCE FOR PLANS

	Construction	Operation
Criteria Air Pollutants and Precursors	None	Consistency with the current Air Quality Plan; and Projected VMT or vehicle trip increase is less than or equal to the projected population increase.
Local Community Risk and Hazards	Land use diagram identifies special overlay zones around existing and planned sources of TACs and $PM_{2.5}$, including special overlay zones of at least 500 feet (or Air District-approved modeled distance) on each side of all freeways and high-volume roadways, and plan identifies goals, policies, and objectives to minimize potentially adverse impacts.	
Odors	Identify locations of odor sources in plan; identify goals, policies, and objectives to minimize potentially adverse impacts.	

SOURCE: BAAQMD, 2017b.

Specifically, this section starts with an assessment of consistency with the Clean Air Plan by evaluating the Proposed Project's consistency with various Clean Air Plan air pollution control strategies and by comparing the Proposed Project's VMT increase to its projected population increase. For health risk, the plan-level analysis describes BAAQMD's guidance, which calls for examining the impact of the environment on the project (i.e., how would existing sources of TAC and $PM_{2.5}$ affect new residents), and provides information to inform potential future development that minimizes health impacts, while recognizing that the focus of CEQA is impacts of the project on the environment.[16] The analysis also assesses any potential odor sources anticipated as part of the plan.

Project-Level Analysis

In addition to assessing potential air quality impacts resulting adoption of the Proposed Project at a plan level, the following analysis considers the potential for significant impacts as a result of future projects that may be constructed under the Proposed Project. The BAAQMD CEQA Guidelines identifies thresholds of significance for project-level impacts from emissions of

[16] This is pursuant to the *California Building Industry Association v. Bay Area Air Quality Management District* case decided in 2015.

criteria air pollutants, contribution to health risks, and odorous emissions. BAAQMD thresholds of significance for project-level impacts are summarized in **Table 4.2-7**.

TABLE 4.2-7
BAAQMD THRESHOLDS OF SIGNIFICANCE FOR PROJECTS

		Construction	Operation	
Criteria Air Pollutants and Precursors	**ROG**	54 average pounds per day	54 average pounds per day	10 maximum tons per year
	NO_x	54 average pounds per day	54 average pounds per day	10 maximum tons per year
	PM_{10} exhaust	84 average pounds per day	84 average pounds per day exhaust	15 maximum tons per year
	$PM_{2.5}$ exhaust	54 average pounds per day	54 average pounds exhaust per day	10 maximum tons per year
	PM_{10}/$PM_{2.5}$ fugitive dust	Implementation of Best Management Practices	None	
	CO	None	9.0 ppm (8-hour average)	20.0 ppm (1-hour average)
Risk and Hazards for New Sources and Receptors (Individual Project)		Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient $PM_{2.5}$ increase: > 0.3 µg/m3 annual average Zone of Influence: 1,000-foot radius from property line of source or receptor	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient $PM_{2.5}$ increase: > 0.3 µg/m3 annual average Zone of Influence: 1,000-foot radius from property line of source or receptor	
Risk and Hazards for New Sources and Receptors (Cumulative)		Compliance with Qualified Community Risk Reduction Plan OR Cancer: > 100 in a million (from all local sources) Non-cancer: > 10.0 Hazard Index (from all local sources) (Chronic) $PM_{2.5}$: > 0.8 µg/m3 annual average (from all local sources) Zone of Influence: 1,000-foot radius from property line of source or receptor	Compliance with Qualified Community Risk Reduction Plan OR Cancer: > 100 in a million (from all local sources) Non-cancer: > 10.0 Hazard Index (from all local sources) (Chronic) $PM_{2.5}$: > 0.8 µg/m3 annual average (from all local sources) Zone of Influence: 1,000-foot radius from property line of source or receptor	
Odors		None	Five confirmed complaints per year, averaged over three years	

SOURCE: BAAQMD, 2017b.

Evaluating health risks for worker receptors as well as annual average $PM_{2.5}$ concentrations from fugitive construction dust emissions is currently not recommended by BAAQMD for air quality assessments as stipulated in the BAAQMD CEQA Guidelines (BAAQMD, 2017b). However, as discussed above, BAAQMD is in the process of updating their health risk assessment guidelines. This update may recommend that lead agencies consider offsite workers as sensitive receptors and estimate annual average $PM_{2.5}$ concentrations from fugitive construction dust emissions in health risk assessments for projects. The City may update their thresholds of significance and modeling methods after the revised BAAQMD guidelines are published. However, it would be speculative to anticipate the specific language and timing of the BAAQMD CEQA Guidelines revisions at the time this Draft EIR is published, which is prior to publication of the revised guidelines.

While the exact timing of development is unknown and will ultimately be market driven, this analysis incudes a qualitative discussion of criteria pollutant emissions and health risk that my

result from construction and operation of future development under the Proposed Project. The following analysis also identifies mitigation measures that would apply to future development under the proposed the Proposed Project to minimize impacts, where necessary.

4.2.3.3 Proposed 2045 General Plan Policies, Land Use and Zoning

Safety Element

The following policies directly and indirectly pertaining to air quality are proposed as a part of the Safety Element Update in the Proposed Project.

> ***SAF-3.5: Green Stormwater Infrastructure.*** Fund and implement a green infrastructure program for the installation and maintenance of projects and existing civic resources such as the parks system and public spaces, to improve stormwater management, support biodiversity, reduce air pollution exposure, improve water quality, and increase access to natural spaces, including trees. Prioritize green stormwater infrastructure investment in frontline communities, and particularly in residential neighborhoods dominated by concrete and asphalt with limited green space and elevated air pollution, in Priority Conservation Areas, and in areas where green infrastructure, including trees and other types of vegetated buffers, can effectively address stormwater management issues and reduce air pollution exposure among sensitive populations. *This policy is cross-listed as Action EJ-A.13 in the Environmental Justice Element.*
>
> ***SAF 5.1 Risks from Hazardous Materials Facilities.*** Review proposed facilities that would produce or store hazardous materials, gas, natural gas, or other fuels to identify, and require feasible mitigation for, any significant risks. The review shall consider, at a minimum, the following:
>
> - presence of seismic or geologic hazards;
> - presence of other hazardous materials;
> - proximity to residential development and areas in which substantial concentrations of people exist, particularly environmental justice communities already overburdened by pollution, including toxic releases from facilities, cleanup sites, groundwater threats/threats from sea level rise, and other sources; and
> - nature and level of risk and hazard associated with the proposed project.

Environmental Justice Element

The following policies and actions directly and indirectly pertaining to air quality are proposed as a part of the Environmental Justice Element in the Proposed Project.

Policies:

> ***EJ-1.1: Toxic Air Contaminants.*** Reduce the public's exposure to toxic air contaminants through appropriate land use and transportation strategies, particularly in Environmental Justice Communities and other areas most burdened by air pollution, as identified in **Figure EJ-12.**
>
> ***EJ-1.2: Truck Emissions and Pollution Exposure.*** Minimize air pollution and exposure of sensitive uses to truck pollution, particularly in EJ Communities and other areas most

burdened by air pollution, while recognizing the Port of Oakland's role as the highest-volume shipping port in Northern California.

EJ-1.3: Industrial Uses Near Sensitive Land Uses. Ensure that heavy industrial uses are adequately buffered from residential areas, schools and other sensitive land uses. In new developments, require adequate mitigation of air contaminant exposure and vegetative barriers near large stationary and mobile sources of air pollution.

EJ-1.4: Performance Standards. Develop zoning standards applicable to new industrial and commercial developments in order to minimize or avoid the potential for adverse effects related to air quality, noise, or safety on adjacent existing residential uses and Environmental Justice Communities. This could include expansion of the S-19 Health and Safety Protection Combining Zone to include air quality effects.

EJ-1.5: Regulating Polluting Uses. Develop more stringent permitting standards and limit the number of variances approved for new, high-intensity, industrial or commercial land uses near sensitive uses in Environmental Justice Communities. *See also Policy SAF-5.1.*

EJ-1.6 Enhanced Enforcement. Prioritize code enforcement and cessation of illegal uses and activities that cause pollution and are hazardous to health in EJ Communities.

EJ-1.7: Truck-Related Impacts. For new warehouses and truck-related businesses, reduce impacts from truck loading and delivery including noise/vibration, odors, air pollution, and greenhouse gas emissions.

EJ-1.8: Air Filtration. Consistent with the State's Building Energy Efficiency Standards for air filtration in effect as of January 1, 2023, the City of Oakland shall require newly constructed buildings of four or more habitable floors to include air filtration systems equal to or greater than MERV 13 (ASHRAE Standard 52.2), or a particle size efficiency rating equal to or greater than 50 percent in the 0.3-1.0 μm range and equal to or greater than 85 percent in the 1.0-3.0 μm range (AHRI Standard 680).

EJ-1.9: EV Charging. Require industrial and warehouse facilities to provide electrical connections for electric trucks and transport refrigeration units in support of CARB regulations.

EJ-1.10: Reduce Emissions from Port Operation. Support Port of Oakland's efforts to reduce emissions as part of operation and compliance with CARB regulations. This could include:

- Support of zero-emission drayage truck operations through appropriate local ordinance amendments, including allowable weight limits for single-axle, zero-emission trucks on local streets, and developing an investment plan for needed upgrades.
- Provision of data or staff time to study of the effects on truck flow and congestion due to increasing visits from larger container ships, the feasibility of an off-terminal container yard that utilizes zero-emission trucks to move containers to and from the marine terminals, and the potential efficiency gains from increasing the number of trucks hauling loaded containers on each leg of a roundtrip to the Port.

EJ-1.11: Building Electrification. Continue to enforce compliance with the Building Electrification Ordinance, which requires new buildings to be natural gas-free and support the transition of existing buildings to natural gas alternatives in order to improve safety and air quality and reduce health risks. This could include:

- Ensuring that all new developments reduce on-site natural gas combustion through electrification of heating and cooking technologies.

EJ-1.13: Emissions from Construction Activities. Require projects to implement construction air pollution and greenhouse gas emissions controls and applicable mitigation strategies for all construction sites to the maximum extent feasible. Refer to Best Construction Practices and Best Available Retrofit Control Technology (BARCT) recommended by BAAQMD.

EJ 1.14: Reduced Exposure to Air Pollution for Project Occupants. Incorporate measures to improve indoor air quality and reduce exposure to air pollution in new development projects.

EJ-1.15: Sensitive Uses. Coordinate with BAAQMD and community partners in evaluating human exposure to toxic air contaminants, particularly in frontline and environmental justice communities, and impose conditions as appropriate on projects to protect public health and safety beyond those in the 2020 standard conditions of approval.

EJ-1.16: Community Air Protection. On an ongoing basis, support BAAQMD, community members, businesses, and other stakeholders in developing and implementing Community Air Monitoring Plans, Community Emissions Reduction Plans, and other air pollution control initiatives pursuant to SB 617. Supportive City actions may include:

- Participation on steering committees and technical advisory committees.
- Co-investments that leverage additional funding for actions in frontline and environmental justice communities.
- Utilization of community-collected air quality data in policy development and evaluation.
- Contracts with community partners and other air pollution monitoring organizations to obtain more granular pollution data.

EJ-1.17: Data-Informed Efforts. Collaborate with BAAQMD, community organizations, and other stakeholders, to use air quality monitoring data to inform area-specific improvement actions outside of SB 617-related efforts. Such actions may include:

- Prioritizing areas for capital investments with co-benefits for air quality, such as the planting of trees and installation of EV charging infrastructure.
- Integrating air quality improvement actions into planning efforts, such as new specific plans, master plans, or area plans that will guide development in impacted areas.
- Limiting the establishment of new sources of air pollutants in areas with elevated levels of pollutant concentrations unless appropriate mitigation is implemented.

- Obtaining and using hyperlocal data along with community ground-truthing to more accurately inform development of air quality improvement strategies that are most effective and responsive to the needs of EJ Communities.

- Seeking opportunities to enhance existing air monitoring efforts, such as by working with BAAQMD and helping to expand the current monitoring network, especially where sensitive uses are within close proximity (within 500 feet) of pollution sources.

- Partnering with industrial and warehouse facility owners, community-based environmental and energy justice organizations to install rooftop solar PV systems to power EV charging stations.

EJ-1.18: Impact Assessment and Mitigation. Continue to use BAAQMD modeling tools and guidance documents as appropriate to identify and mitigate air quality impacts from proposed development projects.

EJ-1.19: Regional Coordination. Support air quality planning efforts led by other local, regional, and State agencies while simultaneously leveraging City authority and resources to focus on reducing air pollution burden in EJ Communities.

Actions:

EJ-A.1: Amend the City's Zoning code to include the following changes:

- Allow greater residential density in less-polluted areas, including existing single-family residential neighborhoods.

- Condition the permitting of heavy industrial businesses within five hundred (500) feet of a zone that permits residential activities.

- Establish special permit criteria for truck-intensive industrial activities located within five hundred (500) feet of any zone that permits residential activities.

- Establish special performance standards and standard conditions of approval for Truck-Intensive Industrial Activities located within five hundred (500) feet of any zone that permits residential activities.

- Amend the permit procedures for nonconforming Truck-Intensive Industrial Activities

- Condition the permitting of commercial kitchen operations designed for online ordering and food delivery.

- Modify the S-19 Health and Safety Protection Combining Zone to prohibit use of diesel generators as the primary source of power within five hundred (500) feet from any Residential, Open Space, or Institutional Zone boundary.

EJ-A.2: Adopt more stringent air quality construction and operations requirements for development near or within industrially zoned land as part of standard conditions of approval.

EJ-A.3: Work with BAAQMD and other partners in the region to explore creation of a grant program for installation and maintenance of air filtration devices/systems in existing buildings. Develop a list of priority buildings near heavy industrial uses,

including schools, nursing homes, and other sensitive uses within EJ Communities and areas most affected by air quality issues, shown in Figure EJ-12.

EJ-A.4: In partnership with representative groups from EJ Communities, develop a Carbon Sequestration Incubator in Oakland to incubate and develop green jobs in urban agriculture, urban forestry, aquatic and riparian restoration, and/or other forms of carbon removal. Assess market opportunities, policy drivers, potential locations, and existing businesses and nonprofits that may benefit from collaborating in such a space

EJ-A.5: Study the feasibility of an amortization ordinance, which allows the City to identify and prioritize nonconforming land uses (which could include existing polluting industries) to phase out over time. The study should recommend an implementation plan that includes criteria to determine which industries to amortize. Criteria could include total cost of land and improvements; cost of moving and reestablishing the use elsewhere; whether the use is significantly non-conforming; compatibility with existing land use patterns and densities; and possible threat to public health, safety, or welfare.

EJ-A.6: Prioritize and implement vegetative buffer projects, including those between industrial land and sensitive land uses, as identified in specific plans and community plans, including EONI and WOCAP.

EJ-A.8: As part of the LUTE update in Phase 2, explore modifications to truck routes and truck management in partnership with the Port of Oakland and WOIEP.

EJ-A.10: Adopt requirements that new commercial and employment uses that generate truck traffic are located along existing truck routes to the extent feasible and work with project proponents to develop preferred truck routing that avoids sensitive land uses, such as schools, hospitals, elder and childcare facilities, and residences wherever feasible.

EJ-A.11: Coordinate with public agencies in the Bay Area region to catalyze the development and deployment of zero emission medium- and heavy-duty fleets and support development of shared charging hubs and resources. Support advocacy efforts for significant additional funding for retrofitting or replacing diesel trucks with zero-emission EV trucks, prioritizing a just transition approach by including economic support for independent truckers to compensate for lost wages while waiting for retrofitted or new EV trucks.

EJ-A.12: Work with the Port of Oakland to establish permanent locations for parking and staging of Port-related trucks and cargo equipment, i.e. tractors, chassis, and containers. Such facilities will provide long-term leases to parking operators and truck owner-operators at competitive rates. Such facilities will be at the City or Port logistics center or otherwise not adjacent to Oakland residents who are disproportionately impacted by poor air quality.

EJ-A.14: Fund and implement a green infrastructure program for the installation and maintenance of projects and existing civic resources such as the parks system and public spaces, to improve stormwater management, support biodiversity, reduce air pollution exposure, improve water quality, and increase access to natural spaces, including trees. Prioritize investment in frontline communities, and particularly in residential neighborhoods dominated by concrete and asphalt with limited green space and elevated air pollution, in Priority Conservation Areas, and in areas where

green infrastructure, including trees and other types of vegetated buffers, can effectively address stormwater management issues and reduce air pollution exposure among sensitive populations.

- Consider and give priority to specific projects identified in the West Oakland Specific Plan, EONI and other community and specific plans. Continue to work with community groups throughout the implementation process.
- Utilize the Priority Conservation Areas "Equity Checklist".

EJ-A.26: As part of the LUTE update in Phase 2, include policies that promote a fine-grained neighborhood land use pattern that encourages walking, biking, and getting around without a car.

EJ-A.29: Prioritize urban greening projects identified in community plans, such as EONI, WOCAP, and others. Implement projects in partnership with community groups in EJ Communities.

4.2.4 Impacts of the Project

Impact AIR-1: Adoption of the Proposed Project would not conflict with or obstruct implementation of the applicable air quality plan. (Criteria 1 and 2) (*Less than Significant*)

The most recently adopted air quality plan for the SFBAAB is the 2017 Clean Air Plan (BAAQMD, 2017c). The 2017 Clean Air Plan is a road map that demonstrates how the SFBAAB will implement all feasible measures to reduce ozone precursors (ROG and NO_x) and reduce transport of ozone and its precursors to neighboring air basins, in accordance with the requirements of the California CAA. It also provides a control strategy to reduce PM, air toxics, and GHGs. In determining consistency with the 2017 Clean Air Plan, this analysis considers whether the Proposed Project would:

- Support the primary goals of the 2017 Clean Air Plan;
- Include applicable control measures of the 2017 Clean Air Plan; and
- Avoid disrupting or hindering implementation of control measures identified in the 2017 Clean Air Plan.

The primary goals of the 2017 Clean Air Plan are: to protect air quality and public health at the regional and local scale, to protect the climate by reducing regional criteria air pollutant emissions, and to reduce local air quality-related health risks (by meeting State and national ambient air quality standards). To meet these goals, the 2017 Clean Air Plan includes 85 control measures aimed at reducing air pollutants in the SFBAAB (BAAQMD, 2017c). These control measures are grouped into the following sectors: stationary (industrial) sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, super-GHGs, and areas for future study. The vast majority of the control measures included in the 2017 Clean Air Plan involve rulemaking or other actions under the jurisdiction of agencies not directly involved with design and approval of future development under the Proposed Project and therefore do not directly apply. For example, the Agriculture, Natural and Working Lands, and Water measures address emissions sources not applicable to the Proposed Project, but rather the

air district's own programs and regional air quality planning and are, therefore, less applicable to local agencies' decisions. In addition, 40 of the 85 control measures address stationary sources (such as oil refineries and cement kilns, and large boilers used in commercial and industrial facilities) and will be implemented by the air district using its permit authority. Therefore, these measures are not suited to implementation through local planning efforts.

The Proposed Project would promote increased residential density in high resource areas, areas near transit stations, and along transit corridors. It would also provide greater allowances for a range of house-scale buildings with multiple units thereby allowing medium density housing in existing lower-density residential neighborhoods. As described below and throughout this Draft EIR, proposed updated and new goals, policies, and actions would also promote transportation alternatives and energy conservation, encourage tree-plantings, improve water quality, and reduce air pollution exposure. Future development under the Proposed Project would provide higher-density development along transit corridors and near regional transit, facilitating denser land use patterns throughout the City which would support the implementation of transportation-, energy-, building-, waste-, and water conservation-related measures discussed in the 2017 Clean Air Plan and would not hinder its implementation. The relevant sectors are discussed further below.

Stationary Source Control Measures

Stationary sources of air pollution include oil refineries, cement plants, natural gas distribution facilities, crude oil and natural gas production facilities, gas station, dry cleaners, metal fabricators, chemical and pharmaceutical production facilities, diesel generators, and large boilers use in commercial and industrial facilities. Stationary sources are regulated by BAAQMD through rulemaking, permitting, and enforcement programs. The Stationary Source Control Measures that would be supported by the Proposed Project include the following:

- SS 32: Emergency Backup Generators;
- SS 33: Commercial Cooking Equipment;
- SS 36: PM from Trackout; and
- SS 38: Fugitive Dust.

Many of the stationary source control measures propose regulatory action and would not be the responsibility of future actions under the Proposed Project. Any stationary sources of air pollution that would be incorporated into future development under the Proposed Project would be regulated by BAAQMD, and the Proposed Project would not hinder the implementation of these measures. Future development under the Proposed Project would incorporate SCA's 20 through 24, discussed above, would further support the stationary source measures included in the Clean Air Plan. In addition, incorporation of the proposed updated and new goals, policies, and actions such as EJ-1.1, Toxic Air Contaminants, and EJ-1.15, Sensitivity Uses, would continue to reinforce BAAQMD's air toxics program to reduce the public's exposure to toxic air contaminants.

Transportation Control Measures

The Transportation Control Measures concern improving transit systems, improving efficiency of the region's transportation system, encouraging residents and employees to exhibit "sustainable

transportation behavior," improving bicycle and pedestrian facilities, and supporting high-density growth. The Proposed Project would thereby support the implementation of the following Transportation Control Measures included in the 2017 Clean Air Plan:

- TR 3: Local and Regional Bus Service;
- TR 4: Local and Regional Rail Service;
- TR 5: Transit Efficiency and Use;
- TR 9: Bicycle and Pedestrian Access and Facilities; and
- TR 10: Land Use Strategies.

The large majority of future development under the Proposed Project would be concentrated in areas that are served by local and regional bus service, as well as regional rail services, which would contribute to increased transit use and efficiency within the region. In addition, incorporation of the proposed updated and new actions such as EJ-A.27, would promote a fine-grained neighborhood land use pattern that encourages walking, biking, and getting around without a car. Furthermore, development within the Plan Area would place residents near existing and proposed future bikeways and pedestrian pathways that have been identified by the City's 2017 Oakland Pedestrian Plan and the 2019 Oakland Bike Plan (see Section 4.15, *Transportation and Circulation*). Overall, development under the Proposed Project would increase resident access to alternative modes of transportation including bicycle/pedestrian facilities and transit, which would reduce VMT per capita, thereby reducing criteria pollutant and TAC emissions. In addition, incorporation of SCA 77, Plug-In Electric Vehicle (PEV) Charging Infrastructure; and SCA 78, Transportation and Parking Demand Management, would have the potential to further reduce operational emissions by encouraging the use of alternatively powered vehicles, and reducing emissions associated with vehicle trip generation, respectively.

Energy Control Measures

The Proposed Project would also, through implementation of existing, local, regional, and State policies, further the 2017 Clean Air Plan's Energy Control Measures. The Energy Control Measures included in the 2017 Clean Air Plan focus on decreasing the amount of electricity consumed within the SFBAAB, which indirectly generates pollutant emissions during the energy generation process; as well as decreasing the carbon intensity of the electricity used. More specifically, the Energy Control Measures of the 2017 Clean Air Plan include:

- EN 1: Decarbonize Electricity Production; and
- EN 2: Decrease Electricity Demand.

Future development under the Proposed Project would be required to comply with the most recent applicable standards included in Title 24, Part 6 of the California Code of Regulations, the CALGreen Code, the City of Oakland Green Building Ordinance, and the City of Oakland Ordinance Requiring All-Electric Construction in Newly Constructed Buildings. These standards are meant to reduce energy use and improve energy efficiency of development. In addition, East Bay Community Energy (EBCE), a community choice aggregation, offers clean energy to City residents, and will be available to residents of future development under the Proposed Project. Proposed updated and new goals, policies, and actions such as EJ-1.9, EV Charging; and EJ-1.11,

Building Electrification, would support energy conservation in new development. In addition, almost all of the SCAs listed in Section 4.2.3, above, as well as those listed in Section 4.15, *Transportation and Circulation,* would also reduce energy use.

Buildings Control Measures

The 2017 Clean Air Plan includes four Buildings Control Measures to improve the energy efficiency of existing buildings, to promote the use of electricity and on-site renewable energy in existing and new buildings, and to ensure that new construction is designed to achieve zero net GHG emissions. The Buildings Control Measures that would be applicable to the Proposed Project include:

- BL 1: Green Buildings;
- BL 2: Decarbonize Buildings; and
- BL 4: Urban Heat Island Mitigation.

As discussed above, future development under the Proposed Project would be required to comply with the most recent applicable standards included in Title 24, Part 6 of the California Code of Regulations, the CALGreen Code, the City of Oakland Green Building Ordinance, and the City of Oakland Ordinance Requiring All-Electric Construction in Newly Constructed Buildings, which would lead to energy-related improvements that would reduce emissions. Proposed updated and new goals, policies, and actions such as EJ-1.9, EV Charging, EJ-1.8, Air Filtration, EJ-11.11, Building Electrification, EJ-4.5: Improve Indoor Air Quality in Existing Buildings, EJ-4.6, Environmental Quality, as well as actions EJ-A.3,would support green building initiatives in new development and existing buildings. In addition, incorporation of SCA 23, Exposure to Air Pollution (Toxic Air Contaminants), SCA 41, Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist, SCA 42, Greenhouse Gas Reduction Plan, and SCA 77, Plug-In Electric Vehicle (PEV) Charging Infrastructure, would encourage implementation of additional green building measures into future development under the Proposed Project. Furthermore, although not required to establish consistency with the 2017 Clean Air Plan, as discussed under **Impact AIR-3**, subsequent projects that do not fall below the screening levels identified in BAAQMD CEQA Guidelines, and that would generate operational emissions that would exceed BAAQMD thresholds of significance, would be required to implement the tree planting requirements included in Mitigation Measure AIR-1, identified below.

Waste Management Control Measures

The waste management sector generates GHG emissions from landfills and composing facilities as well as a variety of air pollutants from waste decomposition in landfills and composting operations. The Waste Management Control Measures are meant to reduce or capture methane emissions from landfills and composting facilities, divert organic materials from landfills, and increase waste diversion rates through efforts to reduce, reuse, and recycle. The Waste Management Control Measures that would be supported by the Proposed Project include the following:

- WA 3: Green Waste Diversion; and
- WA 4: Recycling and Waste Reduction.

Future development under the Proposed Project would be serviced by a waste hauler that offers residential and commercial composting services and that would be required to comply with the requirements of the California Integrated Waste Management Act and AB 341. Therefore, the Proposed Project would support the applicable Waste Management Control Measures of the 2017 Clean Air Plan.

Water Control Measures

Water use and wastewater treatment indirectly generates criteria air pollutant and toxic air contaminant emissions; therefore, the 2017 Clean Air Plan includes measures to reduce emissions from the water sector by encouraging water conservation, limiting GHG emissions from publicly owned treatment works (POTWs), and promoting the use of biogas recovery systems. The only Water Control Measure that would be applicable to development under the Proposed Project is:

- WR 2: Support Water Conservation.

As discussed under the Building Control Measures, future development under the Proposed Project would be subject to the requirements of Title 24, Part 6 of the California Code of Regulations, the CALGreen Code, and the City of Oakland Green Building Ordinance which include mandatory measures to improve water efficiency and conservation.

Summary

With adherence to existing and proposed regulations, policies, and SCAs discussed above, future development under the Proposed Project would support the goal of the 2017 Clean Air Plan to protect public health and therefore result in a less than significant impact related to implementation of the applicable air quality plan.

Mitigation: None required.

Impact AIR-2: Adoption of the Proposed Project would not result in a cumulatively considerable net increase of any criteria air pollutant for which the Plan Area region is in nonattainment under and applicable federal or State air quality standard. (Criteria 1 and 2) (*Less than Significant*)

The significance of a plan's emissions of criteria air pollutants is based on consistency with regional air quality planning, including an evaluation of population growth and growth in VMT. For a proposed plan to result in less-than-significant criteria air pollutants impact, an analysis must demonstrate that the plan's growth in VMT would not exceed the plan's population growth.

Growth in Vehicle Miles Traveled Compared to Growth in Population

As discussed in Section 4.15, *Transportation and Circulation,* population growth projected for the Proposed Project in 2030 compared to 2020 Existing Conditions is 102,756 residents and 18,851 employees for a total service population increase of 121,607. This is a 18.3 percent increase in the City of Oakland's service population by 2030 based on the baseline existing 2020 service population for the City, as shown in **Table 4.2-8**.

TABLE 4.2-8
PROPOSED PHASE I UPDATE VMT VERSUS POPULATION GROWTH

	2020 Existing Conditions	2030 Conditions with proposed Phase I Update	Change	Percent Change
Population	426,583	529,609	102,756	24.0 percent
Employment	236,135	254,986	18,851	8.0 percent
Service Population	662,988	784,595	121,607	18.3 percent
Total Daily VMT[a]	13,291,389	14,376,930	1,085,541	8.2 percent

NOTES:
[a] VMT data provided by Kittelson and Associates, 2022
[b] Population is based on CCTA Model estimates, which multiplies new housing units in each transportation analysis zone by the ratio of existing population to housing from original MTC/ABAG Plan Bay Area 2040 data. This differs slightly from the population estimates in the Project Description and Section 4.12, *Population and Housing*, which rely on U.S. Census data, Department of Finance data, data from transit analysis zones (TAZ), and ABAG projections.
[c] Data for the City, County, and the Region are based on

Based on the output from the travel demand model, daily VMT would increase in 2030 by approximately 1,085,541 from the 2020 existing conditions of approximately 13,291,389, as shown in Table 4.2-8. This represents growth of approximately 8.2 percent attributable to the proposed *Phase I Oakland 2045 General Plan Update*. Because the growth in VMT (8.2 percent) would be less than the growth in service population (18.3 percent), the adoption of the Proposed Project would result in a less-than-significant impact with respect to regional criteria air pollutants.

Summary

As discussed above, adoption of the Proposed Project would result in growth in VMT that would be less than the growth in service population. For this reason, adoption of the Proposed Project would result in a less-than-significant impact with respect to regional emissions of criteria air pollutants.

Mitigation: None required.

Impact AIR-3: Future development under the Proposed Project could result in average daily emissions that would exceed the City's construction significance thresholds of 54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10}; operational of future development under the Proposed Project could result in operational average daily emissions of more than 54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10}; or result in maximum annual emissions of 10 tons per year of ROG, NO_x, or $PM_{2.5}$ or 15 tons per year of PM_{10}. (Criteria 5 and 6) (*Significant and Unavoidable*)

Construction and operation of future development under the Proposed Project would result in criteria air pollutant emissions. The specific characteristics of each subsequent project and the required construction and operational information (i.e., project size, duration of construction activity, construction equipment required, operating hours, equipment horsepower, etc.) are not known at this time; therefore, it is not possible to quantitatively assess whether future projects would generate significant impacts from emissions of criteria air pollutants. However, potential

future developments that may occur under the Proposed Project are qualitatively analyzed on a project-level in an effort to anticipate potential impacts and apply mitigation measures where necessary. This project-level analysis first discusses potential emissions from project construction, and then potential emissions from project operation.

BAAQMD CEQA Guidelines include screening criteria based on development type and size to determine if construction or operational emissions from individual projects would likely result in a cumulatively considerable net increase in non-attainment criteria air pollutants.[17] A project that exceeds the screening criteria may require a detailed air quality assessment to determine whether criteria air pollutant emissions would exceed the applicable significance thresholds (BAAQMD, 2017b). Projects below the screening criteria would not require further analysis and the criteria pollutant impact from those projects are presumed to be less than significant. The screening level criteria and sizes for construction and operation of residential land uses are provided in **Table 4.2-9** (BAAQMD 2017b). BAAQMD also has screening criteria for non-residential land use types. If a project meets all of the following screening criteria, it would result in a less-than-significant impact from criteria air pollutant precursor emissions:

1. The project is below the applicable screening level size shown in Table 4.2-9; and
2. Construction-related activities would not include any of the following:
    a. Extensive demolition (i.e., demolition greater than 100,000 square feet of building space);
    b. Simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously);
    c. Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site) (not applicable to high density infill development);
    d. Extensive site preparation (i.e., greater than default assumptions used by the CalEEMod model for grading, cut/fill, or Earth movement); or
    e. Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity.

All screening criteria for would be considered during the review of subsequent projects.

Future development under the Proposed Project may not meet the screening criteria and therefore, could potentially generate emissions of criteria air pollutants that contribute a cumulatively considerable amount of non-attainment pollutants. For example, these projects could require substantial ground disturbance, require extremely compressed construction schedules, and/or require specialty equipment; all of which could lead to exceedance of the significance thresholds. Subsequent projects that exceed BAAQMD screening criteria would require a detailed air quality assessment to determine whether criteria air pollutant emissions would exceed significance thresholds listed in Table 4.2-7, above.

[17] For example, the construction-related screening size for mid-rise apartments is 240 dwelling units, per Table 3-1 in BAAQMD CEQA Guidelines.

TABLE 4.2-9
OPERATIONAL AND CONSTRUCTION CRITERIA POLLUTANT SCREENING FOR POTENTIAL SUBSEQUENT DEVELOPMENT

Land Use Type	Screening Size for Operational Criteria Pollutants (Pollutant of Concern in Parentheses)	Screening Size for Construction Criteria Pollutants (Pollutant of Concern in Parentheses)
Single-family	325 du (NO_x)	114 du (ROG)
Apartment, low-rise	451 du (ROG)	240 du (ROG)
Apartment, mid-rise	494 du (ROG)	240 du (ROG)
Apartment, high-rise	510 du (ROG)	249 du (ROG)
Condo/townhouse, general	451 du (ROG)	240 du (ROG)
Condo/townhouse, high-rise	511 du (ROG)	252 du (ROG)

SOURCE: BAAQMD, 2017b.

Construction

Construction of future development under the Proposed Project would potentially include demolition and removal of existing structures, excavation, site preparation, construction of new buildings, paving, and application of architectural coatings. Emissions generated during construction activities would include exhaust emissions from the use of heavy-duty off-road diesel equipment, on-road diesel trucks, and employee vehicles, as well as fugitive emissions associated with Earth-disturbing activities and other demolition and construction work.

As discussed above, the air district established screening criteria to determine if construction emissions from projects would result in a cumulatively considerable net increase in criteria air pollutants; see Table 4.2-9. A project that exceeds the construction screening criteria would require a detailed air quality assessment to determine whether construction criteria air pollutant emissions would exceed significance thresholds. It is likely that many future development project under the Proposed Project would not exceed the construction screening criteria and therefore would not result in criteria air pollutant emissions that exceed the air district's significance thresholds. The construction screening criteria are conservative and projects that exceed them are still likely to find that upon detailed evaluation, the project's construction emissions do not exceed the air district's significance thresholds and therefore would result in less-than-significant construction criteria air pollutant impacts.

Fugitive Dust

Dust can be an irritant causing watering eyes or irritation to the lungs, nose, and throat. Demolition, excavation, grading, equipment movement across unpaved construction sites, and other construction activities can cause wind-blown or fugitive dust that adds PM_{10} and $PM_{2.5}$ to the local atmosphere. BAAQMD has taken a qualitative approach to addressing fugitive dust emissions during construction, such that any project that implements BAAQMD Basic Construction Mitigation Measures Recommended for All Projects (Best Management Practices) is considered to result in a less-than-significant impact with respect to fugitive dust.

Construction activities associated with future development under the Proposed Project would be required to implement the SCA 20, Dust Controls – Construction Related, requiring projects to implement various dust control measures including, but not limited to, watering of exposed surfaces, covering haul truck loads, cleaning of track-out, limiting vehicle speeds, and more. In addition, future projects involving extensive site preparation or extensive soil transport would be required to implement supplementary dust control measures including but not limited to applying ground cover or soil stabilizers to disturbed areas, installing wind breaks, and maintaining a soil moisture of 12 percent. Implementation of SCA 20 would reduce construction dust from future development under the Proposed Project and the impacts from fugitive dust emissions would be less than significant.

Exhaust

Exhaust emissions of criteria air pollutants ROG, NO_x, PM_{10}, and $PM_{2.5}$ are generated during construction from use of heavy-duty construction equipment, worker vehicle trips, vendor truck trips, haul truck trips, and application of architectural coatings. Emissions from future development under the Proposed Project would be considered significant if they were to exceed any of BAAQMD project-level thresholds of significance for construction criteria pollutants.

As previously discussed, although the specific characteristics of future development under the Proposed Project and the required construction equipment information (year and duration of construction, equipment type, operating hours, horsepower, etc.) are not known at this time, subsequent projects would be required to undergo a project-level criteria air pollutant assessment at the time each project is proposed. The project-level assessment would include an evaluation of the project compared to the screening levels in Table 4.2-9 and the construction-related screening criteria listed above, and should the project exceed screening criteria, a project-specific criteria air pollutant detailed analysis to determine whether the project exceeds the air district's criteria air pollutant thresholds.

Development under the Proposed Project would be subject to Proposed Policy EJ-1., Emissions from Construction Activities, which would further strengthen the City's air quality requirements for new projects, including for construction emissions. In addition, Proposed Policy EJ-1.15, Community Air Protection, would encourage air pollution control initiatives pursuant to AB 617 and proposed Policy EJ-1.8, Impact Assessment and Mitigation, would support the use of BAAQMD guidance and modeling tools to identify and mitigate air quality impacts from proposed development projects. Furthermore, action EJ-A.2 requires more stringent air quality construction and operations requirements for development near or within industrially zoned land as part of standard conditions of approval.

Future projects would also be required to implement SCA 21, Criteria Air Pollutant Controls – Construction Related; and SCA 22, Diesel Particulate Matter Controls – Construction Related, discussed under the *Regulatory Setting* section, above. SCA 21 would be applicable to all projects that involve construction activities and requires idling time limitations, proper maintenance of equipment, low-VOC coatings, and other measures that would reduce criteria air pollutant emissions during construction activities. SCA 22 would be applicable to projects with more than 100 dwelling units or 25,000 square-feet of non-residential uses, and projects with more than

50 dwelling units or 25,000 square feet of non-residential uses located within areas that have been identified by BAAQMD as needing "Best Practices" or needing "further study" (typically within 1000 feet of a freeway or along major thoroughfares). SCA 22 requires projects to complete an HRA and/or implement measures to reduce diesel particulate emissions during construction. Incorporation of SCAs 21 and 22 would reduce emissions of criteria air pollutants from future projects.

As discussed above, construction details related to future development under the Proposed Project (year and duration of construction, equipment type, operating hours, horsepower, etc.) are not yet known and it is impossible to say for certain that emissions of criteria air pollutants would not exceed the applicable thresholds of significance, even with incorporation of proposed policies and SCAs. Therefore, project-level impacts would be potentially significant.

Because the specific characteristics of each subsequent project and the required construction equipment information (year and duration of construction, equipment type, operating hours, horsepower, etc.) are not known, **Mitigation Measure AIR-1: Text Changes to SCA 21, Criteria Air Pollutant Controls – Construction Related**, provided below, requires a quantitative analysis of projects exceeding BAAQMD's screening criteria and implementation of criteria pollutant emission reduction measures if significance thresholds for criteria pollutants are exceeded. For such projects, the criteria pollutant emission reduction measures would be required to the degree necessary to avoid a significant impact (e.g., if use of Tier 4 Final equipment avoids a significant impact, additional measures would not be required).

Operations

Future development under the Proposed Project would generate emissions from mobile sources, area sources, energy use, stationary sources, waste generation, and water use. As discussed above, the air district established screening criteria to determine if operational emissions from projects would result in a cumulatively considerable net increase in criteria air pollutants; see Table 4.2-9 above (BAAQMD, 2017b). A project that exceeds the operational screening criteria would require a detailed air quality assessment to determine whether operational criteria air pollutant emissions would exceed significance thresholds.

Most subsequent projects are not anticipated to exceed the operational screening criteria or applicable thresholds of significance for criteria air pollutants. Most operational emissions from residential and mixed-use development are from gasoline-powered passenger vehicles, which do not emit a substantial amount of NO_x. Some VOC would be emitted from personal product and solvent use (i.e., consumer products), but these emissions typically do not exceed thresholds for small and mid-size projects. Vehicles also emit fugitive $PM_{2.5}$ in the form of road dust, brake wear, and tire wear; however individual projects are unlikely to emit enough fugitive $PM_{2.5}$ to exceed significance thresholds. Only the largest projects would potentially exceed the thresholds.

Action EJ-A. encourages the deployment of zero emission medium- and heavy-duty fleets which might serve certain subsequent development projects, thereby reducing criteria pollutant and TAC emissions. Proposed Policy EJ-1.13, Emissions from Construction Activities, would further strengthen the City's air quality requirements for new projects; and action EJ-A.2 encourages the

adoption of more stringent air quality construction and operations requirements for development near or within industrially zoned land. Policy EJ-1.11, Building Electrification would enforce the City's all-electric new development requirement. Proposed Policy EJ-1.16, Community Air Protection would encourage air pollution control initiatives pursuant to SB 617. Proposed Policy EJ-1.18, Impact Assessment and Mitigation would support the use of BAAQMD guidance and modeling tools to identify and mitigate air quality impacts from proposed development projects; and EJ-1.19, Regional Coordination would support air quality planning efforts led by other local, regional, and State agencies and reduce air pollution burden in frontline and environmental justice communities.

Further, future development under the Proposed Project would be required to implement SCA 24, Stationary Sources of Air Pollution (Toxic Air Contaminants) requiring project applicants to incorporate appropriate measures into the project design to reduce the potential health risk from on-site stationary sources of toxic air contaminants. Although these measures are focused on reducing TACs from operation of future projects, these measures would have the added benefit of reducing emissions of criteria air pollutants from stationary sources.

As discussed above, sufficient detail about future development under the Proposed Project is not currently available and it is impossible to say for certain that emissions of criteria air pollutants would not exceed the applicable thresholds of significance even with incorporation of proposed policies and SCAs. Therefore, project-level impacts would be potentially significant.

Because the specific operational characteristics of each subsequent project are not known, **Mitigation Measure AIR-1: Text Changes to SCA 21, Criteria Air Pollutant Controls – Construction Related,** provided below, requires a quantitative analysis of projects exceeding BAAQMD's screening criteria, and implementation of criteria pollutant emission reduction measures if significance thresholds for criteria pollutants are exceeded.

Health Implications of Significant Impacts Related to Ozone Precursors

The health effects associated with emissions of criteria pollutants and ozone precursors are described in Section 4.2.1, *Environmental Setting* above (see *Criteria Air Pollutants*). The main health concern of exposure to ground-level ozone is the effect on the respiratory system, especially on lung function.

Future individual projects developed under the Proposed Project could generate criteria pollutant emissions ROG, NO_x, and particulate matter during construction and/or operation that exceed BAAQMD's project-level thresholds. In the absence of project-specific information, it would be speculative to quantify criteria pollutant emissions, and, without quantification, it is not possible to quantify the health impacts of these emissions on sensitive receptors. Regardless, as discussed above under **Impacts 4.2-1** and **4.2-2**, the Proposed Project as a whole was assessed qualitatively resulting in less than significant impacts with adherence to existing and proposed regulations, policies, and SCAs. There is currently no guidance or project-level thresholds for a significance determination regarding health effects from criteria pollutant emissions.

Summary

As discussed above, without specific details about future development under the Proposed Project, it is impossible to determine whether individual projects could generate emissions of criteria air pollutants that would exceed the applicable thresholds of significance. Although emissions would be reduced through adherence to proposed policies, SCAs, and Mitigation Measures, the impact would remain significant and unavoidable.

Mitigation Measure AIR-1: Text Changes to SCA 21, Criteria Air Pollutant Controls – Construction Related.

21. Criteria Air Pollutant Controls - Construction and Operational Related

[Enhanced Controls: All "Basic" controls listed above plus the following controls ~~if the project involves: Construction activities with average daily emissions exceeding the CEQA thresholds for construction activity, currently 54 pounds per day of ROG, NOx, or PM2.5 or 82 pounds per day of PM10. In most cases, criteria pollutants from construction will not require SCA measures, but analysis must be performed to determine applicability for projects that exceed 100,000 square feet of non-residential development or 200 residential dwelling unit).~~]

g) Criteria Air Pollutant Reduction Measures

Requirement: Project applicants proposing projects that exceed BAAQMD screening levels (as amended to specify projects that include extensive demolition i.e., demolition greater than 100,000 square feet of building space) ~~The project applicant~~ shall retain a qualified air quality consultant to prepare a project-level criteria air pollutant assessment of construction and operational emissions at the time the project is proposed. The project-level assessment shall either include a comparison of the project with other similar projects where a quantitative analysis has been conducted or shall provide a project-specific criteria air pollutant analysis to determine whether the project exceeds the City's criteria air pollutant thresholds.

In the event that a project-specific analysis finds that the project could result in criteria air pollutant emissions that exceed City significance thresholds (54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10}), the project applicant shall identify criteria air pollutant reduction measures to reduce the project's average daily emissions below these thresholds~~54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10}~~. The following emission reduction measures shall be implemented to the degree necessary to reduce emissions to levels below the significance thresholds. Additional measures shall be implemented if necessary. Quantified emissions and identified reduction measures shall be submitted to the City (and the Air District if specifically requested) for review and approval prior to the issuance of building permits and the approved criteria air pollutant reduction measures shall be implemented during construction.

i. Clean Construction Equipment

a) Where access to grid-powered electricity is reasonably available, portable diesel engines shall be prohibited and electric engines shall be used for concrete/industrial saws, sweepers/scrubbers, aerial lifts, welders, air compressors, fixed cranes, forklifts, cement and mortar mixers, pressure washers, and pumps.

b) Diesel off-road equipment shall have engines that meet the Tier 4 Final off-road emission standards, as certified by CARB, as required to reduce the emissions to less than the thresholds of significance shown in Table 2-1 of BAAQMD CEQA Guidelines (BAAQMD 2017b). This requirement shall be verified through submittal of an equipment inventory that includes the following information: (1) Type of Equipment, (2) Engine Year and Age, (3) Number of Years Since Rebuild of Engine (if applicable), (4) Type of Fuel Used, (5) Engine HP, (6) Engine Certification (tier rating), (7) Verified Diesel Emission Control Strategy (VDECS) information if applicable, and other related equipment data. A Certification Statement is also required to be made by the Contractor as documentation of compliance and for future review by the air district as necessary. The Certification Statement must state that the Contractor agrees to comply and acknowledges that a violation of this requirement shall constitute a material breach of contract.

c) Any other best available technology that reduces emissions offered at the time that future projects are reviewed may be included in the construction emissions minimization plan (e.g., alternative fuel sources, etc.).

d) Exceptions to requirements a), b), and c) above may be granted if the project sponsor has submitted information providing evidence that meeting the requirement (1) is technically not feasible, (2) would not produce desired emissions reductions due to expected operating modes, or (3) there is a compelling emergency need to use equipment that to not meet the engine standards and the sponsor has submitted documentation that the requirements of this exception provision apply. In seeking an exception, the project sponsor shall demonstrate that the project will use the cleanest piece of construction equipment available and feasible and strive to meet a performance standard of average construction emissions of ROG, NO_x, $PM_{2.5}$ below 54 lbs/day, and PM_{10} emissions below 82 lbs/day.

ii. Super-Compliant VOC Architectural Coatings during Construction.

The Project sponsor shall use super-compliant VOC architectural coatings during construction for all interior and exterior spaces and shall include this requirement on plans submitted for review by the City's building official. "Super-Compliant" refers to paints that meet the more stringent regulatory limits in South Coast Air Quality Management District rule 1113 which requires a limit of 10 grams VOC per liter.[18]

iii. Use Low and Super-compliant VOC Architectural Coatings in Maintaining Buildings.

Subsequent projects shall use super-compliant VOC architectural coatings in maintaining buildings. "Super-Compliant" refers to paints that meet the more stringent regulatory limits in South Coast Air Quality Management District rule 1113, which requires a limit of 10 grams VOC per liter.[19]

iv. Promote Use of Green Consumer Products.

To reduce ROG emissions associated with the Project, the Project Sponsor and/or future developer(s) shall provide education for residential tenants concerning green

18 http://www.aqmd.gov/home/regulations/compliance/architectural-coatings/super-compliant-coatings
19 http://www.aqmd.gov/home/regulations/compliance/architectural-coatings/super-compliant-coatings

consumer products. The Project sponsor and/or future developer(s) shall develop electronic correspondence to be distributed by email annually and upon any new lease signing to residential tenants of each building on the Project site that encourages the purchase of consumer products that generate lower than typical VOC emissions. The correspondence shall encourage environmentally preferable purchasing.

v. Best Available Control Technology for Projects with Diesel Backup Generators and Fire Pumps.

The Project sponsor shall implement the following measures. These features shall be submitted to the City for review and approval and be included on the Project drawings submitted for the construction-related permit or on other documentation submitted to the City:

a) Pursuant to SCA 24, non-diesel fueled generators shall be installed to replace diesel-fueled generators if feasible. Alternative fuels used in generators, such as biodiesel, renewable diesel, natural gas, or other biofuels or other non-diesel emergency power systems, must be demonstrated to reduce criteria pollutant emissions compared to diesel fuel.

b) Pursuant to SCA 24, all new diesel backup generators shall have engines that meet or exceed CARB Tier 4 off-road Compression Ignition Engine Standards (title 13, CCR, section 2423). If CARB adopts future emissions standards that exceed the Tier 4 requirement, the emissions standards resulting in the lowest criteria pollutant emissions shall apply.

c) All new diesel backup generators shall have an annual maintenance testing limit of 20 hours, subject to any further restrictions as may be imposed by BAAQMD in its permitting process.

d) For each new diesel backup generator permit submitted to BAAQMD for the Project, the Project sponsor shall submit the anticipated location and engine specifications to the City for review and approval prior to issuance of a permit for the generator from the City of Oakland Department of Building Inspection. Once operational, all diesel backup generators shall be maintained in good working order for the life of the equipment and any future replacement of the diesel backup generators shall be required to be consistent with these emissions specifications. The operator of the facility at which the generator is located shall be required to maintain records of the testing schedule for each diesel backup generator for the life of that diesel backup generator and to provide this information for review to the planning department within three months of requesting such information.

vi. Electric Vehicle Charging

Prior to the issuance of the building's final certificate of occupancy, the project applicant shall demonstrate that the project is designed to comply with EV requirements in the most recently adopted version of CALGreen Tier 2 at the time of project-specific CEQA review. The installation of all EV charging equipment shall be included on the project drawings submitted for the construction-related permit(s) or on other documentation submitted to the City.

vii. Additional Operational Emission Reduction Measures

Subsequent projects that do not meet the screening criteria and exceed the applicable criteria air pollutant thresholds of significance shall implement the following additional measures to reduce operational criteria air pollutant emissions:

a) Prohibit TRUs from operating at loading docks for more than 30 minutes by posting signs at each loading dock presenting this TRU limit.

b) All newly constructed loading docks that can accommodate trucks with TRUs shall be equipped with electric vehicle (EV) charging equipment for heavy-duty trucks. This measure does not apply to temporary street parking for loading or unloading.

c) Require that all future tenants have a plan to convert their vehicle fleet(s) to zero emission vehicles (ZEVs) no later than 2040. This would be a condition of all leases at the project site.

d) Other measures that become available and are shown to effectively reduce criteria air pollutant emissions on site or off site if emission reductions are realized within the air basin. Measures to reduce emissions on site are preferable to off-site emissions reductions.

h) Construction Emissions Minimization Plan

Requirement: For projects that involve construction activities with average daily emissions exceeding the CEQA thresholds for construction activity, currently 54 pounds per day of ROG, NOx, or $PM_{2.5}$ or 82 pounds per day of PM_{10}, ~~T~~the project applicant shall prepare a Construction Emissions Minimization Plan (Emissions Plan) for all identified criteria air pollutant reduction measures. The Emissions Plan shall be submitted to the City (and the Air District if specifically requested) for review and approval prior to the issuance of building permits. The Emissions Plan shall include the following: …

Impact AIR-4: Traffic associated with adoption of the Proposed Project would not contribute to carbon monoxide (CO) concentrations exceeding the California Ambient Air Quality Standards (CAAQS) of nine parts per million (ppm) averaged over eight hours and 20 ppm for one hour. (Criterion 7) (*Less than Significant*)

Regional ambient air quality monitoring data, including those presented in Table 4.2-1, demonstrate that CO concentrations within Oakland and the air basin at large are well below federal and State standards, despite long-term upward trends in regional VMT. In recent years, the potential for localized increases in carbon monoxide concentrations from increased traffic has been greatly reduced due to improvements in vehicle exhaust controls since the early 1990s and the use of oxygenated fuels.

BAAQMD's recommended approach for determining if a project would contribute to CO concentrations exceeding the CAAQS of 9 ppm averaged over eight hours and 20 ppm for one hour is to use screening criteria. If a project meets all of BAAQMD's screening criteria, the project is presumed to result in a less-than-significant impact to air quality with respect to local

CO concentrations. Pursuant to BAAQMD CEQA Guidelines' screening criteria for CO, localized CO concentrations should be estimated for projects in which (a) project-generated traffic would conflict with an applicable congestion management program established by the county congestion management agency or (b) project-generated traffic would increase traffic volumes at affected intersections to more than 44,000 vehicles per hour (or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited, such as tunnels, parking garages, bridge underpasses, natural or urban street canyons, and below-grade roadways). In Oakland, only the MacArthur Maze portion of Interstate 580 exceeds the 44,000 vehicles per hour screening criteria. Further, ambient CO standards have not been exceeded in the Bay Area for over a decade, largely due to reformulated fuels in California and vehicle emissions controls, as discussed above.

Although specific details related to future development under the Proposed Project are not yet known at this time, given improvements in vehicle exhaust controls, the use of oxygenated fuels, and CO concentrations within Oakland that are well below federal and State standards, it is implausible that future projects would generate vehicle trips that would cause local roadways to exceed the screening thresholds and the impact is considered to be less than significant.

Mitigation: None required.

Impact AIR-5: Adoption of the Proposed Project could result in exposure of future on-site sensitive receptors to substantial levels of toxic air contaminants (TACs). (Criteria 3 and 9) (*Significant and Unavoidable*)

The City's plan-level significance criteria for exposure of sensitive receptors to emissions of TACs and $PM_{2.5}$ states that the impact would be significant if the plan does not include special overlay zones containing goals, policies, and objectives to minimize potential TAC impacts in areas located (a) near existing and planned sources of TACs and (b) within 500 feet of freeways and high-volume roadways containing 100,000 or more average daily vehicle trips. The City's project-level significance criteria for exposure of new sensitive receptors to emissions of TACs and $PM_{2.5}$ is whether the project would expose new sensitive receptors to substantial ambient levels of TACs resulting in:

(a) A cancer risk level greater than 100 in a million;

(b) A non-cancer risk (chronic or acute) hazard index greater than 10.0; or

(c) Annual average $PM_{2.5}$ of greater than 0.8 micrograms per cubic meter.

According to these criteria, impacts would be significant if the Proposed Project would introduce sensitive receptors in the vicinity of existing and planned sources of TACs, such as freeways and high-volume roadways. However, in the *California Building Industry Association v. Bay Area Air Quality Management District* case decided in 2015, the California Supreme Court held that CEQA does not generally require lead agencies to consider how existing environmental conditions might impact a project's users or residents. Nonetheless, this analysis considers the potential for new

receptors to be exposed to TAC emissions from the sources described above for informational purposes.

As discussed in Section 4.2.1 *Environmental Setting* above, the main sources of DPM emissions in the Plan Area are heavy-duty truck activity along Interstates 80, 580, 880, and 980 (42 percent); ocean-going vessels and commercial harbor craft at the Port of Oakland (26 percent); off-road equipment (25 percent); and diesel locomotives (3 percent). The main sources of $PM_{2.5}$ in the Plan Area are residential fuel combustion (24 percent), industrial processes (22 percent), road dust from on-road vehicle travel (11 percent), on-road vehicle exhaust (11 percent), and cooking (9 percent).

Portions of the Plan Area are within 500 feet of I-580, I-880, I-980, the Port of Oakland, permitted stationary sources, rail operations, industrial processes, and high-volume roadways. Future development under the Proposed Project could site new sensitive receptors (i.e., residential uses, daycare centers) in the vicinity of existing sources of TACs (i.e., freeways, major roadways, rail lines, distribution centers, major rail or truck yards, ferry terminals, stationary sources requiring a BAAQMD permit, Port of Oakland, Oakland Airport, gas stations, and certain dry cleaners), such that the risk at these receptor locations would exceed the health risk screening criteria after a screening analysis conducted in accordance with BAAQMD CEQA Guidelines.

The Proposed Policies and actions listed below would either directly guide development under the Proposed Project or guide existing and new industrial and other uses to help minimize impacts to new residents and sensitive receptors associated with future development under the Proposed Project. Proposed Policy EJ-1.1, Toxic Air Contaminants would help minimize TAC exposure and health risk impacts to new residential uses near TAC sources by enforcing TAC emission performance standards, encourage industry to adopt best-available control technologies to reduce TACs, support air pollution source permitting, and other actions. Policy EJ-1.2, Truck Emissions and Pollution Exposure, and Policy EJ-1.7, Truck Related Impacts would help minimize impacts from existing truck destinations and travel routes such as warehouses and freeways to new nearby residential uses nearby. EJ-A.11 bolsters this policy by encouraging coordination between public agencies in the Bay Area region to catalyze the development and deployment of zero emission medium- and heavy-duty fleets and support development of shared charging hubs and resources. Policy EJ-1.3, Industrial Uses Near Sensitive Uses; and Policy EJ-1.4, Performance Standards, actions EJ-A.1, EJ-A.5, EJ-A.6, EJ-A.7, EJ-A.10, and EJ-A.12 would reduce exposure of new residential uses to industrial and commercial TAC emissions. Policy EJ-1.9, EV Charging would require industrial and warehouse facilities to provide electrical connections for electric trucks and transport refrigeration units, thereby reducing TAC emissions and associated health risk on nearby residential receptors. Policy EJ-1.10, Reduce Emissions from Port Operation would support Port of Oakland efforts reduce emissions as part of operation and compliance with CARB regulations; this would act to reduce TAC emissions and associated health risk on residential receptors close to Port activities. Policy EJ-1.8, Air Filtration would require newly constructed buildings of four or more habitable floors to include air filtration systems equal to or greater than MERV 13, reducing exposure of new receptors to existing TAC emissions. Policies EJ-1.8, Air Filtration; EJ-1.13, Emissions from Construction Activities, as well as action EJ-A.2 would further strengthen the City's air quality requirements for new projects. Policy EJ-1.11, Building

Electrification would enforce the City's all-electric new development requirement. Combined with action EJ-A.3, Policy EJ-1.15, Sensitive Uses would better evaluate local TAC exposure and associated health risks to new residential receptors and would impose conditions as appropriate on future projects to reduce these risks. EJ-1.16, Community Air Protection and Policy EJ-1.17, Data Informed Efforts would encourage air pollution control initiatives pursuant to SB 617. Policy EJ-1.18, Impact Assessment and Mitigation would support the use of BAAQMD guidance and modeling tools to identify and mitigate air quality impacts from proposed development projects. Policy EJ-1.19, Regional Coordination would support air quality planning efforts led by other local, regional, and State agencies and reduce air pollution burden in frontline and environmental justice communities.

Further, future projects that would site sensitive receptors in the vicinity of sources of TACs such that risk at these receptor locations would exceed the health risk screening criteria after a screening analysis be required to implement SCA 23, Exposure to Air Pollution (Toxic Air Contaminants). As discussed above, this SCA would require future projects that meet the criteria above to incorporate appropriate measures into the project design to reduce the potential health risk due to exposure to TACs. Furthermore, the Title 24 Building Code requires low-rise residential buildings and larger to install Minimum Efficiency Reporting Value (MERV) 13 enhanced filtration. MERV 13 air filtration is capable of removing 80 percent of particulate matter, thereby reducing an individual's exposure to air pollution (ASHRAE Standard 52.2 AHRI Standard 680). MERV-16 filtration is also required for projects located in the West Oakland Specific Plan Area.

Because the location of specific new sensitive receptors sited by future development under the Proposed Project is not known, **SCA 23: Exposure to Air Pollution (Toxic Air Contaminants)** and **Mitigation Measure AIR-2: Text Changes to SCA 23, Reduce Exposure to Air Pollution – Toxic Air Contaminants** would be required to reduce health risk to future sensitive receptors.

Summary

Future development under the Proposed Project could site sensitive receptors near existing major sources of TACs including major highways I-580, I-880, and I-980, the Oakland Ferry Terminal, the Oakland Airport, and the Port of Oakland. Adherence to the Title 24 Building Code requirements, proposed policies, and SCA 23; and implementation of Mitigation Measure AIR-2 would minimize the health risks to new receptors; however, without specific details about where projects would site new sensitive receptors and what the health risks would be at these locations, it is impossible to determine whether health risks at these receptor locations would exceed the applicable thresholds of significance. Although health risks would be reduced through implementation of the following SCAs and Mitigation Measure, the impact would remain significant and unavoidable.

> **Mitigation Measure AIR-2: Text Changes to SCA 23, Reduce Exposure to Air Pollution – Toxic Air Contaminants.** *(As also modified by Mitigation Measure AIR-4 in double underline.)*
>
> i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB)

and Office of Environmental Health and Hazard Assessment requirements and in accordance with Bay Area Air Quality Management District (BAAQMD) CEQA guidance for HRAs to determine the health risk of exposure of project residents/ occupants/users to air pollutants and the exposure of existing off-site sensitive receptors to project-generated TAC emissions. The HRA shall be based on project-specific activity data. Estimated project-level health risks shall be compared to the City's health risk significance thresholds for projects. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below ~~acceptable levels~~ the City's health risk significance thresholds for projects, then health risk reduction measures are not required. If the HRA concludes that the health risk exceeds ~~acceptable levels~~ the City's health risk significance thresholds for projects, health risk reduction measures shall be identified to reduce the health risk to ~~acceptable levels~~ below the City's health risk significance thresholds. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. The approved risk reduction measures shall be implemented during construction and/or operations as applicable.

ii. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:

- Installation of mechanical ventilation systems ~~air filtration~~ to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. ~~Air filter devices shall be rated MERV 16~~13 ~~[insert MERV 16 for projects located in the West Oakland Specific Plan area] or higher~~ Mechanical ventilation systems shall be capable of achieving the protection from particulate matter ($PM_{2.5}$) equivalent to that associated with a MERV-16 filtration (as defined by American Society of Heating, Refrigerating and Air-Conditioning Engineers [ASHRAE] standard 52.2). As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.

Impact AIR-6: Construction and operation of future development under the Proposed Project would result in emissions of fine particulate matter ($PM_{2.5}$) and TACs that could result in exposure of sensitive receptors to substantial pollutant concentrations. (Criteria 8a, 8b, 8c, and 9) (*Significant and Unavoidable*)

As discussed in the *Environmental Setting* section, above, BAAQMD's *Planning Healthy Places* guidance has mapped local areas with elevated levels of TACs and $PM_{2.5}$ (BAAQMD, 2021). These areas include those that exceed 100 in a million for cancer risk, and/or exceed $PM_{2.5}$ concentrations of 0.8 micrograms per cubic meter, and/or are within 500 feet of a freeway, 175 feet of a major roadway, or 500 feet of a ferry terminal (BAAQMD, 2016b). The vast majority of the Plan Area meets the criteria above and implementation of best practices to reduce emissions of local air pollutants and associated exposure to local air pollution is recommended. Best practices, as described in the *Planning Healthy Places* guidance, include measures such as retrofitting generators, electrifying loading docks, limiting idling times, using zero emissions

technology and alternative fuels, promoting the use of transportation refrigeration units (TRUs) in lieu of running the main engine, implementing transportation demand management (TDM) strategies, and implementing traffic management strategies. In addition to areas designated for implementation of best practices, a large portion of the remaining areas including West Oakland are designated as "large and complex" sources that require further study (BAAQMD, 2016b). Future construction and operation of development under the Proposed Project would generate TACs and $PM_{2.5}$ emissions from vehicle trips and stationary sources which could substantially contribute to the existing poor air quality in the Plan Area and expose existing and future sensitive receptors to substantial pollutant concentrations. As part of BAAQMD's *Planning Healthy Places* guidance, BAAQMD will maintain and update mapping of local air pollution over time (BAAQMD, 2016b).

Construction

Construction details related to future development under the Proposed Project (i.e., duration of construction activity, equipment type, operating hours, horsepower, etc.) are not yet known; therefore, it is not possible to assess whether construction-related TAC emissions would result in health risks in excess of the City's significance thresholds described above.

Future development under the Proposed Project would implement proposed Policy EJ-1.13, Emissions from Construction Activities, which would further strengthen the City's air quality requirements for new projects. Policy EJ-1.16, Community Air Protection, and Policy EJ-1.17, Data Informed Efforts, would encourage air pollution control initiatives pursuant to SB 617. Policy EJ-1.18, Impact Assessment and Mitigation, would support the use of BAAQMD guidance and modeling tools to identify and mitigate air quality impacts from proposed development projects. Additionally, Action EJ-A.2 will create more stringent air quality construction and operations requirements for development near or within industrially zoned land as part of standard conditions of approval. These Proposed Policies would reduce health risks from construction-related TAC emissions that could result from future development under the Proposed Project.

Implementation of SCA 22, Diesel Particulate Matter Controls – Construction Related, would require future projects that exceed certain size thresholds (see discussion of SCA 22 in the *Regulatory Setting* section, above) to either prepare an HRA to determine whether health risk reduction measures would be required, or to use Tier 4 Final engines during construction to minimize health risk. In addition, future projects would be required to implement SCA 26, Asbestos in Structures; and SCA 27, Naturally Occurring Asbestos, during any demolition of structures that may contain asbestos, or construction activities in areas that are known to contain naturally-occurring asbestos. Compliance with these measures would reduce the health risks from diesel particulate matter and asbestos during construction of future development under the Proposed Project.

Although implementation of these existing and proposed policies, regulations, and SCAs, would reduce health risks from construction of future development, construction details related to future development under the Proposed Project are not known at this time, and construction-related health risks could exceed BAAQMD thresholds of significance. Therefore, because the specific

construction characteristics of subsequent project are not known, **Mitigation Measure AIR-3: Text Changes to SCA 22, Diesel Particulate Matter Controls-Construction Related**, provided below, would revise SCA 22 to require either a detailed project-specific construction HRA consistent with current BAAQMD guidelines or implement additional emissions controls for off-road construction equipment to reduce health risks. For such projects, the mitigation measure would be required to the degree necessary to avoid a significant impact.

Operation

As discussed above, the specifics of future development under the Proposed Project are unknown at this time and information required to evaluate project-level health risks (i.e., stationary source equipment specifics, project-level trip generation) are not yet available. As such, operation of future development under the Proposed Project could generate TAC emissions that could cause community health risks to exceed the City's thresholds of significance and result in potentially significant health risk impacts.

Proposed policies and actions described above under **Impact AIR-5**, including policies EJ-1.2, Truck Emissions and Pollution Exposure; EJ-3, Zero Emission Trucks; EJ-1.4, Performance Standards; EJ-1.7, Truck Related Impacts; EJ-1.8, Air Filtration; EJ-1.9, EV Charging; EJ-1.11, Building Electrification; EJ-1.13, Emissions from Construction Activities; EJ-1.15, Sensitive Uses; EJ-1.16, Community Air Protection; EJ-1.17, Data Informed Efforts; EJ-1.18, Impact Assessment and Mitigation; and EJ-1.19, Regional Coordination, as well as EJ-A.1, EJ-A.5, EJ-A.7, EJ-A-10, EJ-A.12 would either directly guide development under the Proposed Project or guide existing and new industrial and other uses to help minimize impacts to new residents and sensitive receptors associated with future development under the Proposed Project.

In addition, as discussed under the *Regulatory Setting* section, above, SCA 24, Stationary Sources of Air Pollution (Toxic Air Contaminants), would apply to all projects that involve a stationary pollutant source requiring a permit from BAAQMD, and would require the project applicant to prepare a detailed HRA and/or incorporate health risk reduction measures into the project. while SCA 25 (Truck-Related Risk Reduction Measures), would apply to all projects that involve new truck loading docks or truck fleets and would require that project applicants locate proposed truck loading docks as far from sensitive receptors as feasible and demonstrate that all truck fleets operate in compliance with all applicable CARB requirements to control emissions from diesel engines.

Implementation of the existing and proposed policies, regulations, and SCAs discussed above would reduce health risks from operations of future development. Nonetheless, because the specific operational characteristics of subsequent project are not known, **Mitigation Measure AIR-4: Text Changes to the application of SCA 23, Reduce Exposure to Air Pollution – Toxic Air Contaminants**, provided below, would revise SCA 23 to require either a detailed project-specific operational HRA consistent with current BAAQMD guidelines or implement additional risk reduction features; **Mitigation Measure AIR-5: Text Changes to the application of SCA 24, Stationary Sources of Air Pollution (Toxic Air Contaminants)**, provided below, would revise SCA 24 to require either a detailed project-specific operational HRA consistent with current BAAQMD guidelines or implement additional emissions controls for emergency backup

generators to reduce health risks; and **Mitigation Measure AIR-6: Text Changes to the application of SCA 25, Truck-Related Risk Reduction Measures (Toxic Air Contaminants)**, provided below, would revise SCA 25 to require additional emissions controls for diesel trucks and loading docks to reduce health risks. In addition, **Mitigation Measure AIR-2: Text Changes to SCA 23, Reduce Exposure to Air Pollution – Toxic Air Contaminants** would minimize the health risks to new receptors by requiring MERV 16 filtration for certain projects. For such projects, the mitigation measures would be required to the degree necessary to avoid a significant impact (e.g., if venting diesel backup generator exhaust on the rooftops of each building avoids a significant impact, additional measures would not be required).

Summary

Project-specific information for future development under the Proposed Project is not yet available and health risk impacts cannot be evaluated at a project-specific level at this time. Both construction and operation of future development under the Proposed Project could generate TAC emissions that could cause significant health risk impacts. Although the adherence to proposed policies, SCAs, and mitigation measures listed below would reduce the health risk impacts from future projects, the impact would remain significant and unavoidable.

Mitigation Measure AIR-3: Text Changes to SCA 22, Diesel Particulate Matter Controls-Construction Related.

Requirement: The project applicant shall implement appropriate measures during construction to reduce potential health risks to sensitive receptors due to exposure to diesel particulate matter (DPM) and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) from construction ~~emissions~~ activities. **The project applicant shall choose one** of the following methods:

i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with current guidance from the California Air Resources Board (CARB), the ~~and~~ Office of Environmental Health and Hazard Assessment, and Bay Area Air Quality Management District (BAAQMD) to determine the health risk to sensitive receptors exposed to DPM and $PM_{2.5}$ from project construction emissions. The HRA shall be based on project-specific construction schedule, equipment, and activity data. Estimated project-level health risks shall be compared to the City's health risk significance thresholds for projects. The HRA shall be submitted to the City (and the Air District if specifically requested) for review and approval. If the HRA concludes that the health risk is at or below ~~acceptable levels~~ the City's health risk significance thresholds for projects, then DPM and $PM_{2.5}$ reduction measures are not required. If the HRA concludes that the health risk exceeds ~~acceptable levels~~ the City's health risk significance thresholds for projects, DPM and $PM_{2.5}$ reduction measures shall be identified to reduce the health risk to ~~acceptable levels~~ below the City's health risk significance thresholds as set forth under subsection b below. Identified DPM and $PM_{2.5}$ reduction measures shall be submitted to the City for review and approval prior to the issuance of building permits and the approved DPM and $PM_{2.5}$ reduction measures shall be implemented during construction.

-or-

ii. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:

- All off-road diesel equipment shall be equipped with the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement) as certified by CARB. The equipment shall be properly maintained and tuned in accordance with manufacturer specifications. This shall be verified through an equipment inventory submittal and Certification Statement that the Contractor agrees to compliance and acknowledges that a significant violation of this requirement shall constitute a material breach of contract.

- Where access to grid-powered electricity is reasonably available, portable diesel engines shall be prohibited and electric engines shall be used for concrete/ industrial saws, sweepers/scrubbers, aerial lifts, welders, air compressors, fixed cranes, forklifts, cement and mortar mixers, pressure washers, and pumps.

- Any other best available technology that reduces emissions offered at the time that future projects are reviewed may be included in the construction emissions minimization plan (e.g., alternative fuel sources, etc.).

Mitigation Measure AIR-4: Text Changes to SCA 23, Reduce Exposure to Air Pollution – Toxic Air Contaminants. *(As also modified by Mitigation Measure AIR-2 in double underline/strikeout.)*

i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements and in accordance with Bay Area Air Quality Management District (BAAQMD) CEQA guidance for HRAs to determine the health risk of exposure of project residents/ occupants/users to air pollutants and the exposure of existing off-site sensitive receptors to project-generated TAC emissions. The HRA shall be based on project-specific activity data. Estimated project-level health risks shall be compared to the City's health risk significance thresholds for projects. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below ~~acceptable levels~~ the City's health risk significance thresholds for projects, then health risk reduction measures are not required. If the HRA concludes that the health risk exceeds ~~acceptable levels~~ the City's health risk significance thresholds for projects, health risk reduction measures shall be identified to reduce the health risk to ~~acceptable levels~~ below the City's health risk significance thresholds. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. The approved risk reduction measures shall be implemented during construction and/or operations as applicable.

Mitigation Measure AIR-5: Text Changes to SCA 24, Stationary Sources of Air Pollution (Toxic Air Contaminants).

a. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements and in

accordance with Bay Area Air Quality Management District (BAAQMD) CEQA guidance for HRAs to determine the health risk associated with proposed stationary sources of pollution in the project. The HRA shall be based on project-specific activity data. Estimated project-level health risks shall be compared to the City's health risk significance thresholds for projects. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below ~~acceptable levels~~ the City's health risk significance thresholds for projects, then health risk reduction measures are not required. If the HRA concludes the health risk exceeds ~~acceptable levels~~ the City's health risk significance thresholds for projects, health risk reduction measures shall be identified to reduce the health risk to ~~acceptable levels~~ the City's health risk significance thresholds for projects. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. The approved risk reduction measures shall be implemented during construction and/or operations as applicable.

The City shall revise the items under section b. of SCA 24, Stationary Sources of Air Pollution (Toxic Air Contaminants), as follows:

a. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:

    i. Installation of non-diesel fueled generators, if feasible, or;

    ii. Installation of diesel generators with an EPA-certified Tier 4 engine or engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy, if feasible. If CARB adopts future emissions standards that exceed the Tier 4 requirement, the emissions standards resulting in the lowest DPM emissions shall apply.

    iii. All new diesel backup generators shall have an annual maintenance testing limit of 20 hours, subject to any further restrictions as may be imposed by BAAQMD in its permitting process.

    iv. All diesel backup generator exhaust shall be vented on the rooftops of each building where the generators are located. This could be achieved by either placing the diesel backup generators themselves on the rooftops, or by constructing exhaust stacks from the diesel backup generator locations to the rooftops. Alternatively, the generators or exhaust stacks could be located in areas where the Project sponsor can quantitatively demonstrate that these locations would not result in health risks that exceed those associated with rooftop placement for both existing offsite and future onsite sensitive receptors.

    v. For each new diesel backup generator permit submitted to BAAQMD for the Project, the Project sponsor shall submit the anticipated location and engine specifications to the City for review and approval prior to issuance of a permit for the generator from the City of Oakland Department of Building Inspection. Once operational, all diesel backup generators shall be maintained in good working order for the life of the equipment and any future replacement of the diesel backup generators shall be required to be consistent with these emissions specifications. The operator of the facility at which the generator is located shall

be required to maintain records of the testing schedule for each diesel backup generator for the life of that diesel backup generator and to provide this information for review to the planning department within three months of requesting such information.

Mitigation Measure AIR-6: Text Changes to SCA 25, Truck-Related Risk Reduction Measures (Toxic Air Contaminants).

a. Diesel Truck Emission Reduction Measures

Requirement: The Project sponsor shall incorporate the following health risk reduction measures into the Project design and construction contracts (as applicable) in order to reduce the potential health risk due to exposure to toxic air contaminants. These features shall be submitted to the City for review and approval and be included on the Project drawings submitted for the construction-related permit or on other documentation submitted to the City. Emissions from Project-related diesel trucks shall be reduced through implementing the following measures, if feasible:

i. Prohibit TRUs from operating at loading docks for more than 30 minutes by posting signs at each loading dock presenting this TRU limit.

ii. All newly constructed loading docks that can accommodate trucks with TRUs shall be equipped with electric vehicle (EV) charging equipment for heavy-duty trucks. This measure does not apply to temporary street parking for loading or unloading.

iii. Require that all future tenants have a plan to convert their vehicle fleet(s) to zero emission vehicles (ZEVs) no later than 2040. This would be a condition of all leases at the project site.

iv. Requiring truck-intensive tenants to use advanced exhaust technology (e.g., hybrid) or alternative fuels.

v. Other measures that become available and are shown to effectively reduce criteria air pollutant emissions on site or off site if emission reductions are realized within the air basin. Measures to reduce emissions on site are preferable to off-site emissions reductions.

vi. The project sponsor shall develop a Truck Route Plan that establishes operational truck routes to avoid sensitive receptors as identified in the environmental review analysis completed for the project. The purpose of the Truck Route Plan is to route trucks on streets that are located as far from offsite sensitive receptors as possible, while still maintaining the operational goals of the project. The Truck Route Plan must include route restrictions, truck calming, truck parking, and truck delivery restrictions to minimize exposure of nearby sensitive receptors to truck exhaust and fugitive particulate emissions. Prior to the commencement of operational activities, the project sponsor shall certify (1) compliance with the Truck Route Plan, and (2) all applicable requirements of the Truck Route Plan have been incorporated into tenant contract specifications.

Impact AIR-7: Adoption of the Proposed Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. (Criteria 4 and 10) (*Less than Significant*)

During construction of the future development under the Proposed Project, the use of diesel-powered vehicles and equipment could temporarily generate localized odors, which would cease upon completion of construction activities and therefore would not result in a significant odor impact.

The BAAQMD CEQA Guidelines identifies land uses that have potential to generate continuous odorous impacts and odor complaints during operation. These land uses include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants (BAAQMD, 2017b). Future development under the Proposed Project would not include land uses that are identified by BAAQMD as common odor sources. In addition, BAAQMD Regulation 7 places general limitations on odorous substances and specific emission limitations on certain odorous compounds.

Summary

Construction of future development under the Proposed Project could temporarily generate odorous emissions, and no land uses known to generate continuous odor impacts are planned to be developed under the Proposed Project. Therefore, the Proposed Project would result in a less than significant impact.

Mitigation: None required.

4.2.5 Cumulative Impacts

This section presents an analysis of the cumulative effects of future development under the Proposed Project in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to air quality could occur if the incremental impacts of future development under the Proposed Project combined with the incremental impacts of cumulative development would be significant and if the Proposed Project's contribution would be considerable.

The air basin is a nonattainment area for both the federal and State ozone standards; therefore, an air quality impact already exists. Additional emissions of ozone precursors NO_x or ROG over threshold amounts would further degrade air quality related to ozone. Impact AIR-2 evaluates whether the Proposed Project's contribution to this significant impact would be considerable. In addition, the air district's project-level criteria air pollutant thresholds are based on levels below which new sources would not result in a cumulatively considerable net increase in criteria air pollutants for which the region is in nonattainment. The potential for future development under the Proposed Project to result in significant criteria air pollutant emissions, and therefore a cumulatively considerable contribution to non-attainment criteria pollutants, is addressed under Impact AIR-3. Therefore, no separate cumulative criteria air pollutant analysis is required.

Impact AIR-8: Future development under the Proposed Project, in conjunction with cumulative sources, could result in exposure of sensitive receptors to substantial levels of fine particulate matter ($PM_{2.5}$) and TACs under cumulative conditions. (Criteria 8d, 8e, 8f, and 9) (*Significant and Unavoidable*)

Geographic Context

Many sources of TACs are already present within the Plan Area including I-580, I-880, I-980, the Oakland Ferry Terminal, the Oakland Airport, the Port of Oakland, diesel locomotives, off-road equipment, industrial processes, residential fuel combustion, and numerous stationary sources that have been permitted by BAAQMD. These sources are already exposing sensitive receptors to substantial pollutant concentrations including $PM_{2.5}$ and DPM levels that increase cancer risk.

Cumulative Impacts

Future projects under the Proposed Project could site sensitive receptors near existing major sources of TACs, and health risks at these receptor locations could exceed the applicable thresholds of significance, even after implementation of the Mitigation Measure AIR-2 identified within Impact AIR-5, above. Further, health risk impacts from construction and operation of individual projects that could be developed under the Proposed Project would generate emissions of TACs that could result in community health risks that could exceed the City's thresholds of significance for cancer risk, hazard index, and ambient $PM_{2.5}$ concentrations, even after implementation of Mitigation Measures AIR-2 through AIR-6 identified within Impact AIR-5 and Impact AIR-6, above. The contribution of future projects that could be developed under the Proposed Project could combine with risks from existing TAC sources and the resulting community health risks could exceed the BAAQMD cumulative risk thresholds. Proposed Policies SAF-3.5, EJ-1.1 through, EJ-1.11, and EJ-1.14 through EJ-1.19 have been identified to reduce this impact, along with Proposed actions EJ-A.1, EJ-A.2, EJ-A.3, EJ-A.5, EJ-A.6, EJ-A.7, EJ-A.8, EJ-A.10, EJ-A.11, and EJ-A.12. Incorporation of SCAs 22, 23, 24, 25, 26, and implementation of Mitigation Measures 4.2-1, 4.2-3, and 42.-4 would also reduce this impact. Nonetheless, as explained under Impacts 4.2-5 and 4.2-6, without specific details about future development under the Proposed Project, it is impossible to determine whether future projects would generate TAC emissions that could cause significant health risk impacts or whether health risks at new receptor locations would exceed the applicable thresholds of significance. Therefore, the cumulative impact would remain significant and unavoidable.

> **Mitigation Measure AIR-2: Text Changes to SCA 23, Reduce Exposure to Air Pollution – Toxic Air Contaminants** (see Impact AIR-5).
>
> **Mitigation Measure AIR-3: Text Changes to SCA 22, Reduce Exposure to Air Pollution – Toxic Air Contaminants** (see Impact AIR-6).
>
> **Mitigation Measure AIR-4: Text Changes to SCA 23, Reduce Exposure to Air Pollution – Toxic Air Contaminants** (see Impact AIR-6).
>
> **Mitigation Measure AIR-5: Text Changes to SCA 24, Stationary Sources of Air Pollution (Toxic Air Contaminants)** (see Impact AIR-6).

Mitigation Measure AIR-6: Text Changes to SCA 25, Truck-Related Risk Reduction Measures (Toxic Air Contaminants) (see Impact AIR-6).

Impact AIR-9: Adoption of the Proposed Project, in combination with cumulative projects, would not combine with other sources of odors that would adversely affect a substantial number of people. (Criteria 4 and 10) (*Less than Significant)*

Impact AIR-7 describes the potential of odorous emissions from the Proposed Project. Section 4.2.1, *Environmental Setting* (see *Odorous Emissions*) identifies sources of odors in the vicinity of the Plan Area, including a wastewater treatment plant and pump stations, which are the type listed in BAAQMD Regulation 7. However, future development under the Proposed Project would not likely include land uses that are identified by BAAQMD as common odor sources. Therefore, operation of future development under the Proposed Project would not generate odors, hence the potential for the Proposed Project to combine with cumulative projects to result in a significant cumulative odor impact is limited. Therefore, this impact would be less than significant, and no mitigation is required.

Mitigation: None required.

4.2.6 References

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4.3 Biological Resources

This section describes conditions and potential environmental effects of the Proposed Project pertaining to Biological Resources. The section discusses relevant existing environmental conditions of the Plan Area and regulations pertinent to biological resources, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts on the physical environment that could result from implementation of the Proposed Project and its associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that would reduce potential impacts on biological resources are identified; both existing and proposed updated/new General Plan policies and SCAs are considered. Mitigation measures to address potentially significant impacts on biological resources are also identified.

This section relies in part on historic and current aerial imagery available on Google Earth (2022) and subscription-based biological resource databases including the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB), California Native Plant Society (CNPS) Rare Plant Inventory, and the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation Official Species List (2022) and incorporates relevant information from the General Plan Update Map Atlas (see Appendix A) prepared in support of the Proposed Project.

The evaluation of biological resources includes a "study area" comprised of the Plan Area, excluding areas where new housing development is not expected to occur (e.g., coastal saltmarsh habitat; public lands, such as Joaquin Miller Park, owned by the East Bay Regional Park District, and Leona Heights Park, owned by the City of Oakland; and private lands such as the Mountain View Cemetery, Claremont Country Club, and Mills College).

No scoping comments related to biological resources were received in response to the NOP (Notice of Preparation) of this Draft EIR.

4.3.1 Environmental Setting

4.3.1.1 Regional/Local Conditions

Oakland is in the San Francisco Bay Bioregion, which has a mild Mediterranean climate with generally warm, dry summers and cool, wet winters. This region includes marine, freshwater, and terrestrial resources from Point Arena to the Santa Cruz Mountains and extends from the continental shelf to the delta of the Sacramento and San Joaquin Rivers (USGS, 2017).[1] Oakland is bordered to the west by the San Francisco Bay (Bay) and to the east by the San Pablo Ridge Range, one of the Southern Coast Ranges running from the East San Francisco Bay Area south to Santa Barbara County.

[1] There are numerous sources for bioregions. The USGS Western Ecological Research Center defined their Bioregions of the Pacific U.S. by adopting a slightly modified version of the Forest Service's National Hierarchical Framework of Ecological Units.

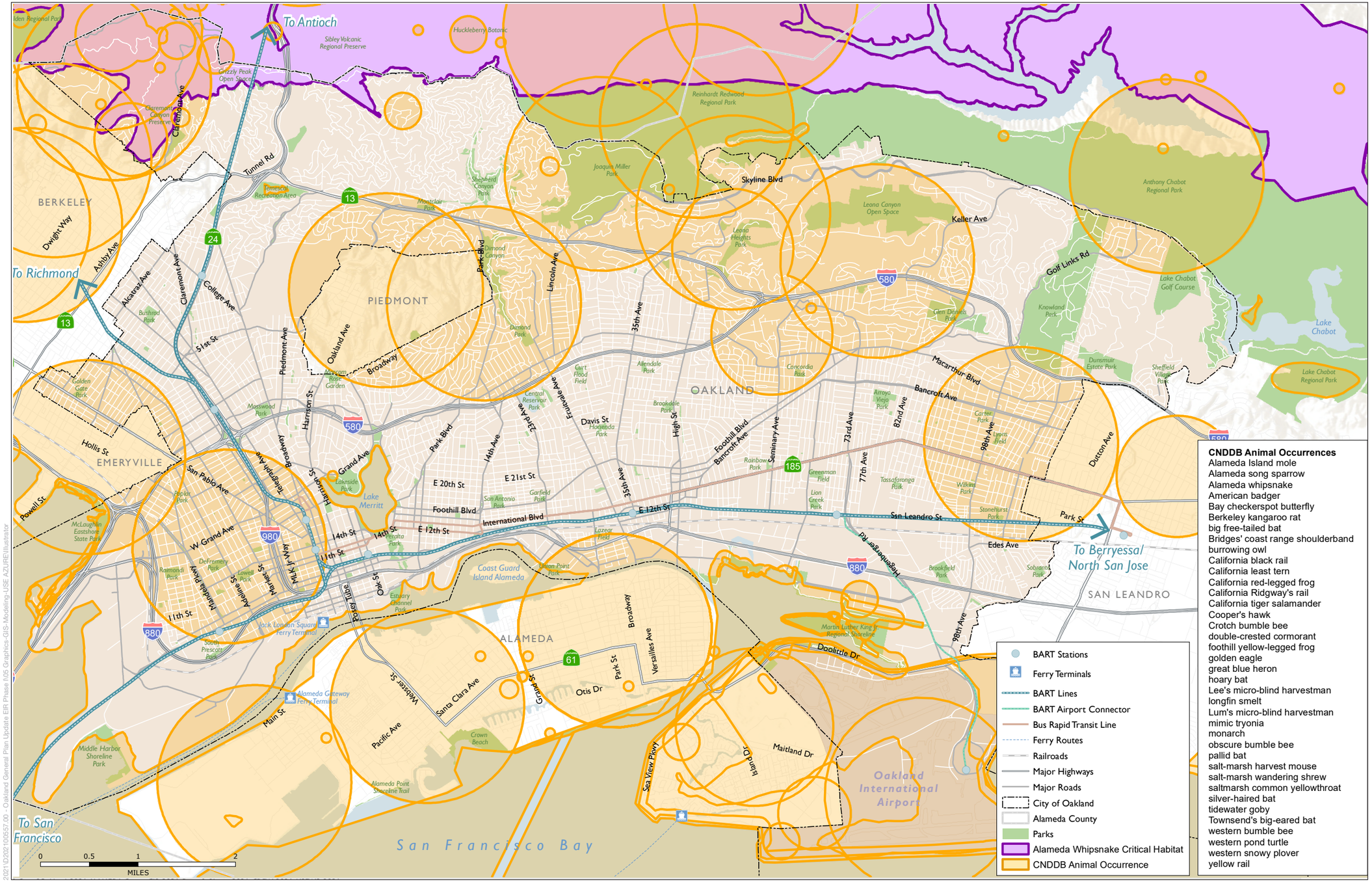
Vegetation and Aquatic Habitat

Oakland is a highly urbanized environment and most of its lands are disturbed or developed areas, which are the areas not designated as a vegetation community or aquatic feature (**Figure 4.3-1**). However, Oakland has 19 miles of shoreline, 13 creeks, a muted tidal lake, and over 100,000 acres of parks and trails (City of Oakland, 2022; USFWS, 2022a). These natural areas include coastal salt marsh along the Bay shoreline, riparian forest along the City's many creeks, extensive grassland, oak woodland, coastal scrub in the Oakland hills, and many other vegetation communities and aquatic features, as shown in Figure 4.3-1 and **Table 4.3-1**.

TABLE 4.3-1
TERRESTRIAL VEGETATION COMMUNITIES AND AQUATIC FEATURES IN OAKLAND

Category	Acreage	Percentage of City of Oakland
Terrestrial		
Annual Grassland	1,182	2
Blue Oak Forest / Woodland	102	<1
California Bay Forest	32	<1
Central Coast Riparian Forests	17	<1
Chamise Chaparral	50	<1
Coast Live Oak Forest / Woodland	2,314	5
Coastal Sat Marsh / Coastal Brackish Marsh	220	<1
Coastal Scrub	559	1
Eucalyptus	913	2
Mixed Chaparral	25	<1
Montane Hardwoods	5	<1
Monterey Pine Forest	33	<1
Non-native / Ornamental Conifer	73	<1
Non-native / Ornamental Grass	479	1
Non-native / Ornamental Hardwood	129	<1
Non-native / Ornamental Conifer / Hardwood Mixture	354	1
Redwood Forest	310	1
Semi-Desert Scrub / Desert Scrub	284	1
Serpentine Conifer	23	<1
Serpentine Grassland	6	<1
Serpentine Hardwoods	34	<1
Serpentine Scrub	3	<1
Valley Oak Forest / Woodland	82	<1
Aquatic		
Estuarine Marine Wetland	329	1
Freshwater Forested / Shrub Wetland	2	<1
Freshwater Pond	152	<1
Lake	365	1
Permanent Freshwater Marsh	128	<1
Riverine	200	<1
Water	192	<1
Other		
Developed / Disturbed	41,310	83

SOURCE: Bay Area Open Space Council, 2019; USFWS, 2021.



SOURCE: Dyett & Bhatia, 2022

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Figure 4.3-1
CNDDB Wildlife Observations and Critical Habitat within the Project Vicinity

ESA

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Special-Status Species

The term *special-status species* refers to plant and wildlife species that are considered sufficiently rare that they require special consideration and/or protection and should be, or currently are, listed as rare, threatened, or endangered by the federal and/or state governments. Such species are legally protected under the federal and/or State Endangered Species Acts or other regulations or are species that are considered sufficiently rare by the regulatory and scientific community to qualify for protection. The term *special-status species* includes the following:

- Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (FESA) (Code of Federal Regulations Title 50, Section 17.12 [listed plants] and Section 17.11 [listed animals] and various notices in the *Federal Register* [FR] [proposed species]);
- Species that are candidates for possible future listing as threatened or endangered under the FESA (61 FR 40, February 28, 1996);
- Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (California Code of Regulations Title 14, Section 670.5);
- Plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code [CFGC] Section 1900 et seq.);
- Species formerly designated by CDFW as California Species of Special Concern (SSC);[2]
- Animals fully protected under the CFGC (Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]);[3]
- Species that meet the definitions of rare and endangered under CEQA. CEQA Section 15380 provides that a plant or animal species may be treated as "rare or endangered" even if not on one of the official lists (*CEQA Guidelines* Section 15380);
- Plants considered by CDFW and the CNPS to be "rare, threatened or endangered in California" (California Rare Plant Rank 1A, 1B, and 2); and.
- Bats defined as having a Moderate or High conservation priority by the Western Bat Working Group.

The CNDDB (CDFW, 2022a) and CNPS Rare Plant Inventory (CNPS, 2022) were queried based on a search of the Oakland West, Oakland East, and San Leandro 7.5-minute U.S. Geological Survey quadrangles. The USFWS *Official List of Federal Endangered and Threatened Species that Occur in or May Be Affected by the Projects* (USFWS, 2022b) was queried based on the study area (refer to Appendix C of this Draft EIR, *Plant and Wildlife Species Lists for the Project Area*, for database reports). In addition, CNDDB observations for wildlife and plants were mapped relative to the Plan Area (Figures 4.3-1 and **4.3-2**). The Calflora database was queried for rare plant

[2] A California SSC is one that: has been extirpated from the State; meets the State definition of threatened or endangered but has not been formally listed; is undergoing or has experienced serious population declines or range restrictions that put it at risk of becoming threatened or endangered; and/or has naturally small populations susceptible to high risk from any factor that could lead to declines that would qualify it for threatened or endangered status.

[3] The *fully protected* classification was California's initial effort in the 1960s to identify and provide additional protection to those animals that were rare or faced possible extinction. The designation can be found in the CFGC.

species habitat requirements and occurrence records (Calflora, 2022). The results of these queries and knowledge of currently available habitat in the study area, formed the basis for analysis of special-status species with the potential to occur in the study area. Based on this analysis, special-status species with a moderate or high potential to occur in the study area are presented in **Table 4.3-2**. Note that CNDDB observations categorized as extirpated, species with ranges outside of the study area, and some species not observed in 50 years or more were excluded from the analysis, particularly if habitat conditions at the time of the observation no longer exist.

TABLE 4.3-2
SPECIAL-STATUS SPECIES WITH A MODERATE OR HIGH POTENTIAL TO OCCUR IN THE STUDY AREA

Common Name *Scientific Name*	Listing Status USFWS/ CDFW/Other	Habitat Description	Potential to Occur in the Study Area
Plants			
Pallid manzanita *Arctostaphylos pallida*	FT/CE/1B.1	Siliceous shales, slopes, ridges, chaparral; 200-460 m. Blooms January - March.	**Moderate.** Recently documented in Oakland Hills (CalFlora, 2022) and could be found in remnant patches of chaparral ridges elsewhere in the study area.
Presidio clarkia *Clarkia franciscana*	FE/CE/1B.1	Coastal scrub, valley and foothill grassland; endemic to serpentine soil; 30 – 340 m. Blooms May – June.	**Moderate.** Recently documented in the Oakland Hills, including on private property (CDFW, 2017).
Western leatherwood *Dirca occidentalis*	--/--/1B.2	Generally north or northeast facing slopes; mixed evergreen forest to chaparral, generally in fog belt. 50 – 400m. Blooms November – March.	**Moderate.** Recently documented in the Oakland Hills and could be found in remnant patches of chaparral and woodland elsewhere in the study area (CalFlora, 2022).
Tiburon buckwheat *Eriogonum luteolum* var. *caninum*	--/--/1B.2	Endemic to serpentine soil. 20 – 630m. Blooms May – October.	**Moderate.** Recently documented in the Oakland Hills including residential areas (CalFlora, 2022)
Most beautiful jewel flower *Streptanthus albidus* ssp. *peramoenus*	--/--/1B.2	Serpentine or metamorphic (Franciscan formation), rocky, generally barren slopes, chaparral openings, steep woodland; 150 – 1,400 meters elevation. Blooms April – July	**Moderate.** Recently documented in the Oakland Hills including residential areas (CalFlora, 2022)
Reptiles			
Alameda whipsnake *Masticophis lateralis euryxanthus*	FT/CT/--	Coastal ranges, in chaparral and riparian habitat and adjacent grasslands.	**Moderate.** Species is known to use open scrub habitat and adjacent grasslands, woodlands, and other non-scrub habitat, which is present in the Oakland hills. Critical Habitat for the species is present in the hills in the northeast portion of the study area and non-site-specific observations are recorded in the vicinity of the study area (exact locations are not provided to protect the species).

TABLE 4.3-2 (CONTINUED)
SPECIAL-STATUS SPECIES WITH A MODERATE OR HIGH POTENTIAL TO OCCUR IN THE STUDY AREA

Common Name *Scientific Name*	Listing Status USFWS/ CDFW/Other	Habitat Description	Potential to Occur in the Study Area
Birds			
Cooper's hawk *Accipiter cooperii*	--/WL/--	Nests in riparian areas and oak woodlands, and hunts songbirds at woodland edges and backyard bird feeders. Increasingly common nesting in neighborhood trees; tolerates human disturbance.	**High.** Suitable nesting habitat is present in the study area.
Sharp-shinned hawk *Accipiter striatus*	--/WL, §3503.5 /--	Nests in dense groves of usually midsized conifers, in the tops of live oaks, and sometimes deciduous trees. Usually on hilltops or hillsides, near grasslands or chaparral, but typically not water. Hunts songbirds along edge habitat.	**Moderate.** Suitable nesting habitat in conifers and oaks and hills and in riparian woodland.
great egret *Ardea alba*	--/*/--	Colonial nester in tall trees near wetland foraging areas. Occasionally nest on the ground or on artificial platforms.	**High.** A nesting rookery for this species is documented on the islands of Lake Merritt. Additional habitat present in riparian corridors with mature trees.
great blue heron *Ardea herodias*	--/*/--	Colonial nester in tall trees near wetland foraging areas	**High.** A nesting rookery for this species is documented on the islands of Lake Merritt. Additional habitat present in riparian corridors with mature trees.
snowy egret *Egretta thula*	BCC/CSC/-- (rookery site)	Colonial nester, with nest sites situated in protected beds of dense tules. Rookery sites situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.	**High.** Species has nested in street trees in downtown Oakland and is documented to nest on the islands of Lake Merritt. Additional habitat present in riparian corridors with mature trees.
American peregrine falcon *Falco peregrinus anatum*	FD/CD, FP/--	Breeds near water at varied nest sites, including natural cliff ledges and potholes, tall metropolitan buildings and bridges, and former nests of common raven and osprey on electric transmission towers and boat navigation channel markers (towers). Prey is often birds, which it takes on the wing, possibly spotting it from a mile or more away.	**Moderate.** A pair has consistently nested on the Fruitvale Bridge for the last 10 years and likely preys on birds in the study area.
black-crowned night heron (nesting colony) *Nycticorax nycticorax*	--/*/--	Colonial nester, usually in trees, occasionally in tule patches. Rookery sites located adjacent to foraging areas: lake margins, mud-bordered bays, marshy spots.	**High.** Nesting rookeries are documented in downtown Oakland and on the islands of Lake Merritt. Additional habitat is present in riparian corridors with mature trees.
Mammals			
pallid bat *Antrozous pallidus*	--/CSC/-- WBWG High	Most common in open, dry habitats with rocky areas for roosting. Roosts on buildings, under bridges and overpasses, and cracks in rocks. Flies low to the ground to forage on large insects on the ground.	**Moderate.** This species could roost in crevices in buildings, and under bridges and road overpasses in the vicinity of foraging habitat. No CNDDB records in study area.

TABLE 4.3-2 (CONTINUED)
SPECIAL-STATUS SPECIES WITH A MODERATE OR HIGH POTENTIAL TO OCCUR IN THE STUDY AREA

Common Name *Scientific Name*	Listing Status USFWS/ CDFW/Other	Habitat Description	Potential to Occur in the Study Area
Mammals (cont.)			
Western red bat *Lasiurus blossevillii*	--/CSC/WBWG: High	Habitats include forests and woodlands from sea level up through mixed conifer forests, and urban parks with lakes. Solitary rooster in tree foliage. May hibernate in leaf litter.	**Moderate.** Suitable roosting habitat present in oak woodland and urban parks with lakes, such as Lake Temescal and Lake Merritt. No CNDDB occurrences from the study area.
Yuma myotis *Myotis yumanensis*	--/*/WBWG: Low-Medium	Roost in crevices in buildings, under bridges, in caves or mines, and in tree bark. Forage over open water. Present throughout most of California with the exception of the southeast portion of the State.	**Moderate.** This species could roost in crevices in buildings, and under tree bark in riparian corridors and the hills within the study area. No CNDDB records in study area.

NOTES:

[a] Species that are not expected to occur because of the absence of suitable habitat, or because the study area is outside of the species' known range, were excluded from the table.

[b] *Potential to Occur Categories*:
- No potential = The study area is outside of the species' known range or does not support suitable habitat for the species. Species identified as unlikely to occur are not addressed further in the habitat assessment.
- Low = The study area is within the known range of the species; however, the species is presumed to be extirpated from the study area or region or only marginally suitable habitat is present within the study area.
- Moderate = The study area is within the known range of the species and suitable habitat is present within the study area; but there are few or no recent documented occurrences of the species within an appropriate distance of the study area (this will depend on the species' mobility).
- High = The study area is within the known range of the species and suitable habitat is present within the study area, and there are recent documented occurrences of the species within an appropriate distance of the study area (this will depend on the species' mobility).

FEDERAL (U.S. Fish and Wildlife Service):
FT = Listed as Threatened (likely to become Endangered within the foreseeable future) by the Federal Government.
FE = Federally endangered
BCC = Bird of Conservation Concern
FD = Delisted

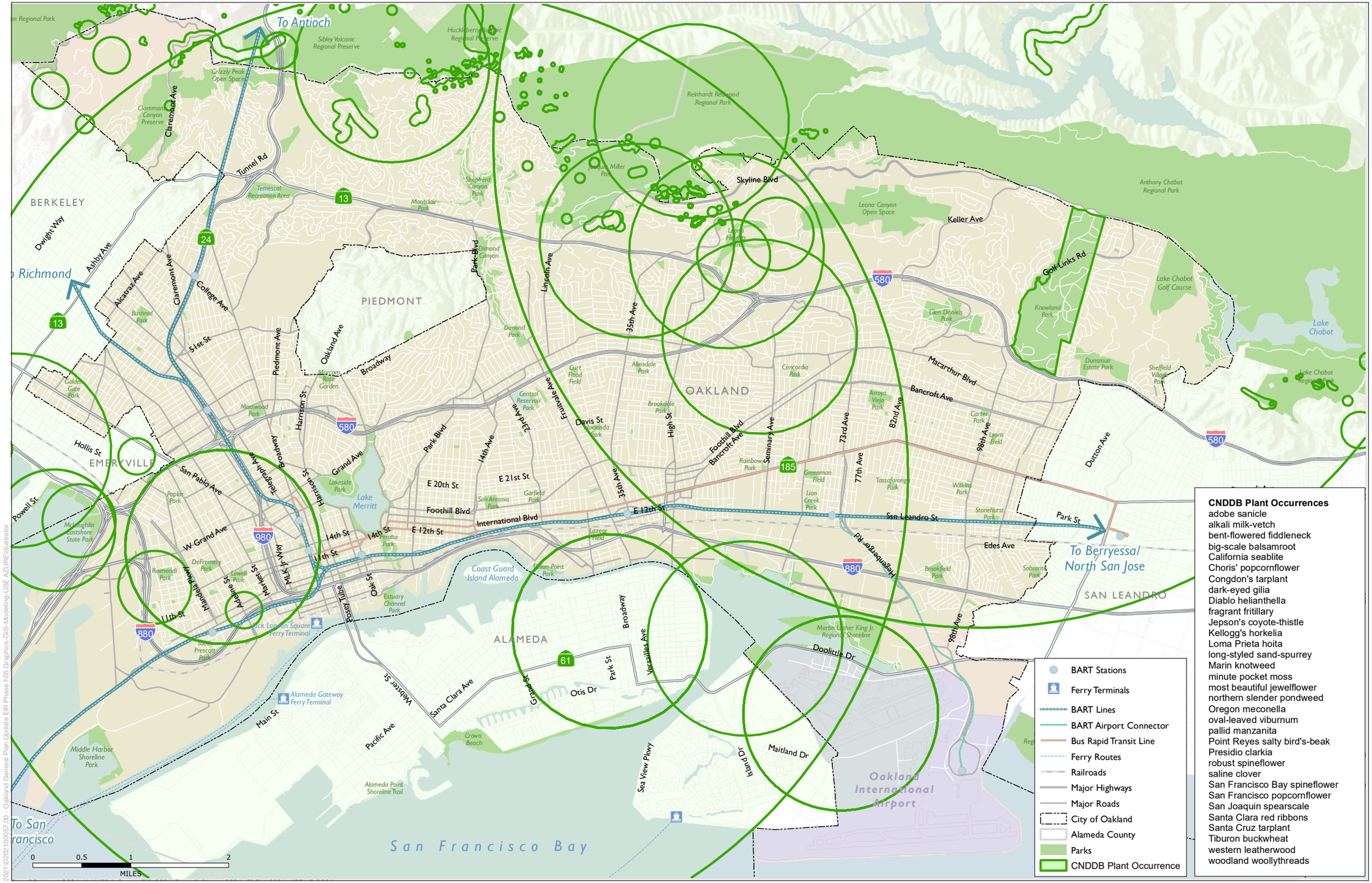
STATE (California Department of Fish and Wildlife):
CT = Listed as Threatened by the State of California
CE= Listed as Endangered by the State of California
CSC = California Species of Special Concern
FP= California Department of Fish and Wildlife designated "fully protected"
CD = Delisted
WL = Watch list
§3503.5 = Protection for nesting species of Falconiformes (hawks) and Strigiformes (owls)
* Special animal-listed on CDFW's Special Animal List

OTHER:

California Native Plant Society (CNPS) California Rare Plant Ranks (CRPR):
1A = Presumed extirpated in California; Rare or extinct in other parts of its range.
1B = Rare, threatened, or endangered throughout range; Most species in this rank are endemic to California.
2A = Extirpated in California, but common in other parts of its range.
2B = Rare, threatened, or endangered in California but common in other parts of its range.
.1 = Seriously endangered in California
.2 = Fairly endangered in California
LS= Locally Significant Species

WBWG = Western Bat Working Group:
Low = Stable population
Medium = Need more information about the species, possible threats, and protective actions to implement.
High= Imperiled or at high risk of imperilment.

SOURCE: ESA



SOURCE: Dyett & Bhatia, 2022

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Figure 4.3-2
CNDDB Plant Observations within the Project Vicinity

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Sensitive Natural Communities

Sensitive natural communities are designated by various resource agencies such as CDFW, or in local policies and regulations; are generally considered to have important functions or values for wildlife and/or are recognized as declining in extent or distribution; and are considered threatened enough to warrant some level of protection. CDFW tracks communities of conservation concern through its *California Sensitive Natural Community List* (CDFW, 2022b). Natural communities with ranks of S1 to S3 are considered sensitive natural communities, to be addressed in the environmental review processes of CEQA and its equivalents.

Critical Habitat

USFWS can designate critical habitat for species that have been listed as threatened or endangered. *Critical habitat* is defined in FESA Section 3(5)(A) as those lands (or waters) within a listed species' current range that contain the physical or biological features that are considered essential to its conservation. Critical habitat for the Alameda whipsnake (*Masticophis lateralis euryxanthus*) is present in limited portions of the study area, specifically in the hills at the northeastern edge of the City of Oakland (USFWS, 2022c).

Wildlife Corridors

Both the shoreline and open waters of the Bay, as well as riparian corridors are potential wildlife corridors. The study area is adjacent to open water of the Bay and includes riparian corridors, the most significant of which are Sausal Creek and San Leandro Creek due to extensive daylighting and presence of riparian vegetation.

4.3.2 Regulatory Setting

4.3.2.1 Federal

The FESA, Migratory Bird Treaty Act (MBTA), Clean Water Act (CWA), and Magnuson-Stevens Fishery Conservation and Management Act are the primary federal planning, treatment, and review mechanisms for biological resources in the study area. Each is summarized below.

Endangered Species Act

USFWS and the National Marine Fisheries Service (NMFS) are the designated federal agencies responsible for administering the FESA. The FESA defines species as "endangered" and "threatened" and provides regulatory protection for any species thus designated. FESA Section 9 prohibits the "take" of species listed by USFWS as threatened or endangered. As defined in the FESA, *taking* means "… to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in such conduct." Recognizing that a take cannot always be avoided, FESA Section 10(a) includes provisions for takings that are incidental to, but not the purpose of, otherwise lawful activities.

FESA Section 7(a)(2) requires all federal agencies, including USFWS, to evaluate projects authorized, funded, or carried out by federal agencies with respect to any species proposed for listing or already listed as endangered or threatened and the species' critical habitat, if any is

proposed or designated. Federal agencies must undertake programs for the conservation of endangered and threatened species and are prohibited from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its "critical habitat", without receipt of a biological opinion and incidental take statement.

As defined in the FESA, "individuals, organizations, states, local governments, and other non-federal entities are affected by the designation of critical habitat only if their actions occur on federal lands, require a federal permit, license, or other authorization, or involve federal funding."

Migratory Bird Treaty Act

The MBTA is the domestic law that affirms and implements a commitment by the United States to four international conventions (with Canada, Mexico, Japan, and Russia) for the protection of a shared migratory bird resource. Unless and except as permitted by regulations, the MBTA makes it unlawful at any time, by any means, or in any manner to intentionally pursue, hunt, take, capture, or kill migratory birds anywhere in the United States. The law also applies to the intentional disturbance and removal of nests occupied by migratory birds or their eggs during the breeding season.

Clean Water Act Section 404

CWA Section 404, which is administered by the U.S. Army Corps of Engineers (USACE), regulates the discharge of dredged and fill material into "waters of the United States." USACE has established a series of nationwide permits that authorize certain activities in waters of the United States, provided that the proposed activity can demonstrate compliance with standard conditions. Projects that result in relatively minor impacts on waters of the United States can normally be conducted under one of the nationwide permits, if consistent with the standard permit conditions. Use of any nationwide permit is contingent on compliance with other federal regulations and Executive Orders, including FESA Section 7, and Section 106 of the National Historic Preservation Act of 1966. In the study area, Lakes Merritt and Temescal; other major creeks, including and Arroyo Viejo, Courtland, Elmhurst, Glen Echo, Lion, Indian Gulch, Palo Seco, Peralta, Pleasant Valley, San Antonio, San Leandro, Sausal, Temescal, and Wildwood creeks; and other smaller creeks draining to the Bay may qualify as waters of the United States.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Act of 1976 (U.S. Code Title 16, Sections 1801−1884 [16 USC 1804–1884]), as amended in 1996 and reauthorized in 2007, is intended to protect fisheries resources and fishing activities within 200 miles of shore. Conservation and management of U.S. fisheries, development of domestic fisheries, and phasing out of foreign fishing activities are the main objectives of the Magnuson-Stevens Act. The Magnuson-Stevens Act provided NMFS with legislative authority to regulate U.S. fisheries in the area between 3 and 200 miles offshore and established eight regional fishery management councils that manage the harvest of the fish and shellfish resources in these waters.

The Magnuson-Stevens Act defines essential fish habitat (EFH) as those waters and substrate that support fish spawning, breeding, feeding, or maturation. The Magnuson-Stevens Act requires that NMFS, the regional fishery management councils, and federal agencies taking an action that may

affect managed fish species covered under the Magnuson-Stevens Act identify EFH and protect important marine and anadromous fish habitat.

The regional fishery management councils, with assistance from NMFS, are required to develop and implement Fishery Management Plans. These plans delineate EFH and management goals for all managed fish species, including some fish species that are not protected under the Magnuson-Stevens Act. Federal agency actions that fund, permit, or carry out activities that may adversely affect EFH are required under Magnuson-Stevens Act Section 305(b), in conjunction with required Section 7 consultation under FESA, to consult with NMFS regarding potential adverse effects of their actions on EFH and to respond in writing to NMFS's recommendations.

All offshore areas, lakes, and creeks in the study area are designated as EFH for Chinook salmon (*Oncorhynchus tshawytscha*) and Coho salmon (*Oncorhynchus kisutch*) as covered under the Pacific Coast Salmon Fishery Management Plan, which is designed to protect habitat for commercially important salmonid species (NOAA, 2022; PFMC, 2016). Coho salmon are extirpated from the Bay. Chinook salmon are not present in bay tributaries but may use offshore waters during migratory periods. The Oakland Estuary and other offshore waters are designated as EFH for groundfish, coastal pelagic species; however, the Proposed Project is not expected to impact offshore waters.

4.3.2.2 State

In addition to CEQA, the primary State planning, treatment, and review mechanisms for biological resources in the study area are the CESA, CFGC Sections 1600–1603 and 3503, 3503.5, and 3511, and the National Pollutant Discharge Elimination System (NPDES) General Permit. Each is summarized below.

California Endangered Species Act

The CESA closely parallels the conditions of the FESA; however, it is administered by CDFW. CESA prohibits the take of plant and animal species that the California Fish and Game Commission has designated as either threatened or endangered in California. "Take" in the context of this regulation means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill a listed species (CFGC Section 86). However, Section 2081 of the act allows the department to issue permits for the minor and incidental take of species by an individual or permitted activity listed under the act. Unlike FESA, species that are candidates for State listing are granted the same protections as listed species under CESA.

In accordance with the requirements of CESA, an agency reviewing a project within its jurisdiction must determine whether any State-listed endangered or threatened species could be present in the study areas. The agency also must determine whether the project could have a potentially significant impact on such species. In addition, the department encourages informal consultation on any project that could affect a candidate species.

California Fish and Game Code Sections 1600–1603

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports fish or wildlife resources are subject to the regulatory

authority of CDFW under CFGC Sections 1600–1603. Under the CFGC, a *stream* is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Included are watercourses with surface or subsurface flows that support or have supported riparian vegetation. Specifically, CFGC Section 1603 governs private-party individuals, and CFGC Section 1601 governs public projects.

CDFW jurisdiction in altered or artificial waterways is based on the value of those waterways to fish and wildlife. CDFW must be contacted by the public or private party for a streambed alteration agreement for any project that might substantially affect a streambed or wetland. CDFW has maintained a "no net loss" policy regarding potential impacts and has required replacement of lost habitats.

California Fish and Game Code Sections 3503, 3503.5, and 3513

Under CFGC Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the code or any regulation made pursuant thereto. CFGC Section 3503.5 prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs. Migratory non-game birds are protected under Section 3800, whereas other specified birds are protected under Section 3505. CFGC Section 3513 adopts the federal definition of migratory bird take, which is defined by the U.S. Department of the Interior under provisions of the MBTA. Section 3513 does not prohibit the incidental take of birds if the underlying purpose of the activity is not to take birds. In addition, CDFW has issued an advisory that affirms that California law prohibits incidental take of migratory birds (CDFW, 2018b).

4.3.2.3 Local Plans, Ordinances and Policies

City of Oakland General Plan

Objectives and policies in the General Plan related to biological resources are included in the Open Space, Conservation and Recreation element include:

> **Objective CO-6: Surface Waters.** To protect the ecology and promote the beneficial uses of Oakland's creeks, lakes, and nearshore waters.
>
> > ***Policy CO-6.1: Creek Management.*** Protecting Oakland's remaining natural creek segments by retaining creek vegetation, maintaining creek setbacks, and controlling bank erosion. Strongly discourage projects which bury creeks or divert them into concrete channels.
> >
> > ***Policy CO-6.4: Lake Management.*** Manage Oakland's lakes to take advantage of their recreational and aesthetic potential while conserving their ecological functions and resource value.
> >
> > ***Policy CO-6.5: Protection of Bay and Estuary Waters.*** Protect the surface waters of the San Francisco Estuary system, including San Francisco Bay, San Leandro Bay, and the Oakland Estuary. Discourage shoreline activities which negatively impact marine life in the water and marshland areas.

Policy CO-6.6: Restriction of Bay Fill. Prohibit bay fill unless there is compelling evidence that its benefits will outweigh the environmental and other costs. In such instances, support compliance with the mitigation requirements of the Bay Conservation and Development Commission and other regulatory agencies.

Objective CO-7: Protection of Native Plant Communities. To minimize the loss of native plant communities and restore these communities where they have been damaged or lost, and to preserve Oakland's trees unless there are compelling safety, ecological, public safety, or aesthetic reasons for their removal.

Policy CO-7.1: Protection of Native Plant Communities. Protect native plant communities, especially oak woodlands, redwood forests, native perennial grasslands, and riparian woodlands, from the potential adverse impacts of development. Manage development in a way which prevents or mitigates adverse impacts to these communities.

Policy CO-7.2: Native Plant Restoration. Consideration of Landscape Guidelines. Control of Invasive Species. Encourage efforts to restore native plant communities in areas where they have been compromised by development or invasive species, provided that such efforts do not increase an area's susceptibility to wildfire.

Policy CO-7.4*: *Tree Removal. Discourage the removal of large trees on already developed sites unless removal is required for biological, public safety, or public works reasons.

Policy CO-7.5*: *Non-native Plant Removal. Do not remove non-native plants within park and open space areas solely because they are non-natives. Plant removal should be related to other valid management policies, including fire prevention.

Objective CO-8: Wetlands. To conserve wetlands so that they may continue to provide habitat for fish and wildlife.

Policy CO-8.1: Mitigation of Development Impacts. Work with federal, state, and regional agencies on an ongoing basis to determine mitigation measures for development which could potentially impact wetlands. Strongly discourage development with unmitigable adverse impacts.

Policy CO-8.2: Wetland Park Activities. Limit recreational uses within wetland "parks" to activities that are consistent with the fragile environmental characteristics of the areas. These uses may include wildlife refuges, ecological study areas, and where appropriate, interpretive boardwalks and nature centers.

Objective CO-9: Rare, Endangered, and Threatened Species. To protect rare, endangered, and threatened species from the impacts of urbanization.

Policy CO-9.1: Habitat protection. Protect rare, endangered, and threatened species by conserving and enhancing their habitat and requiring mitigation of potential adverse impacts when development occurs within habitat areas.

Objective CO-11: Wildlife. To sustain a healthy wildlife population within the City of Oakland.

Policy CO-11.1: Protection from Urbanization. Protect wildlife from the hazards or urbanization, including loss of habitat and predation by domestic animals.

Policy CO-11.2: Migratory Corridors. Protect and enhance migratory corridors for wildlife. Where such corridors are privately owned, require new development to retain native habitat or take other measures which help sustain local wildlife population and migratory patterns.

Oakland Municipal Code

City of Oakland Tree Ordinance

The City of Oakland Protected Tree Ordinance (OMC Chapter 12.36) permits removal of protected trees under certain circumstances. To grant a tree removal permit, the City must determine that removal is necessary in order to accomplish one of the following objectives:

- To ensure public health and safety,
- To avoid an unconstitutional taking of property,
- To take reasonable advantage of views,
- To pursue acceptable professional practice of forestry or landscape design, or
- To implement the vegetation management prescriptions in the S-11 site development review zone.

Protected trees include the following:

- California or coast live oak (*Quercus agrifolia*) measuring four inches diameter at breast height (dbh) or larger, and
- Any other tree measuring nine inches dbh or larger except eucalyptus (Eucalyptus spp.) and Monterey pine (*Pinus radiata*); provided, however, Monterey pine trees on City property and in development-related situations where more than five Monterey pine trees per acre are proposed to be removed are considered protected trees.

City of Oakland Creek Protection, Storm Water Management and Discharge Control Ordinance

The City's Creek Protection, Stormwater Management, and Discharge Control Ordinance (Chapter 13.16 of the Oakland Municipal Code) prohibits activities that would result in the discharge of pollutants to Oakland's waterways or in damage to creeks, creek functions, or habitat. The Ordinance requires the use of standard best management practices (BMPs) to prevent pollution or erosion to creeks and/or storm drains. Additionally, a creek protection permit is required for any construction work on creekside properties. The Ordinance establishes comprehensive guidelines for the regulation of discharges to the City's storm drain system and the protection of surface water quality. Under the ordinance, the City of Oakland Public Works Agency issues permits for storm drainage facilities that would connect to existing City drainage facilities. The Ordinance includes enforcement provisions to provide more effective methods to deter and reduce the discharge of pollutants to the storm drain system, local creeks, and Bay.

As described in Section 4.9, *Hydrology and Water Quality*, the Plan Area is bordered by the Bay, including the Oakland Estuary and San Leandro Bay. The Estuary is considered a waterway under the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16). Future development under the Proposed Project would require a Creek Protection Permit type I, II, III, of IV depending on the

type of work proposed and where it is taking place in relation to the centerline of a creek. Creek Protection Permits are obtained through submittal of a Creek Protection Plan and accompanying hydrology report. The Creek Protection Plan may include, but is not limited to, implementation of litter prevention measures, dust control measures, methods of cleaning tools and equipment, construction site fencing, sediment and erosion control measures, wet weather protection, and emergency preparations for construction-related spills. See Section 4.9, *Local Plans, Ordinances and Policies*, for further discussion of the Creek Protection Plan requirements.

4.3.2.4 City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to reducing impacts on biological resources are listed below. All SCAs would be adopted as enforceable conditions of approval and required, as applicable, to be implemented during construction and operation of future development under the Proposed Project to help ensure less-than-significant impacts on biological resources. The SCAs are incorporated and required as part of the Proposed Project, so they are not listed as mitigation measures.

- **SCA 28: Bird Collision Reduction Measures**

  Requirement: The project applicant shall submit a Bird Collision Reduction Plan for City review and approval to reduce potential bird collisions to the maximum feasible extent. The Plan shall include all of the following mandatory measures, as well as applicable and specific project Best Management Practice (BMP) strategies to reduce bird strike impacts to the maximum feasible extent. The project applicant shall implement the approved Plan. Mandatory measures include all of the following:

  i. For large buildings subject to federal aviation safety regulations, install minimum intensity white strobe lighting with three second flash instead of solid red or rotating lights.

  ii. Minimize the number of and co-locate rooftop-antennas and other rooftop structures.

  iii. Monopole structures or antennas shall not include guy wires.

  iv. Avoid the use of mirrors in landscape design.

  v. Avoid placement of bird-friendly attractants (i.e., landscaped areas, vegetated roofs, water features) near glass unless shielded by architectural features taller than the attractant that incorporate bird friendly treatments no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule), as explained below.

  vi. Apply bird-friendly glazing treatments to no less than 90 percent of all windows and glass between the ground and 60 feet above ground or to the height of existing adjacent landscape or the height of the proposed landscape. Examples of bird-friendly glazing treatments include the following:

  - Use opaque glass in window panes instead of reflective glass.
  - Uniformly cover the interior or exterior of clear glass surface with patterns (e.g., dots, stripes, decals, images, abstract patterns). Patterns can be etched, fritted, or on films and shall have a density of no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule).

- Install paned glass with fenestration patterns with vertical and horizontal mullions no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule).
- Install external screens over non-reflective glass (as close to the glass as possible) for birds to perceive windows as solid objects.
- Install UV-pattern reflective glass, laminated glass with a patterned UV-reflective coating, or UV-absorbing and UV-reflecting film on the glass since most birds can see ultraviolet light, which is invisible to humans.
- Install decorative grilles, screens, netting, or louvers, with openings no more than two inches horizontally, four inches vertically, or both (the "two-by-four" rule).
- Install awnings, overhangs, sunshades, or light shelves directly adjacent to clear glass which is recessed on all sides.
- Install opaque window film or window film with a pattern/design which also adheres to the "two-by-four" rule for coverage.

vii. Reduce light pollution. Examples include the following:

- Extinguish night-time architectural illumination treatments during bird migration season (February 15 to May 15 and August 15 to November 30).
- Install time switch control devices or occupancy sensors on non-emergency interior lights that can be programmed to turn off during non-work hours and between 11:00 p.m. and sunrise.
- Reduce perimeter lighting whenever possible.
- Install full cut-off, shielded, or directional lighting to minimize light spillage, glare, or light trespass.
- Do not use beams of lights during the spring (February 15 to May 15) or fall (August 15 to November 30) migration.

viii. Develop and implement a building operation and management manual that promotes bird safety. Example measures in the manual include the following:

- Donation of discovered dead bird specimens to an authorized bird conservation organization or museums (e.g., UC Berkeley Museum of Vertebrate Zoology) to aid in species identification and to benefit scientific study, as per all federal, state and local laws.
- Distribution of educational materials on bird-safe practices for the building occupants. Contact Golden Gate Audubon Society or American Bird Conservancy for materials.
- Asking employees to turn off task lighting at their work stations and draw office blinds, shades, curtains, or other window coverings at end of work day.
- Install interior blinds, shades, or other window coverings in windows above the ground floor visible from the exterior as part of the construction contract, lease agreement, or CC&Rs.

- Schedule nightly maintenance during the day or to conclude before 11 p.m., if possible.

- **SCA 29: Tree Removal During Bird Breeding Season**

  Requirement: To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of birds shall not occur during the bird breeding season of February 1 to August 15 (or during December 15 to August 15 for trees located in or near marsh, wetland, or aquatic habitats). If tree removal must occur during the bird breeding season, all trees to be removed shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to the start of work and shall be submitted to the City for review and approval. If the survey indicates the potential presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the California Department of Fish and Wildlife, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.

- **SCA 30: Tree Permit**

  a. Tree Permit Required

  Requirement: Pursuant to the City's Tree Protection Ordinance (OMC Chapter 12.36), the project applicant shall obtain a tree permit and abide by the conditions of that permit.

  b. Tree Protection During Construction

  Requirement: Adequate protection shall be provided during the construction period for any trees which are to remain standing, including the following, plus any recommendations of an arborist:

  i. Before the start of any clearing, excavation, construction, or other work on the site, every protected tree deemed to be potentially endangered by said site work shall be securely fenced off at a distance from the base of the tree to be determined by the project's consulting arborist. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris which will avoid injury to any protected tree.

  ii. Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall be incorporated to allow the roots to breathe and obtain water and nutrients. Any excavation, cutting, filling, or compaction of the existing ground surface within the protected perimeter shall be minimized. No change in existing ground level shall occur within a distance to be determined by the project's consulting arborist from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree.

  iii. No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the project's consulting arborist from the base of any protected trees, or any other location on the site from which such

substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within a distance from the base of any protected trees to be determined by the project's consulting arborist. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree. No sign, other than a tag showing the botanical classification, shall be attached to any protected tree.

iv. Periodically during construction, the leaves of protected trees shall be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration.

v. If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Department and the project's consulting arborist shall make a recommendation to the City Tree Reviewer as to whether the damaged tree can be preserved. If, in the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall require replacement of any tree removed with another tree or trees on the same site deemed adequate by the Tree Reviewer to compensate for the loss of the tree that is removed.

vi. All debris created as a result of any tree removal work shall be removed by the project applicant from the property within two weeks of debris creation, and such debris shall be properly disposed of by the project applicant in accordance with all applicable laws, ordinances, and regulations.

c. Tree Replacement Plantings

Requirement: Replacement plantings shall be required for tree removals for the purposes of erosion control, groundwater replenishment, visual screening, wildlife habitat, and preventing excessive loss of shade, in accordance with the following criteria:

i. No tree replacement shall be required for the removal of nonnative species, for the removal of trees which is required for the benefit of remaining trees, or where insufficient planting area exists for a mature tree of the species being considered.

ii. Replacement tree species shall consist of Sequoia sempervirens (Coast Redwood), Quercus agrifolia (Coast Live Oak), Arbutus menziesii (Madrone), Aesculus californica (California Buckeye), Umbellularia californica (California Bay Laurel), or other tree species acceptable to the Tree Division.

iii. Replacement trees shall be at least twenty-four (24) inch box size, unless a smaller size is recommended by the arborist, except that three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate.

iv. Minimum planting areas must be available on site as follows:

- For Sequoia sempervirens, three hundred fifteen (315) square feet per tree;
- For other species listed, seven hundred (700) square feet per tree.

v. In the event that replacement trees are required but cannot be planted due to site constraints, an in-lieu fee in accordance with the City's Master Fee Schedule may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians.

vi. The project applicant shall install the plantings and maintain the plantings until established. The Tree Reviewer of the Tree Division of the Public Works Department may require a landscape plan showing the replacement plantings and the method of irrigation. Any replacement plantings which fail to become established within one year of planting shall be replanted at the project applicant's expense.

- **SCA 31: Alameda Whipsnake Protection Measures**

a. Pre-Construction Survey Required

Requirement: The project applicant shall hire a qualified biologist to conduct an Alameda whipsnake survey to identify the potential presence of Alameda whipsnakes at the project site. If the presence of Alameda whipsnakes is confirmed, the whipsnakes shall be captured and relocated away from the construction area by a qualified biologist in accordance with all applicable regulations and guidelines. The biologist shall submit the results of the survey (and capture/relocation if applicable) to the City for review and approval.

b. Information and Protocols for Construction Workers

Requirement: The biologist from section (a) above shall instruct the project superintendent and the construction crews (primarily the clearing, demolition, and foundation crews) of the potential presence, status, and identification of Alameda whipsnakes. The biologist shall also establish a set of protocols for use during construction concerning the steps to take if a whipsnake is seen on the project site, including who to contact, to ensure that whipsnakes are not harmed or killed. The project applicant shall submit evidence of compliance with these requirements to the City for review and approval.

c. Alameda Whipsnake Exclusion Fence

Requirement: Unless alternative (equivalent or more effective) measures are recommended by the biologist, the project applicant shall install a solid fence to prevent whipsnakes from entering the work site. The snake exclusion fence shall be constructed as follows:

i. Plywood sheets at least three feet in height, above ground. Heavy duty geotextile fabric approved by the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife may also be used for the snake exclusion fence;

ii. Buried four to six inches into the ground;

iii. Soil back-filled against the plywood fence to create a solid barrier at the ground;

iv. Plywood sheets maintained in an upright position with wooden or masonry stakes;

v. Ends of each plywood sheet overlapped to ensure a continuous barrier; and

vi. Work site or construction area shall be completely enclosed by the exclusion fence or approved traps shall be installed at the ends of exclusion fence segments to allow capture and relocation of Alameda whipsnake away from the construction area by a qualified biologist.

The location and design of the proposed exclusion fence shall be submitted for review and approval by the City and be included on plans for all construction-related permits.

d. Alameda Whipsnake Protection During Construction

Requirement: The project applicant shall comply with the requirements in the above sections during construction activities. The approved protocol from section (b) above shall be

followed in the event Alameda whipsnakes are encountered. The snake exclusion fence from section (c) above shall be installed and remain in place throughout the construction period. All construction activities and equipment/materials/debris storage shall take place on the project-side of the exclusion fence.

- **SCA 58: Creek Protection Plan.** See Section 4.9, *Hydrology and Water Quality*.

4.3.3 Environmental Analysis

4.3.3.1 Significance Criteria

The City of Oakland has established thresholds of significance for CEQA impacts, which incorporate those in Appendix G of the *CEQA Guidelines* (City of Oakland, 2020). The Proposed Project would have a significant adverse impact related to biological resources if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
3. Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

4.3.3.2 Approach to Analysis / Methodology

This is a program-level Draft EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Impacts relative to biological resources are evaluated using the criteria listed above and based on information included in the City of Oakland General Plan, Map Atlas, and the documents listed in Section 4.3.6, *References – Biological Resources*.

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future

development under the Proposed Project, this Draft EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas and analyzes the impacts of housing development through the projection period ending in 2030.

The impact analysis is based on the resources, references, and data collection methods identified in Section 4.3.1. The analysis addresses potential direct and indirect impacts from construction and operation of future development under the Proposed Project, defined as follows:

Direct impacts are those that could occur at the same time and place as project implementation, such as the removal of habitat as a result of ground disturbance.

Indirect impacts are those that could occur either at a later time or at a distance from the project areas, but that are reasonably foreseeable, such as the loss of an aquatic species as a result of upstream effects on water quality or quantity.

Direct and indirect impacts on biological resources may vary in duration; they may be temporary, short term, or long term.

The analysis considers the potential impacts of future development under Proposed Project on suitable habitat, special-status species, sensitive natural communities, wetlands, and wildlife corridors, using the significance criteria listed above. Mitigation measures are identified, as necessary, to reduce impacts to less-than-significant levels.

4.3.3.3 Topics Considered and Determined to Have No Impact

Although Pacific Gas and Electric (PG&E) has a Bay Area Habitat Conservation Plan (HCP) covering the Plan Area, it is applicable only to PG&E projects and, therefore, the Proposed Project would not conflict with the provisions of the PG&E Bay Area HCP. There are no adopted or approved local, regional, or State habitat conservation plans applicable to the study area; therefore, the following significance threshold (Criterion 6) does not apply to the study area and is not discussed further:

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

4.3.4 Impacts of the Proposed Project

Impact BIO-1: Adoption of the Proposed Project could have a substantial adverse effect, either directly, indirectly, or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS (special-status plant species, nesting birds, roosting bats, Alameda whipsnake). (Criterion 1) (*Less than Significant with Mitigation*)

Portions of the study area include suitable habitat for the following special-status species and are within the species' known range: pallid manzanita, a federally and State listed species, and western leatherwood and Tiburon buckwheat, both of which have a CNPS California Rare Plant Rank of 1B.2; Cooper's hawk and sharp-shinned hawk, which are protected by CFGC 3503 and the MBTA; great egret, great blue heron, snowy egret, and black-crowned night heron, which are

protected by the MBTA; peregrine falcon, which is a CDFW fully protected species; pallid bat and western red bat, both California Species of Special Concern; and Yuma myotis, which, as Western Bat Working Group "medium" species, meet the definition for rare and endangered species under CEQA (CDFW, 2022).

Special-Status Plant Species

Construction Impacts

Potential habitat for pallid manzanita, western leatherwood, Presidio clarkia, Tiburon buckwheat, and most beautiful jewel flower is present in undeveloped hillside areas northeast of State Highway 13 and Interstate 580 southeast of its intersection with State Highway 13 within the City of Oakland. These special-status plant species have the potential to be present in disturbed or undisturbed natural sites that are not developed with buildings, asphalt, compressed gravel, hardscape, turf, or landscaping. Construction activities, such as clearing and grubbing, ground disturbance (e.g., grading, trenching, etc.), site access, or construction staging within these areas could result in direct temporary or permanent impacts to these special-status plant species, if present. If these construction activities were to remove or otherwise damage individuals of these species, this would result in a potentially significant impact. **Mitigation Measure BIO-1**, provided below, would reduce this potential impact to a less-than-significant level.

> **Mitigation Measure BIO-1: Avoid and Minimize Impacts on Special-Status Plant Species.**
>
> To avoid and minimize impacts on special-status plant species, the City shall revise its development application form and adopt a new SCA that shall apply to residential development proposed on or adjacent to an undeveloped parcel(s) containing a contiguous vegetated area of one acre or more in size, located northeast of Highway 13 and Interstate 580, southeast of its intersection with State Highway 13 within the City of Oakland.
>
> The review process created through the revised application and SCA shall require the following measures:
>
> - Prior to and within 12 months of the start of construction, including clearing and grubbing, and grading, a qualified biologist shall conduct a properly timed special-status plant survey during the blooming period for pallid manzanita, western leatherwood, Presidio clarkia, Tiburon buckwheat, and most beautiful jewel flower within the species' suitable habitat within the project work limits. The survey will follow the CDFW *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* (CDFW, 2018a) and will determine the potential presence and distribution of sensitive natural communities.
>
> - If the survey concludes that special-status plant species are present within the project work limits, the biologist shall establish an adequate buffer area for each plant population to exclude activities that directly remove or alter the habitat of, or result in indirect adverse impacts on, the special-status plant species.
>
> - As necessary, all necessary approvals from USFWS/CDFW will be obtained for any impacts to special-status plant species protected under FESA or CESA.

When Required: Prior to the start of construction; During construction; Ongoing as specified in the condition

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

Significance after Mitigation: Implementation of **Mitigation Measure BIO-1** would reduce construction-related impacts on special-status plants by requiring surveys to determine if special-status plants are present and reinforcing compliance with USFWS and CDFW approvals if direct impacts that cannot be avoided. Therefore, implementation of this mitigation measure would reduce potential impacts on special-status plants to less than significant with mitigation.

Operational Impacts

No operational activities associated with the Proposed Project are expected to impact special-status plants; therefore, operational impacts would be less than significant.

Mitigation: None required.

Special-Status and Nesting Birds

Construction Impacts

Construction within the study area could result in direct or indirect impacts on special-status and nesting birds, including but not limited to great egret, snowy egret, great blue heron, black-crowned night heron, Cooper's hawk, sharp-shined hawk, and peregrine falcon. Direct impacts to special-status and nesting birds could result from the removal of trees and vegetation and/or demolition of buildings while an active bird nest is present. In addition, earth moving, operation of heavy equipment, and increased human presence could result in indirect impacts caused by noise, vibration, and visual disturbance. These conditions could indirectly result in nest failure (disturbance, avoidance, or abandonment that leads to unsuccessful reproduction), or could cause flight behavior that would expose an adult or its young to predators. These activities could cause birds that have established a nest before the start of construction to change their behavior or even abandon an active nest, putting their eggs and nestlings at risk for mortality.

Generally, nest failure would be a violation of CFGC sections 3503–3513. Impacts during the non-breeding season generally are not considered significant, primarily because of the birds' mobility and ability to access other comparable foraging habitat in the region. However, some construction activities during the breeding season could result in a potentially significant impact. SCA 29, Tree Removal During Bird Breeding Season, includes measures to avoid impacts to nesting birds. However, SCA 29 does not protect nesting birds from direct impacts resulting from demolition of buildings or other structures they may be nesting upon, nor does it protect nesting birds from impacts resulting from indirect disturbance that could cause nest failure, as described in the above paragraph. To reduce the potential for significant impacts to nesting birds, implementation of Mitigation Measure BIO-2, provided below, includes measures to survey for nesting birds in unoccupied structures and in quieter areas of the City where birds may not be habituated to the noise and disturbance levels typical of the City's more urban areas. Individual

projects are responsible for compliance with the MBTA and CFGC Sections 3503–3513, which prohibit actions that cause failure of active nests.

Mitigation Measure BIO -2: Avoid and Minimize Impacts on Nesting Birds.

To avoid and minimize impacts on nesting birds, the City shall adopt a new SCA that shall apply to residential development proposed on parcels located northeast of Highway 13 and Interstate 580 southeast of its intersection with State Highway 13 within the City of Oakland AND at least one of the following:

a) Parcels containing structures that have been unoccupied / vacant for 12 months or more; or

b) Parcels within 200 feet of a substantial vegetated area (generally contiguous one acre in size or larger)

The SCA shall require the following measures:

a) If construction begins during the nesting season (February 1 to August 15), a pre-construction survey for nesting raptors and other migratory birds shall be conducted by a qualified biologist within 7 days prior to the onset of construction, to identify any active nests. The surveys shall be submitted to the City for review and approval.

    i. For qualifying projects containing structures that have been unoccupied / vacant for 12 months or more, surveys shall be performed for the project site to locate any active passerine (e.g., songbird) or raptor (bird of prey) nests.

    ii. For qualifying projects within 200 feet of a substantial vegetated area, surveys shall be performed within 50 feet to locate any active passerine (e.g., songbird) nests and within 200 feet to locate any active raptor (bird of prey) nests.

b) If no active nests are identified during the survey period, or if development is initiated during the non-breeding season (August 16 to January 31), construction may proceed with no restrictions.

c) If the survey indicates the potential presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the California Department of Fish and Wildlife, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.

d) Any birds that begin nesting amid construction activities shall be assumed to be habituated to construction-related or similar noise and disturbance levels and no work exclusion zones shall be established around active nests in these cases.

e) Any work that must occur within established no-disturbance buffers around active nests shall be monitored by a qualified biologist. If adverse effects in response to project work within the buffer are observed and could compromise the nest's success, work within the no-disturbance buffer shall halt until the nest occupants have fledged.

When Required: Prior to start of construction.

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

Significance after Mitigation: Implementation Mitigation Measure BIO-2 would reduce construction-related impacts by limiting construction and tree removal to the non-nesting season when feasible or, if avoiding the nesting season is not feasible, conducting pre-construction surveys for special-status and nesting birds and establishing no-disturbance buffers around any active nests until birds have fledged and are able to leave the tree to be removed or the construction area; and reporting findings to the City prior to initiation of tree removal or construction. Therefore, implementation of Mitigation Measure BIO -2 would reduce potential for impacts on nesting birds to less than significant with mitigation.

Operational Impacts

Operational activities associated with the Proposed Project are unlikely to indirectly impact nesting birds due to the baseline level of human disturbance already occurring in and adjacent to the study area. Birds nesting in these areas following construction are assumed to be habituated to such disturbance, and therefore, the impacts of human disturbance on special-status and nesting birds would be less than significant.

Mitigation: None required.

Special-Status Roosting Bats

Construction Impacts

Project construction could result in impacts to roosting western red bat, pallid bat, and Yuma myotis, if present. Western red bat and pallid bat are CDFW species of special concern. Yuma myotis is categorized as Low-Medium conservation concern by the Western Bat Working Group. All three species have the potential to roost within the study area, which could result in impacts to bats during daytime construction hours. The pallid bat and Yuma myotis may roosts on buildings, under bridges and overpasses, and rock cracks; the Yuma myotis also roosts in caves or mines and in tree bark. The western red bat is solitary rooster in tree foliage. Construction activities could result in direct impacts to roosting bats if they were disturbed, killed, or injured by removal or trimming of a tree in which they were roosting. If roosting bats are present, construction noise could result in indirect impacts due to disturbance, avoidance, or abandonment of roosts. If tree removal were to occur during periods of winter torpor or maternity roosting, any bats present would likely not survive the disturbance (Tuttle, 1991).[4] This would be a potentially significant impact. Mitigation Measure BIO-3, provided below, would reduce this potential impact to a less-than-significant level.

Mitigation Measure BIO-3: Avoid and Minimize Impacts on Special-Status Roosting Bats in Buildings.

To avoid and minimize impacts on special-status roosting bat species, the City shall adopt a new SCA that shall apply to development involving full demolition or relocation of

[4] Torpor refers to a state of decreased physiological activity with reduced body temperature and metabolic rate.

structures that are vacant and/or abandoned and have been vacant and/or abandoned for 14 days or more during the preceding maternity season (April 15 – August 15). The SCA shall require the following measures:

Requirement: The project applicant shall retain a qualified biologist (as defined by CDFW[5]) who is experienced with bat surveying techniques, behavior, and roosting habitat. The retained biologist shall conduct a pre-construction habitat assessment of the project area (focusing on buildings to be demolished or relocated) to identify potential bat habitat and/or signs of potentially active roost sites. Should the pre-construction habitat assessment not identify potential bat habitat and or signs of potentially active roost sites, no further action is required.

Should the pre-construction habitat assessment identify potential bat habitat and/or signs of potentially active roost sites within the project area (e.g., guano, urine staining, dead bats, etc.), the project applicant shall be required to implement the following measures:

a. For projects starting demolition during the non-sensitive periods (August 16 – October 14, and March 2 – April 14), work shall be done under the supervision of a qualified biologist with restrictions such as:

    i. Potential bat roosting habitat or active roosts shall be disturbed only under clear weather conditions when precipitation is not forecast for three days, average wind speeds are less than 15 miles per hour, and when nighttime temperatures are at least 45 degrees Fahrenheit.

    ii. When appropriate, buildings shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost, likely in the evening. Under no circumstances shall active maternity roosts be disturbed until the roost disbands at the completion of the maternity roosting season or otherwise becomes inactive, as determined by the qualified biologist.

– or –

b. For projects starting demolition during one of the sensitive periods (maternity season/ April 15 – August 15 or period of winter torpor/October 15 – March 1), the project applicant shall be required to implement the following measures:

    i. To the extent feasible, construction activities in areas identified as potential roosting habitat during the habitat assessment shall not occur during bat maternity roosting season and period of winter torpor (April 15 to August 15, and October 15 to March 1, respectively).

    ii. If avoidance of the bat maternity roosting season and period of winter torpor, defined above, is infeasible, the qualified biologist shall conduct pre-construction surveys of potential bat roost sites identified during the initial habitat assessment. The survey shall be submitted to the City for review and approval.

    iii. If no signs of potentially active roost sites are identified, no further action is required.

[5] CDFW defines credentials of a qualified biologist within permits or authorizations issued for a project. Typical qualifications include a minimum of four years of academic training leading to a degree and a minimum of 2 years of experience conducting surveys for each species that may be present within the project area.

iv. If active bat roosts or evidence of roosting is identified during pre-construction surveys, the qualified biologist shall determine, if possible, the type of roost and species. A no-disturbance buffer shall be established around roost sites either through the seasonal avoidance windows of April 15 to August 15 and October 15 to March 1, or until the qualified biologist determines the roosts are no longer active. The size of the no-disturbance buffer would be determined by the qualified biologist and would depend on the species present, roost type, existing screening around the roost site (such as dense vegetation or a building), as well as the type of construction activity that would occur around the roost site.

v. Any work that must occur within established no-disturbance buffers shall be done under the supervision by a qualified biologist with restrictions such as:

   a) Potential bat roosting habitat or active roosts shall be disturbed only under clear weather conditions when precipitation is not forecast for three days and when daytime temperatures are at least 50 degrees Fahrenheit.

   b) When appropriate, buildings shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost, likely in the evening and after bats have emerged from the roost to forage. Under no circumstances shall active maternity roosts be disturbed until the roost disbands at the completion of the maternity roosting season or otherwise becomes inactive, as determined by the qualified biologist.

   c) If adverse effects in response to project work within the no-disturbance buffers are observed, work within the no-disturbance buffer shall halt until the roost disbands.

Mitigation Measure BIO-4: Avoid and Minimize Impacts on Special-Status Roosting Bats in Trees.

To avoid and minimize impacts on special-status roosting bat species, the City shall adopt a new SCA that shall apply to residential development requiring a tree permit per the City's Tree Protection Ordinance (OMC Chap. 12.36). The SCA shall require the following measures:

a. A qualified biologist (as defined by CDFW[6]) who is experienced with bat surveying techniques (including auditory sampling methods), behavior, and roosting habitat shall conduct a pre-construction habitat assessment of the subject tree to characterize potential bat habitat and identify potentially active roost sites.

b. Trees with potential bat roosting habitat or active bat roost sites shall follow a two-step removal process which shall occur outside of the bat maternity roosting season and period of winter torpor (April 15 to August 15, and October 15 to March 1).

c. On the first day and under supervision of the qualified biologist, tree branches and limbs not containing cavities or fissures in which bats could roost shall be cut using chainsaws or other handheld equipment.

6 CDFW defines credentials of a qualified biologist within permits or authorizations issued for a project. Typical qualifications include a minimum of four years of academic training leading to a degree and a minimum of 2 years of experience conducting surveys for each species that may be present within the project area.

d. On the following day and under the supervision of the qualified biologist, the remainder of the tree may be trimmed or removed, either using chainsaws or other equipment (e.g., excavator or backhoe).

e. All felled trees shall remain on the ground for at least 24 hours prior to chipping, off-site removal, or other processing to allow any bats to escape, or be inspected once felled by the qualified biologist to ensure no bats remain within the tree and/or branches. The tree will be removed on or after the third day.

When Required: Prior to start of building demolition or tree removal.

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

Significance after Mitigation: Implementation of Mitigation Measure BIO-3 and BIO-4 would reduce construction-related impacts by requiring pre-construction surveys to identify potential bat roosting habitat and active bat roosts; establishment of protective buffers until roosts are no longer in use; and limiting the removal of trees with potential bat roosting habitat to the time of year when bats are active to avoid disturbing bats during the maternity roosting season or months of winter torpor. Implementation of Mitigation Measures BIO-3 and BIO-4 reduce potential impacts on roosting bats to less than significant with mitigation.

Operational Impacts

Operational activities associated with the Proposed Project could include increase human presence in areas occupied by roosting bats, such as riparian woodlands, public parks, bridges, and underpasses. Special-status bats roosting in these areas are assumed to be habituated to human disturbance associated with an urban environment and the incremental level of disturbance associated with future development under the Proposed Project would be in proportion to the baseline level of disturbance, i.e., baseline disturbance would be greatest in the most densely populated parts of the Plan Area where the greatest number of housing units would be expected to be built, resulting in the greatest localized increase in human activity. Therefore, operational impacts would be less than significant.

Mitigation Measure: None required.

Alameda Whipsnake

Construction Impacts

Suitable core and foraging/dispersal habitat is present in undeveloped hillside areas within the study area, including in scrub, grassland, and woodland habitat.[7] A small portion of the study area is located within Alameda whipsnake Critical Habitat, Recovery Unit 6: Caldecott Tunnel Corridor (USFWS, 2002). Alameda whipsnake could suffer temporary or permanent loss of critical habitat, and, if Alameda whipsnakes are present in a construction area, mortality to individuals during clearing and grubbing and ground disturbing activities; these would be

[7] The US Fish and Wildlife Service describes Alameda whipsnake as using one or more core areas, which are areas of concentrated use centered on a scrub plant community. However, whipsnakes often spend hours to weeks in adjacent habitats, including grassland, oak savanna, and occasionally oak-bay woodland.

potentially significant impacts. SCA 31, Alameda Whipsnake Protection Measures, avoids and minimizes impacts to Alameda whipsnake individuals; however, it does not avoid and mitigation temporary and permanent impacts to Alameda whipsnake habitat. Implementation of Mitigation Measure BIO-5, Text changes to SCA 31, would reduce impacts to Alameda whipsnake to less than significant by avoiding and minimizing impacts to the species' habitat.

> **Mitigation Measure BIO-5: Text changes to SCA 31, Alameda Whipsnake Protection Measures.** Add the following.
>
> e. Mitigation for Impacts to Alameda Whipsnake Habitat
>
> Requirement: To restore Alameda whipsnake critical habitat impacted by the project, the applicant shall have a qualified biologist experienced in identifying Alameda Whipsnake critical habitat conduct a preconstruction baseline survey of the project site, from which they shall then prepare and submit a Revegetation Plan (Plan) for review and approval by USFWS and if necessary CDFW, pursuant to regulatory agency permitting requirements. The Plan shall include detailed specifications for minimizing the introduction of invasive weeds and restoring all temporarily disturbed areas. The Plan shall include mitigation in accordance with USFWS and if necessary CDFW requirements to address permanent impacts to Alameda whipsnake critical habitat. The applicant or its designee shall ensure successful implementation of the Plan. As part of the preparation of the Vegetation Management Plan (VMP), as required by SCA 47, the VMP shall quantify the area of Alameda Whipsnake critical habitat that will be disturbed by implementing the VMP. The VMP shall be submitted to USFWS and if necessary CDFW.
>
> When Required: Prior to the start of ground disturbing activities, including clearing and grubbing, associated with construction; During construction; Ongoing as specified in the Revegetation Plan
>
> Initial Approval: Bureau of Building
>
> Monitoring/Inspection: Bureau of Building
>
> **Significance after Mitigation:** Implementation of Mitigation Measure BIO-5 would reduce construction-related impacts by requiring pre-construction baseline survey of the project site and a Revegetation Plan for review and approval by USFWS and if necessary CDFW, pursuant to regulatory agency permitting requirements. Implementation of Mitigation Measures 4.3-5 would reduce potential impacts on Alameda whipsnakes to less than significant with mitigation.

Operational Impacts

Operational activities associated with the Proposed Project are unlikely to indirectly impact Alameda whipsnake since the species would have the option to disperse into extensive interconnected habitat to the northeast and south; therefore, operational impacts would be less than significant.

> **Mitigation:** None required.

Summary

With adherence to SCAs 29 and 31 and Mitigation Measures 4.3-1 through 4.3-5, future development under the Proposed Project would result in a less than significant impact on special-status species.

Impact BIO-2: Adoption of the Proposed Project could have a substantial adverse effect on riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations, or by CDFW or USFWS. (Criteria 1 and 2). (*Less than Significant with Mitigation*)

Riparian Habitat

Construction Impacts

As described in more detail in Section 4.9, *Hydrology and Water Quality*, the study area includes numerous creeks, some of which have riparian habitat associated with daylighted sections of these waterways. These creeks are largely surrounded by existing development or, in the case of Sausal Creek, have their headwaters within Joaquin Miller Park, which is protected public land owned by the East Bay Regional Park District. Construction on properties bordering riparian habitat would be subject to the City's Creek Protection Ordinance, which would require a Creek Protection Permit and a Creek Protection Plan (see SCA 58, in Section 4.9). Under the permit, development would occur outside of the City's established creek setbacks and, therefore, would have no direct impacts to riparian vegetation or creek habitat. In addition, the Creek Protection Plan may include, but is not limited to, implementation of litter prevention measures, dust control measures, methods of cleaning tools and equipment, construction site fencing, sediment and erosion control measures, wet weather protection, and emergency preparations for construction-related spills. With implementation of these SCA 58, construction-related impacts to riparian habitat would be less than significant.

Mitigation: None required.

Operational Impacts

Operational impacts on riparian habitat associated with future development under the Proposed Project could occur due to increased disturbance caused by an incremental increase in residents accessing riparian corridors. These potential impacts would be expected to be negligible since future development under the Proposed Project would occur in developed areas where disturbance of this kind is already occurring. Therefore, operational impacts on riparian habitat would be less than significant.

Sensitive Natural Communities

Construction Impacts

Oak woodland and chaparral habitat north of Highway 13 and Interstate 580 within the study area, and riparian woodlands associated with creeks, could include sensitive natural communities (CDFW, 2022). Construction activities could require clearing and grubbing, tree removal, and grading potentially resulting in temporary or permanent significant impacts on sensitive natural.

Implementation of **Mitigation Measure BIO-1: Avoid and Minimize Impacts on Special-Status Plant Species** (see Impact BIO-1) would reduce potentially significant impacts on sensitive natural communities.

> **Significance after Mitigation:** Implementation of Mitigation Measure BIO-1 would reduce construction-related impacts on sensitive natural communities by requiring surveys to determine if special-status plants are present and reinforcing compliance with USFWS and CDFW approvals if direct impacts that cannot be avoided. Implementation of this mitigation measure would reduce potential impacts on special-status plants to less than significant with mitigation.

Operational Impacts

Operational impacts on sensitive natural communities associated with the Proposed Project are not expected. The highest density future development under the Proposed Project would be in Priority Development Areas, which are located in currently developed regions of the Plan Area (see Figure 3-4). While some housing may be built near natural or protected areas in the northeast of the Plan Area that could contain sensitive natural communities, the incremental numbers of housing units and people would still be minimal relative to existing populations and housing densities in these areas. Therefore, operational impacts on sensitive natural communities would be less than significant.

> **Mitigation:** None required.

Summary

With adherence to the aforementioned SCAs, mitigation measures, and other regulatory compliance, adoption of the Proposed Project would result in a less than significant impact on riparian habitat or other sensitive natural communities.

Impact BIO-3: Adoption of the Proposed Project would not have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (Criterion 3) (*Less than Significant*)

Construction Impacts

Jurisdictional wetlands and waters in the study area may include Lake Merritt and Lake Temescal, and Arroyo Viejo, Elmhurst, Glen Echo, Lion, Indian Gulch, Palo Seco, Peralta, Pleasant Valley, San Antonio, San Leandro, Sausal, Temescal, and Wildwood Creeks, shown on Figure 4.9-2, *Creeks*. Potential impacts to creeks are addressed under Impact BIO-2. Future development under the Proposed Project are not expected to involve the removal, filling, or hydrological interruption of ponds, lakes, creeks or other potentially jurisdictional wetlands and waters. If construction of subsequent projects were to involve the removal, filling, or hydrological interruption of ponds, lakes, creeks or other potentially jurisdictional wetlands and waters, the project proponent would be required to apply for permits from the appropriate regulatory agencies (e.g., the Corps, Regional Water Quality Control Board, CDFW) and would be evaluated under CEQA once project details are knows; therefore, anticipated impacts are less than significant.

Operational Impacts

No potential operational impacts associated with the Proposed Project are anticipated due to the existing development and high-density development currently surrounding jurisdictional wetland and waters in the study area.

Mitigation: None required.

Summary

Adoption of the Proposed Project would result in a less than significant impact to State or federally protected wetlands.

Impact BIO-4: Adoption of the Proposed Project could interfere substantially with the movement of a native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. (Criterion 4) ***(Less than Significant with Mitigation)***

Native Wildlife Nursery Sites

Herons and egrets nest communally in sites referred to as rookeries. Heron and egret rookeries have been documented in the study area at Lake Merritt and near Chinatown in downtown Oakland.

Construction Impacts

Potential construction- and operations-related impacts on communal nesting birds would be the same as those for individual special status and nesting birds, as discussed above under Impact BIO-1, which would be potentially significant impacts. SCA BIO-29, Tree Removal During the Bird Breeding Season, and Mitigation Measure BIO-2: Avoid and Minimize Impacts on Nesting Birds, would reduce construction-related impacts to less than significant (see Impact BIO-1).

Significance after Mitigation: Implementation of Mitigation Measure BIO-1 would reduce construction-related impacts on sensitive natural communities by requiring surveys to determine if special-status plants are present and reinforcing compliance with USFWS and CDFW approvals if direct impacts that cannot be avoided. Implementation of this mitigation measure would reduce potential impacts on special-status plants to less than significant with mitigation.

Operational Impacts

Operational activities associated with the Proposed Project are unlikely to indirectly impact communally nesting birds due to the baseline level of human disturbance already occurring in and adjacent to the study area. Birds nesting in these areas following construction are assumed to be habituated to such disturbance, and therefore, the impacts of future development under the Proposed Project would be less than significant.

Mitigation: None required.

Native Wildlife Movement Corridors

The study area is located within the Pacific Flyway along the northwestern shoreline of South San Francisco Bay. Although specific migratory corridors near the study area are unknown, it can be assumed that numerous birds pass overhead through the Plan Area during spring and fall migrations. In addition, resident birds make daily localized flights at low elevations while they forage and disperse. Although the study area in general would not be expected to host a high density of birds, the Bay, the Oakland Estuary, San Leandro Bay and Lake Merritt attract migrating waterfowl looking for a place to feed and rest during migrations.

Construction Impacts

Future development under the Proposed Project would require heavy equipment for construction of new buildings, potentially for demolition of existing buildings, and may include excavators, cranes, pile drivers, dump trucks, concrete mixers, concrete pump trucks, and other industrial machinery that generate increased noise and vibration. Migratory birds could easily find undisturbed portions of Lake Merritt or utilize other areas, including calm offshore waters outside of the study area. Therefore, construction activities associated with the Proposed Project would result in a less than significant impact on resident and migratory bird movements.

Operational Impacts

Future development under the Proposed Project could increase building heights, glazed surfaces, and nighttime uplighting in the study area relative to existing conditions. The portion of buildings most likely to sustain bird strikes extends from ground level to 60 feet above the ground surface (San Francisco Planning Department, 2011). Many bird collisions are also induced by artificial night lighting, particularly from large buildings, which can be especially problematic for migrating songbirds because many are nocturnal migrants. Light fields caused by uplighting can disorient or entrap birds who become reluctant to fly from the lit area to darkness (Ogden, 1996). Research suggests that fatal bird collisions also increase as light emissions increase (Verheijen, 1981).

Direct effects on migratory and resident birds moving through an area could include death or injury if birds collide with lighted structures or with transparent or reflective glass surfaces. Glass corners, which birds may view as an open flyway to habitat on the other side, and glass facades that reflect adjacent landscape vegetation can result in bird collisions. Indirect effects on migratory birds that become disoriented or entrapped by nighttime lighting resulting in delayed arrival at breeding or wintering grounds, and reduced energy stores necessary for migration, winter survival, or subsequent reproduction (Gauthreaux, 2006). These impacts would be potentially significant.

Future development under the Proposed Project would occur in already urbanized areas. Although proposed increases in maximum building heights are focused on transit corridors, future development under the Proposed Project could be designed with a glass façade and be located near bird attractants such as water bodies, open spaces, and green roofs. SCA BIO-28, Bird Collision Reduction Measures, requires project proponents to prepare and submit a Bird Collision Reduction Plan for City review and approval. The Bird Collision Reduction Plan shall include mandatory measures and best management practice strategies to reduce bird strike impacts. With

implementation of SCA BIO-28, future development under the Proposed Project would result in less than significant impacts related to the movement of native or migratory birds.

Mitigation: None required.

Summary

With adherence to SCAs 28 and 29 and Mitigation Measure BIO-2, future development under the Proposed Project would result in a less than significant impact on the movement of resident native or migratory wildlife and the use of wildlife nursery sites.

Impact BIO-5: Adoption of the Proposed Project could conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Criterion 5) (*Less than Significant with Mitigation Measures*)

The local policies relevant to the biological resources present, or with potential to occur, in the study area include the City of Oakland General Plan, City of Oakland Creek Protection, Storm Water Management and Discharge Control Ordinance, and the City of Oakland Tree Protection Ordinance. These policies, summarized in detail in Section 4.3.2, *Regulatory Framework*, are analyzed for project consistency below.

City of Oakland General Plan

The Proposed Project is consistent with the goals and policies of the Open Space, Conservation and Recreation (OSCAR) element to protect the ecology of Oakland's creeks, lakes, and nearshore waters; to protect native plant communities and preserve Oakland's trees; to conserve wetlands; to protect rare, endangered, and threatened species; and to sustain a healthy wildlife population within the City of Oakland. The 2023 – 2031 Housing Element sites are primarily planned for currently developed portions of the City, thereby limiting potential impacts on areas of special ecological significance, such as creeks, lakes, wetlands and intact wildlife habitat. Specifically, SCA 28, Bird Collision Reduction Measures, SCA 29, Tree Removal During Bird Breeding Season, SCA 31, Alameda Whipsnake Protection Measures, and Mitigation Measures 4.3-1 through 4.3-5 would protect the biotic resources discussed in the OSCAR element of the City's General Plan.

City of Oakland Creek Protection, Storm Water Management and Discharge Control Ordinance

With adherence to SCA 58, Creek Protection Plan, which requires creek setbacks, implementation of litter prevention measures, dust control measures, methods of cleaning tools and equipment, construction site fencing, sediment and erosion control measures, wet weather protection, and emergency preparations for construction-related spills, the Proposed Project would not conflict with the City of Oakland Creek Protection, Storm Water Management and Discharge Control Ordinance.

City of Oakland Tree Protection Ordinance

Project details are not yet available for future development under the Proposed Project, but it is likely that some development would require removal of trees. Tree removals would be subject to SCA 30, Tree Permit. Implementation of this SCA would ensure that tree replacement plantings

would be conducted in accordance with the requirements of the City's Protected Tree Ordinance. Therefore, with implementation of SCA 30, the Proposed Project would not conflict with the City's Tree Protection Ordinance.

Mitigation Measure BIO-1: Avoid and Minimize Impacts on Special-Status Plant Species. See Impact BIO-1.

Mitigation Measure BIO-2: Avoid and Minimize Impacts on Nesting Birds. See Impact BIO-1.

Mitigation Measure BIO-3: Avoid and Minimize Impacts on Special-Status Roosting Bats in Buildings. See Impact BIO-1.

Mitigation Measure BIO-4: Avoid and Minimize Impacts on Special-Status Roosting Bats in Trees. See Impact BIO-1

Mitigation Measure BIO-5: Text changes to SCA 31, Alameda Whipsnake Protection Measures. See Impact BIO-1.

Summary

With adherence to the above SCAs and mitigation measures, construction and operations impacts would be less than significant.

4.3.5 Cumulative Impacts

This section presents an analysis of the cumulative effects of future development under the Proposed Project in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to biological resources could occur if the incremental impacts of the Proposed Project combined with the incremental impacts of one or more of the cumulative projects would cause a cumulatively considerable impact on special-status species, riparian habitat, sensitive natural communities, wetlands, or other waters of the United States, or on other biological resources protected by federal, State, or local regulations or policies (based on the significance criteria and thresholds presented earlier). This analysis then considers whether the incremental contribution of the Proposed Project to this cumulative impact would be considerable. Both conditions must apply for a project's cumulative effects to be significant.

As previously discussed, the Proposed Project would have no impact on an adopted habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Accordingly, the Proposed Project could not contribute to cumulative impacts related to this topic and it is not discussed further.

Impact BIO-6: Future development under the Proposed Project, combined with cumulative development, could result in significant cumulative impacts to biological resources. (*Less than Significant with Mitigation*)

Geographic Context

The geographic scope of potential cumulative impacts on biological resources encompasses the study area and biologically linked areas that share the City of Oakland's watersheds and greater San Francisco Bay Area. Historic development in the region has already caused substantial adverse cumulative changes to biological resources in the study area. This includes the engineering of portions of all creeks in the watershed to allow urban development over and around these waterways, and the loss of the forest, oak woodlands, grasslands, riparian corridors and floodplains to urban encroachment.

Cumulative Impacts – Construction and Operations

Future development under the Proposed Project and cumulative projects could include clearing and grubbing, tree removal, excavation and grading, and pile driving, requiring use of heavy equipment and cranes. Most of this development will occur in currently developed portions of the Plan Area, which host little in the way of sensitive biological resources except for nesting birds and roosting bats. A small proportion of the development could occur in undeveloped natural habitat, for example in undeveloped hillside areas northeast of State Highway 13 and Interstate 580 southeast of its intersection with State Highway 13. These natural habitats could potentially host special-status plant or wildlife species or sensitive natural communities. In other words, the potential impacts of the future development under the Proposed Project on biological resources are largely site-specific, and the overall cumulative effects would be dependent on the degree to which significant native vegetation and wildlife resources are present on a particular development site and, if present, the degree to which they are avoided, or potential impacts are addressed through implementation of SCAs and mitigation measures.

As discussed above, the Proposed Project would result in less-than-significant impacts (in some cases with mitigation measures implemented) on biological resources, including special-status species, riparian habitat, jurisdictional waters, native wildlife nursery sites, and native wildlife movement corridors. In addition, all other cumulative development has been, or will be, subject to the same SCAs related to biology, hydrology, and water quality and would be required to comply with the same provisions of the City's Protected Tree Ordinance and Creek Protection, Stormwater Management, and Discharge Control Ordinance. With implementation of SCA 28, Bird Collision Reduction Measures; SCA 29, Tree Removal During Bird Breeding Season; SCA 30, Tree Permit; SCA 31, Alameda Whipsnake Protection Measures; SCA 58, Creek Protection Plan; Mitigation Measure BIO-1. Avoid and Minimize Impacts on Special-Status Plant Species; Mitigation Measure BIO-2: Avoid and Minimize Impacts on Nesting Birds; Mitigation Measure BIO-3: Avoid and Minimize Impacts on Special-Status Roosting Bats in Buildings; Mitigation Measure BIO-4: Avoid and Minimize Impacts on Special-Status Roosting Bats in Trees; and Mitigation Measure BIO-5: Text changes to SCA 31, Alameda Whipsnake Protection Measures, adoption of the Proposed Project would not result in a considerable contribution to cumulative impacts; therefore, the cumulative impact would be less than significant.

Mitigation Measure BIO-1: Avoid and Minimize Impacts on Special-Status Plant Species. See Impact BIO-1.

Mitigation Measure BIO-2: Avoid and Minimize Impacts on Nesting Birds. See Impact BIO-1.

Mitigation Measure BIO-3: Avoid and Minimize Impacts on Special-Status Roosting Bats in Buildings. See Impact BIO-1.

Mitigation Measure BIO-4: Avoid and Minimize Impacts on Special-Status Roosting Bats in Trees. See Impact BIO-1.

Mitigation Measure BIO-5: Text changes to SCA 31, Alameda Whipsnake Protection Measures. See Impact BIO-1.

Summary

Adoption of the Proposed Project, with adherence to the aforementioned SCAs, mitigation measures, and other regulatory compliance, would result in a less than significant cumulative impact on biological resources.

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4.4 Cultural Resources

This section describes conditions and potential environmental effects of the Proposed Project pertaining to *Cultural Resources*. The section discusses relevant existing environmental conditions of the Plan Area and regulations pertinent to this section, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts to the physical environment that could result from implementation of the Proposed Project and its associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that would reduce potential impacts to this environmental topic are identified; both existing and proposed updated/new General Plan policies and SCAs are considered. Mitigation measures to address potentially significant impacts are also identified. This section incorporates relevant information from the General Plan Update Map Atlas prepared in support of the Proposed Project (see Appendix A). No scoping comments related to cultural resources were received in response to the NOP (Notice of Preparation) of this Draft EIR.

4.4.1 Environmental Setting

4.4.1.1 Cultural Resources Terminology

Architectural Resources

Architectural resources include buildings, structures, objects, and historic districts. Residences, cabins, barns, lighthouses, military-related features, industrial buildings, and bridges are examples of architectural resources. The *CEQA Guidelines* define an historical resource as: (1) a resource in the California Register of Historic Resources (California Register); (2) a resource included in a local register of historical resources as defined in Public Resources Code (PRC) Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

Archaeological Resources

Archaeological resources consist of pre-contact and historic-era archaeological resources. Pre-contact archaeological resources consist of village sites, temporary camps, lithic scatters, roasting pits/hearths, milling features, petroglyphs, rock features, and burials. Associated artifacts include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs). Historic-era archaeological resources include townsites, homesteads, agricultural or ranching features, mining-related features, refuse concentrations, and features or artifacts associated with early military and industrial land uses. Associated artifacts include stone, concrete, or adobe footings and walls; artifact filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. If a lead agency determines that an archaeological site is an historical resource, the provisions of PRC

Section 21084.1 and *CEQA Guidelines* Section 15064.5 would apply. If an archaeological site does not meet the *CEQA Guidelines* criteria for a historical resource, then the site may meet the threshold of PRC Section 21083.2 regarding unique archaeological resources.

4.4.1.2 Archaeological Resources Setting

For the archaeological resources setting section the term *pre-contact*, rather than *prehistoric*, is used as a synonym for *Native American-related* resources and refers to the period prior to Euroamerican arrival in the area. The term *historic-era* is used as a chronological adjective to refer to the period following Euroamerican arrival in the area.

Geoarchaeological Context

The San Francisco Bay Area has undergone dramatic landscape changes since humans began to inhabit the region more than 13,000 years ago. Sea levels began rising about 15,000 years ago, at which time the coastline was located west of the Farallon Islands and reached the present level of the bay about 5,000 years ago. This dramatic change in stream base-level has resulted in increased deposition of sediment along the lower reaches of Bay Area streams and along the San Francisco Bay (Helley et al., 1979). Active alluvial fan[1] deposits are generally less than 5,000 years old and overlie older land surfaces (including stabilized/abandoned Pleistocene-age alluvial fans).

In many places, the interface between older land surfaces and active alluvial fans is marked by a well-developed buried soil profile, or a paleosol.[2] Paleosols preserve the composition and character of the Earth's surface prior to subsequent sediment deposition; thus, paleosols have the potential to preserve archaeological resources if the area was occupied or settled by humans (Meyer and Rosenthal, 2007). Because human populations have grown since the arrival of the area's first inhabitants, younger paleosols (late Holocene) are more likely to yield archaeological resources than older paleosols (early Holocene or Pleistocene).

Not all Holocene-age deposits are equally sensitive – archaeological sites generally occur in specific environmental settings, including level areas near present or former water courses, such as perennial streams, or near water bodies such as lakes, bays, estuaries, and oceans. This is due to the increased diversity and concentration of plant and animal populations in those environmental settings. Furthermore, in the San Francisco Bay Area the majority of recorded pre-contact archaeological sites are within 0.5 miles (2,500 feet) of the historic Bay margin, and sensitivity for pre-contact archaeological sites diminishes in areas further than 0.5 miles from the shore (Kaijankowski et al., 2015).

Pre-contact Background

The natural marshland communities along the edges of bays and channels were the principal source for subsistence and other activities during the pre-contact period of the San Francisco Bay region. Between 1906 and 1908, University of California, Berkeley archaeologist N. C. Nelson conducted

[1] Alluvial fans are fan-shaped deposits of water-transported material (alluvium). They typically form at the base of topographic features where there is a marked break in slope, and contain both active and abandoned stream channels, terraces, natural levees and other fluvial morphologies.

[2] A paleosol is a buried soil that forms when sediment is deposited over a surface with a developed soil profile without it being eroded away first.

surveys of archaeological sites in the Bay region. His early surveys documented nearly 425 "Earth mounds and shell heaps" along the shoreline of the bay (Nelson, 1909). Archaeologists later excavated some of the most notable of these sites in the Bay Area, such as the Stege Mound Archaeological District (CA-CCO-297), the Ellis Landing Site (CA-CCO-295), the Emeryville shellmound (CA-ALA-309), and the Fernandez Site (CA-CCO-259) in Rodeo Valley (Moratto, 1984). These dense midden[3] sites have been carbon 14 dated to be 2,310 ± 220 years old, but other evidence from around the bay suggests that human occupation in the region is of greater antiquity, Categorizing the pre-contact period into cultural stages allows researchers to describe a broad range of archaeological resources with similar cultural patterns and components during a given timeframe, thereby creating a regional chronology. Milliken et al. (2007) provide a framework for the interpretation of the San Francisco Bay Area and have divided human history of the region into four broad periods: the *Paleoindian Period* (11,500 to 8000 B.C.), the *Early Period* (8000 to 500 B.C.), the *Middle Period* (500 B.C. to A.D. 1050), and the *Late Period* (A.D. 1050 to 1550). Economic patterns, stylistic aspects, and regional phases further subdivide cultural patterns into shorter phases. This scheme uses economic and technological types, socio-politics, trade networks, population density, and variations of artifact types to differentiate between cultural periods.

The *Paleoindian Period* (11,500 to 8000 B.C.) was characterized by big-game hunters occupying broad geographic areas. Evidence of human habitation during *Paleoindian Period* has not yet been discovered in the San Francisco Bay Area. During the *Early Period* (*Lower Archaic*; 8000 to 3500 B.C.), geographic mobility continued from the *Paleoindian Period* and is characterized by the millingslab and handstone as well as large wide-stemmed and leaf-shaped projectile points. The first cut shell beads and the mortar and pestle are documented in burials during the *Early Period* (3500 to 500 B.C.), indicating the beginning of a shift to sedentism. During the *Middle Period*, which includes the *Lower Middle Period* (500 B.C. to A.D. 430), and *Upper Middle Period* (A.D. 430 to 1050), geographic mobility may have continued, although groups began to establish longer-term base camps in localities from which a more diverse range of resources could be exploited. The first rich midden sites are recorded from this period. The addition of milling tools, obsidian and chert concave-base projectile points, and the occurrence of sites in a wider range of environments suggest that the economic base was more diverse. By the *Upper Middle Period*, highly mobile hunter-gatherers were increasingly settling down into numerous small villages. Around A.D. 430, a dramatic cultural disruption occurred evidenced by the sudden collapse of the *Olivella* saucer bead trade network. During the *Initial Late Period* (A.D. 1050 to 1550), social complexity developed toward lifeways of large, central villages with resident political leaders and specialized activity sites. Artifacts associated with the period include the bow and arrow, small corner-notched projectile points, and a diversity of beads and ornaments.

Ethnographic Context

Based on a compilation of ethnographic, historic, and archaeological data, Milliken (1995) describes a group known as the Ohlone, who once occupied the general vicinity of the Plan Area.

[3] Any large refuse heap, mound, or concentration of cultural debris associated with human occupation. The term includes such materials as discarded artifacts, food remains, shells, bones, charcoal and ashes, -- and may include the material in which the debris is encapsulated and modifications of this matrix. Midden debris usually contains decayed organic material, bonescrap, artifacts (broken and whole), and miscellaneous detritus. Midden deposits also sometimes contain human burial remains.

While traditional anthropological literature portrayed the Ohlone peoples as having a static culture, today it is better understood that many variations of culture and ideology existed within and between villages. While these static descriptions of separations between native cultures of California make it an easier task for ethnographers to describe past behaviors, this masks Native adaptability and self-identity. California's Native Americans never saw themselves as members of larger cultural groups, as described by some anthropologists. Instead, they saw themselves as members of specific villages, perhaps related to others by marriage or kinship ties, but viewing the village as the primary identifier of their origins.

Economically, Ohlone engaged in hunting and gathering. Their territory encompassed both coastal and open valley environments that contained a wide variety of resources, including grass seeds, acorns, bulbs and tubers, bear, deer, elk, antelope, a variety of bird species, and rabbit and other small mammals. The Ohlone acknowledged private ownership of goods and songs, and village ownership of rights to land and/or natural resources; they appear to have aggressively protected their village territories, requiring monetary payment for access rights in the form of clamshell beads, and even shooting trespassers if caught. After European contact, Ohlone society was severely disrupted by missionization, disease, and displacement.

Today, the Ohlone still have a strong presence in the greater San Francisco Bay Area including the Plan Area, and are highly interested in their historic and pre-contact past. Numerous organized tribes, including the Muwekma Ohlone Indian Tribe, the Ohlone Indian Tribe, and the Confederated Villages of Lisjan, have collaborated on projects in the Plan Area by providing expert knowledge of cultural materials and lifeways.

Identified Pre-contact Archaeological Resources

Records from the Northwest Information Center (NWIC) database of the California Historical Resources Information System were reviewed to determine whether known archaeological resources have been recorded; assess the likelihood for unrecorded archaeological resources to be present based on historical references and the distribution of nearby sites; and develop a context for the identification and preliminary evaluation of cultural resources.

The NWIC records search indicated that over 40 pre-contact archaeological resources are recorded within the Plan Area. These resources consist of shell mounds, habitation sites, isolated artifacts, petroglyphs, bedrock milling stations, and human burial sites. Pre-contact archaeological sites have been identified in developed areas, beneath the existing buildings and infrastructure, as well as in undeveloped areas in the hills and uplands.

In general, San Francisco Bay Area pre-contact archaeological research has identified two broad categories of archaeological resources: residential and non-residential sites (Zeising, 2000). These categories are general enough that they encompass material evidence from the entire pre-contact period and allow for the study of cultural change through time. Indigenous people subsisted by hunting and gathering, harvesting the abundant fauna and flora available in the wooded hills and coastal and estuarine habitats. They hunted deer, trapped smaller animals and birds, caught fish and sea mammals, and ate shellfish. They also ate acorns, berries, and other plant foods that were available at different times throughout the year. In general, Native Americans in the area moved

with the seasons, but also returned to favorite locations and group gathering places. As a result, the archaeological record in the area includes a variety of site types that housed different numbers of people for varying lengths of time (e.g., individual hunting groups, small tribal groups, or larger gatherings of tribes).

The majority of pre-contact sites in the San Francisco Bay Area are shell middens located near coastal or estuarine habitats. Middens are accumulations of material left behind by human activities, such as marine shell and charcoal from cooking fires, or concentrations of objects crafted by people (artifacts). Middens commonly include some combination of flaked stone artifacts and debris left over from their manufacture, such as flakes and shatter; groundstone implements and fragments; burned and unburned faunal bone; ash; charcoal; and fire-affected rocks. Middens are typically characterized by relatively high concentration of marine shell and shell fragments. Shell middens resulted from long-term or frequent occupation by people carrying out daily activities such as food preparation, eating, and tool-making, as well as the gathering and processing of massive quantities of shellfish. Extended occupation by large groups of people led to the accumulation of mounded shell middens, called shellmounds. Even among shellmounds there were varying sizes and perhaps varying functions.

Identified Historic-era Archaeological Resources

The NWIC records search indicated that over 50 historic-era archaeological resources are recorded within the Plan Area. These resources consist of architectural features such as foundations, wall footings, basement walls, and floor remnants; infrastructure features such as road remnants, sewer lines, manholes, drainpipes, and water lines; landscape features such as fence lines, ditches, and mining sites; and refuse features including artifact-filled refuse pits, privies, and wells. As with pre-contact archaeological resources, historic-era archaeological sites have been identified in developed areas, beneath the existing buildings and infrastructure, as well as in undeveloped areas in the hills and uplands.

Artifact-filled features provide valuable information on the consumer behavior of residents. Oakland's residential neighborhoods and the households comprising them had access to a wide array of consumer goods, and the choices individual residents or business owners or employees made in selecting goods can give insight into a variety of cultural processes that influence consumer choice. In addition, the archaeological record has the ability to investigate how an individual or family actually expressed their identity through material goods. The archaeology of Oakland's nineteenth-century populations has been studied in several urban historic-era archaeological assessments (e.g., Praetzellis, 2001; Praetzellis, 2004; Van Bueren et al., 2004).

4.4.1.3 Architectural Resources Setting

The City of Oakland Historical Overview

In 1772, a small exploration party from the Spanish garrison at Monterey, led by Don Pedro Fages, paused in their travels on a high hill, believed to have been near the intersection of Broadway and College Avenue. The exploration party opted to travel on. In 1820, the Spanish government granted 44,000 acres to Luis Maria Peralta upon his retirement from the military. Peralta's grant extended from the shore of San Francisco Bay to the crest of the Oakland hills,

and from San Leandro Creek to "El Cerrito," or the little hill (most likely Albany Hill). Luis Maria Peralta used the land as a cattle ranch, which he sub-divided and bequeathed to his four sons in 1842.

With the 1849 Gold Rush, miners, lumbermen, businessmen, bankers, speculators, and opportunists settled across the bay from San Francisco in what was then known as Contra Costa, or "the other coast." At the same time, many Mexican rancho owners struggled to verify their claims following the Treaty of Guadalupe Hidalgo in 1848, and California's statehood in 1850 as American squatters took up residence. In 1850, Horace W. Carpentier, a 26 year-old graduate of the law school at Columbia University; Edson Adams, a 26 year-old Connecticut native; and Andrew J. Moon, a 50 year-old New Yorker arrived in Contra Costa. Each man leased 160 acres of land from Vicente Peralta and opened the area to squatters. Swiss engineer Julius Kellersberger was hired to plat the land in a grid pattern starting at the shoreline. The lots were then sold, even though Carpentier, Adams, and Moon had no legal claim to the land (Bagwell, 2012.)

Two years later, on March 25, 1852, the town of Oakland was incorporated. Named for an oak grove that stretched from Lake Merritt to the bay, the city encompassed the present-day downtown area and West Oakland to 22nd Street. The town's citizens, who numbered less than 100, elected Carpentier as the city's first mayor.

Ferry service to San Francisco began in 1854. Commercial and industrial businesses were established near the wharves, and the Central Pacific Railroad ran through downtown Oakland by 1863. Oakland's Chinatown had its roots early in the city's history, as Chinese residents established homes, businesses, and services centered around the intersection of 8th and Webster streets as early as the 1860s (Oakland, 2013.)

In 1868, Oakland was chosen as the western terminus for the Transcontinental Railroad. Beginning in 1869, the train brought tourists and workers to California and made Oakland a major port city and manufacturing center. The area of West Oakland became a shipping hub for western U.S. factories and a processing and manufacturing center for raw commodities such as agricultural products and lumber.

As Oakland became an increasingly popular industrial core, residential and commercial communities expanded within the city limits. In 1873, Oakland became the county seat of Alameda County. By 1880, the city's population rose to 34,555, more than 20 times what it had been in 1860 (Bagwell, 2012.) Promotional materials advertised Oakland's "world-renowned" climate, the prosperity of its citizens, its paved streets, and extensive streetcar lines (Rather, 1972.) It was home to several colleges, including the College of California (the precursor of the University of California, Berkeley), Mills Seminary (later Mills College), and St. Mary's College, located at 30th and Broadway.

The City expanded by annexing existing settlements and developing new districts. Clinton, San Antonio, and the small town of Lynn were annexed in 1872, pushing Oakland's eastern city limits out to 36th Street (Historic Preservation Element, 1993.) The small Temescal community, located in north Oakland, expanded in the 1860s with the installation of a telegraph line down present-day Telegraph Avenue and the establishment of a streetcar line to the University of

California, Berkeley. Neighborhoods north of Lake Merritt were annexed in 1891, and Temescal, Golden Gate, and other north Oakland neighborhoods were annexed in 1897 (Historic Preservation Element, 1993.) By 1900, Oakland's population numbered almost 67,000.

The 1906 earthquake and fire displaced thousands of San Francisco residents to the East Bay for temporary and permanent housing. Oakland continued to grow geographically, increasing to nearly its present size by 1909, with the annexation of the hills area, Fruitvale, Melrose, Elmhurst, and the area south to San Leandro. With those additions, the city's area increased from 22.9 to 60.25 square miles. The city experienced a surge of commercial and civic development in the downtown area after the earthquake as well, including construction of a new city hall, which was the first such civic building in the United States designed as a skyscraper. Oakland's Chinese population grew with the influx of new residents from San Francisco following the earthquake, with many families settling in the blocks to the southeast of Chinatown's commercial core.

In 1910, the City of Oakland assumed control of its waterfront, which previously had been held by private entities. The change of ownership prompted the expansion of the Port of Oakland, particularly during World War I. By 1918, at least 50,000 people were employed by the shipyards.

The 1920s saw continuing prosperity in Oakland. Civic works abounded, including the installation of a new lighting system and procurement of land for an airport. The Bay Bridge, which opened in 1936, eased the commute between Oakland and San Francisco. Oakland grew into a major shipbuilding center during World War II, and the city's population expanded with wartime workers, including many African Americans who migrated from the southern states.

The post-World War II emphasis on the private automobile led to increased suburban development and construction of new freeways to reach outlying areas. While freeway construction and redevelopment enticed some businesses and residents away from the city center, in many cases businesses and residents were forced to relocate as the historic commercial and residential fabric of downtown and West Oakland was replaced and disconnected by growing freeway systems. Increased economic and racial segregation were byproducts of this transportation and suburban development pattern, and through the 1960s and 1970s Oakland experienced infrastructure decline associated with entrenched poverty, deindustrialization, and a weak urban tax base (Self, 2003.)

Identified Resources

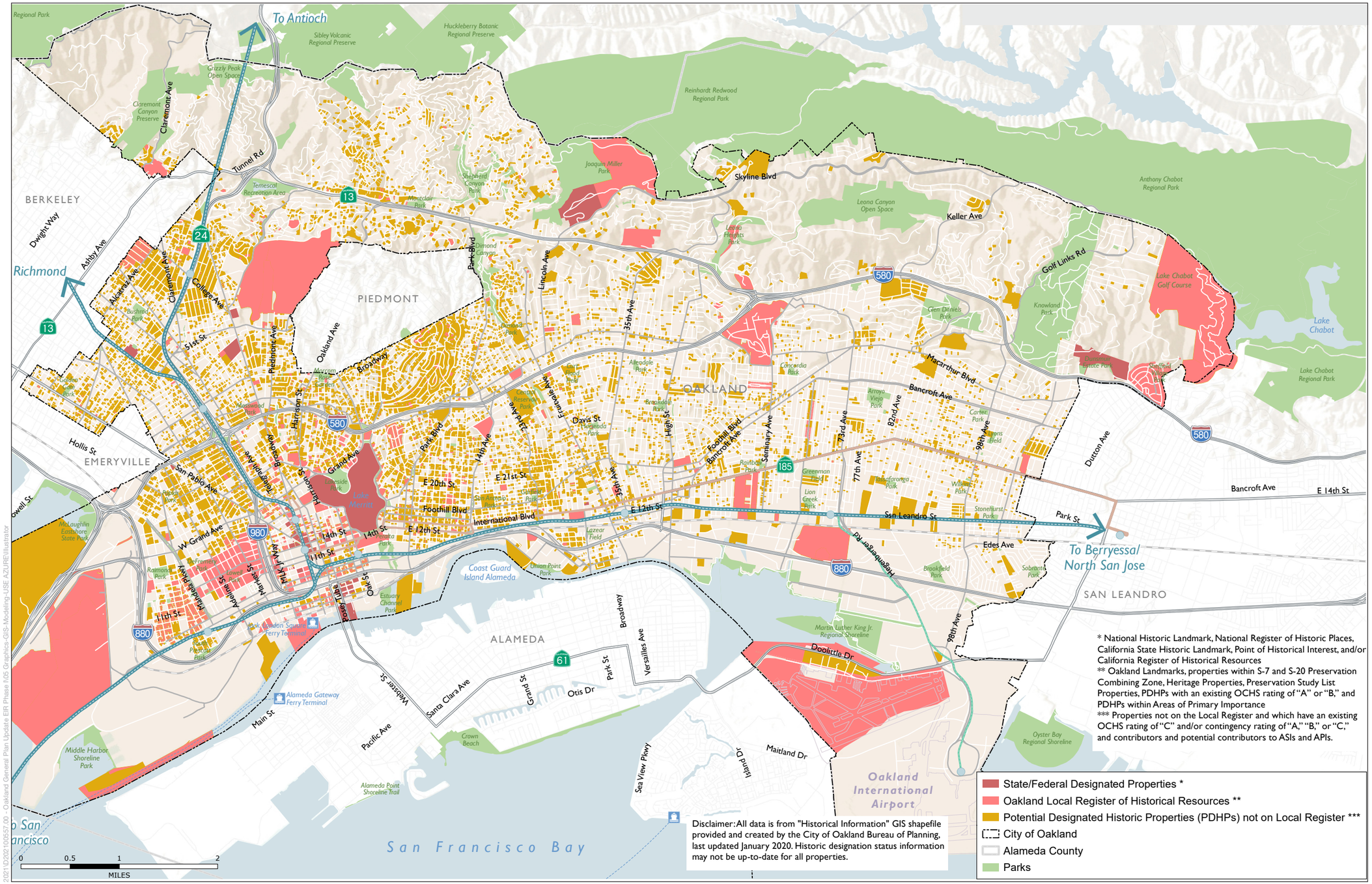
Five National Historic Landmarks, 145 National Register of Historic Places-listed properties (51 individual properties and approximately 94 contributors to historic districts), 13 California Historical Landmarks, and more than 1,000 California Register of Historical Resources-listed properties (159 individual properties and more than 900 district contributors) are all located in the City of Oakland. Additionally, the City has several hundred locally Designated Historic Properties and has also identified around 20,000 "Potential Designated Historic Properties" or locally significant individual historic resources and historic districts (see **Figure 4.4-1**).

The term Designated Historic Properties (DHPs) refers to landmarks, contributors or potential contributors to Preservation Districts, or Heritage Properties. Properties designated or identified as individual resources at the local level include Landmarks, Heritage Properties, Study List Properties, and the highest rated Potential Designated Historic Properties (PDHPs). City of Oakland Landmarks (145 listings) are the most prominent DHPs in the Plan Area, designated by Landmarks Preservation Advisory Board (LPAB) and City Council for historical, cultural, educational, architectural, aesthetic, or environmental value. The category of Heritage Property (approximately 73 properties) is designated by the Landmarks Preservation Advisory Board and is typically less exclusive than the Landmark designation.

Properties included in the Local Register as district contributors include those in S-7 and S-20 Preservation Districts or in an Area of Primary Importance (API). The City of Oakland's S-7 and S-20 Historic Preservation District Combining Zones comprise groupings of significant resources with similar designation criteria and review procedures for Landmark properties.[4] This category includes approximately 1,200 properties in eight districts. APIs are districts or groupings identified through survey and defined by the City's General Plan Historic Preservation Element as "historically or visually cohesive" areas that appear to meet eligibility requirements for listing as districts on the National Register. API contributors and potential contributors include approximately 1,660 properties in 57 districts. The City also identifies Areas of Secondary Importance (ASI), which according to the Historic Preservation Element are like APIs except that (1) an ASI does not appear eligible for the National Register of Historic Places and (2) altered properties which do not now contribute to the ASI but would if restored ("contingency contributors") are counted as contributors.

The Local Register also includes properties which are not individually designated in the categories described above, but which have been assigned Oakland Cultural Heritage Survey (OCHS) ratings of "A" or "B." The A- and B-rated properties include approximately 90 properties not already designated in other categories or in districts. The five-tiered alphanumeric rating system developed for OCHS denotes a property's significance at the local level in its existing condition, its potential significance if rehabilitated or studied further, and its relationship to preservation districts. Briefly, evaluated properties are assigned an Individual Property Rating between "A" (highest importance) and "E" ("of no particular interest") corresponding to their ability to meet criteria related to visual quality and design, historical association, context, and integrity. Properties less than 45-years old at the survey date or obviously lacking integrity are noted as "Not Rated" by the code "F" or "*". Contributors to historic districts are given an additional numerical rating to indicate significance-level of the district – "1" is given to API contributors, "2" is given to ASI contributors, and "3" indicates that the property is not within a historic district. The symbols "+," "-," or "*" following a 1 or 2 indicates role in the API or ASI (contributor, non-contributor, contingency contributor, respectively).

[4] City of Oakland, Oakland California Planning Code Chapter 17.84, electronic resource at https://library.municode.com/ca/oakland/codes/ planning_code?nodeId=TIT17PL_CH17.84PRCOZORE; and 17.100B, electronic resource at https://library.municode.com/ca/oakland/codes/planning_code?nodeId=TIT17PL_CH17.100BS-HIPRDICOZORE, accessed December 17, 2021.



2021\D2021005\01 - Oakland General Plan Update EIR Phase I\GIS Graphics\GIS Modeling\LISE AZURE\Illustrator

SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 4.4-1
Historic Resources

ESA

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4.4.2 Regulatory Setting

4.4.2.1 Federal

National Register of Historic Places

Under the National Historic Preservation Act (NHPA) of 1966, as amended (54 U.S.C. 306108), and its implementing regulations, a property is considered significant if it meets the criteria for listing in the National Register of Historic Places (National Register) at 36 CFR 60.4, as stated below:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and that:
>
> A. Are associated with events that have made a significant contribution to the broad patterns of our 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 be likely to yield, information important in prehistory or history.

If a federal action is required for implementation of a project, Section 106 of the NHPA requires federal agencies to consider the effects of the undertaking on historic properties (i.e., properties listed in or eligible for listing in the National Register), and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register. The Section 106 review normally involves a four-step procedure, which is described in detail in the implementing regulations (36 CFR Part 800) and includes identifying historic properties in consultation with the State Historic Preservation Office (SHPO) and interested parties, assessing effects, consulting with SHPO and others to develop and execute an agreement regarding the treatment of historic properties, and proceeding with the project according to the agreement.

Secretary of the Interior's Standards for Rehabilitation

The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (Secretary's Standards) were published and codified as 36 Code of Federal Regulations 68 in 1995 and updated in 2017.[5] Developed by the National Park Service for reviewing certified rehabilitation tax credit projects, the Secretary's Standards have been adopted by local government bodies across the country for reviewing proposed work on historic properties under local preservation ordinances.

[5] Treatments are defined as follows: "Preservation" acknowledges a resource as a document of its history over time and emphasizes stabilization, maintenance, and repair of existing historic fabric. "Rehabilitation," while also incorporating the retention of features that convey historic character, also accommodates alterations and additions to facilitate continuing or new uses. "Restoration" involves the retention and replacement of features from a specific period of significance. "Reconstruction," the least-used treatment, provides a basis for recreating a missing resource.

The Secretary's Standards provide a useful analytical tool for understanding and describing the potential impacts of changes to historical resources and are used to inform CEQA review.

The Secretary's Standards are neither technical nor prescriptive. Rather, they are intended to promote responsible preservation practices that help protect irreplaceable cultural resources (National Park Service, 2017). The Secretary's Standards consist of ten basic principles created to help preserve the distinctive character of a historic building and its site while allowing for reasonable changes to meet new needs. As stated in the regulations (36 CRF 68), the Secretary's Standards are "to be applied taking into consideration the economic and technical feasibility of each project." In general, a project that would comply with the Secretary's Standards is considered to have mitigated its impact to a less-than-significant level (*CEQA Guidelines* Section 15064.5(b)(3)).

The ten Standards for Rehabilitation are as follows:

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

4.4.2.2 State

California Environmental Quality Act

The California Environmental Quality Act (CEQA), as codified in PRC Sections 21000 et seq., is the principal statute governing the environmental review of projects in the State. CEQA requires lead agencies to determine if a proposed project would have a significant effect on historical resources, including archaeological resources. The *CEQA Guidelines* (Section 15064.5(a)) define a historical resource as: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (California Register), (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be historically significant, provided the lead agency's determination is supported by substantial evidence in light of the whole record. In addition, Section 15064.5 (a)(4) states that "the fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to PRC Section 5020.1(k)), or identified in an historical resources survey (meeting the criteria in PRC Section 5024.1(g)) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1."

CEQA requires lead agencies to determine if a proposed project would have a significant effect on important historical resources or unique archaeological resources. If a resource is neither a unique archaeological resource nor a historical resource, the *CEQA Guidelines* note that the effects of the project on that resource shall not be considered a significant effect on the environment (*CEQA Guidelines* Section 15064.5(c)(4)). As noted above, projects that comply with the Secretary's Standards benefit from a regulatory presumption under CEQA that they would have a less-than-significant impact on a historical resource. Projects that do not comply with the Secretary's Standards may or may not cause a substantial adverse change in the significance of a historical resource and must be subject to further analysis to assess whether they would result in material impairment of a historical resource's significance.

California Register of Historical Resources

The California Register is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1(a)). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for or listed in the National Register.

To be eligible for the California Register, a historical resource must be significant at the local, State, or federal level under one or more of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. Is associated with the lives of persons important in our past.
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4. Has yielded, or may be likely to yield, information important in prehistory or history (PRC Section 5024.1(c)).

Integrity is the authenticity of a historical resource's physical identity as shown by the survival of characteristics that existed during the period of significance. For a resource to be eligible for the California Register, it must also retain enough integrity to be recognizable as a historical resource and to convey the reasons for its significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. A resource that does not retain sufficient integrity to meet the National Register criteria may still be eligible for listing in the California Register.

California Public Resources Code Section 5097.98 and 5097.99

PRC Section 5097.98 (and reiterated in *CEQA Guidelines* Section 15064.5(e)) identifies steps to follow in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery. PRC Section 5097.99, as amended, states that no person shall obtain or possess any Native American artifacts or human remains which are taken from a Native American grave or cairn. Any person who knowingly or willfully obtains or possesses any such artifacts or human remains is guilty of a felony which is punishable by imprisonment.

California Health and Safety Code Section 7050.5

Section 7050.5 of the California Health and Safety Code protects human remains by prohibiting the disinterring, disturbing, or removing of human remains from any location other than a dedicated cemetery.

4.4.2.3 Local Plans, Ordinances and Policies

City of Oakland General Plan

Conformity of the Proposed Project with General Plan goals and policies most relevant to historical resources is discussed throughout the evaluation of potential impacts. The City's Historic Preservation Element and Land Use and Transportation Element are the main sources of such policies, but most other General Plan elements, area plans, and design guidelines include policies supporting protection and potential of historic resources.

Historic Preservation Element

In March 1994, the Oakland City Council adopted the Historic Preservation Element of the Oakland General Plan (amended July 21, 1998). The element presents a series of guiding principles, goals,

policies, and actions by which historic resources are identified, addressed, and integrated into planning policies for the city. The Historic Preservation Element also sets out a graduated system of ratings and designations resulting from the OCHS and Oakland Zoning Regulations.

Identifying Historic Properties: The OCHS (Oakland Cultural Heritage Survey: the Historic Preservation Element's Historical and Architectural Inventory) is an ongoing reconnaissance and intensive survey process conducted by the City of Oakland. It began in 1979 and uses a five-tier rating system based on those of San Francisco Heritage and Parks Canada for individual properties, ranging from "A" (highest importance) and "B" (major importance) to "E" (of no particular interest), plus "not rated.". This letter rating is termed the "Individual Property Rating" of a building and is based on the following criteria:

1. **Visual Quality/Design:** Evaluation of exterior design, interior design, materials and construction, style or type, supporting elements, and importance of designer.
2. **History/Association:** Association with important person or organization, important event, or patterns of history, and the age of the building.
3. **Context:** Continuity and familiarity of the building within the city, neighborhood, or district.
4. **Integrity and Reversibility:** Evaluation of the building's condition, its exterior and interior alterations, any structural removals, and restoration potential.

Additionally, the following goal and policies specifically address historical resources under CEQA (City of Oakland, 1998):

> **Goal 2:** To preserve, protect, enhance, perpetuate, use, and prevent the unnecessary destruction or impairment of properties or physical features of special character or special historic, cultural, educational, architectural, or aesthetic interest or value.
>
> Such properties or physical features include buildings, building components, structures, objects, districts, sites, natural features related to human presence, and activities taking place on or within such properties or physical features.
>
> ***Policy 3.1: Avoid or minimize adverse historic preservation impacts related to discretionary city actions.*** The City will make all reasonable efforts to avoid or minimize adverse effects on the Character-Defining Elements of existing or Potential Designated Historic Properties which could result from private or public projects requiring discretionary City actions.
>
> ***Policy 3.5: Historic preservation and discretionary permit approvals.*** For additions or alteration to Heritage Properties[6] or Potential Designated Historic Properties requiring discretionary City permits, the City will make a finding that: (1) the design matches or is compatible with, but not necessarily identical to, the property's existing or historical design; or (2) the proposed design comprehensively modifies and is at least equal in quality to the existing design and is compatible with the character of the neighborhood; or

[6] Heritage Properties are defined in Appendix A of the City of Oakland Historic Preservation Element as "properties which under Policy 2.5 appear potentially eligible for Landmark or Preservation District designation because they either (1) have received an existing or contingency rating of 'A' (Highest Importance), 'B' (Major Importance), or 'C' (Secondary Importance) from the Intensive Survey; (2) have received an existing or contingency rating of 'A' or 'B' from the Reconnaissance Survey; or (3) contribute or potentially contribute to any area potentially eligible for Preservation District Designation."

(3) the existing design is undistinguished and does not warrant retention and the proposed design is compatible with the character of the neighborhood.

For any project involving complete demolition of Heritage Properties or Potential Designated Historic Properties requiring discretionary City permits, the City will make a finding that: (1) the design quality of the proposed project is at least equal to that of the original structure and is compatible with the character of the neighborhood; or (2) the public benefits of the proposed project outweigh the benefit of retaining the original structure; or (3) the existing design is undistinguished and does not warrant retention and the proposed design is compatible with the character of the neighborhood.

Policy 3.7: Property relocation rather than demolition as part of discretionary projects. As a condition of approval for all discretionary projects involving demolition of existing or Potential Designated Historic Properties, the City will normally require that reasonable efforts be made to relocate the properties to an acceptable site.

Policy 3.8: Definition of "Local Register of Historical Resources" and historic preservation "Significant Effects" for environmental review purposes. For purposes of environmental review under the California Environmental Quality Act, the following properties will constitute the City of Oakland's Local Register of Historic Resources:

1. All Designated Historic Properties [Landmarks, Heritage Properties, Study List Properties, Preservation Districts, and S-7 and S-20 Preservation Combining Zone Properties]; and

2. Those Potential Designated Historic Properties that have an existing rating of "A" or "B" or are located within an Area of Primary Importance (API).

Until complete implementation of Action 2.1.2 (Redesignation), the Local Register of Historical Resources will also include the following designated properties: Oakland Landmarks, S-7 Preservation Combining Zone properties, and Preservation Study List properties.

Complete demolition of a Historical Resource will normally be considered a significant effect that cannot be mitigated to a level less than significant and will, in most cases, require preparation of an Environmental Impact Report.

A proposed addition or alteration to a Historical Resource that has the potential to disqualify a property from Landmark or Preservation District eligibility or may have substantial adverse effects on the property's Character-Defining Elements will normally, unless adequately mitigated, be considered to have a significant effect. Possible mitigation measures are suggested in Action 3.8.1.

Policy 3.13: Security of vacant properties. Vacant or abandoned existing or Potential Designated Historic Properties shall be adequately secured in order to prevent unauthorized entry, theft, or property damage.

Policy 4.1: Archaeological resources. To protect significant archaeological resources, the City will take special measures for discretionary projects involving ground disturbances located in archaeologically sensitive areas.

Land Use and Transportation Element (LUTE)

The LUTE was adopted in 1998 to guide land use policies for all areas within Oakland outside the Estuary Policy Plan boundaries. Updates to this element will be included in *Phase II Oakland*

2045 General Plan Update. The following polices in the current LUTE have the potential to impact historical resources either directly or by incentivizing development in areas likely to have buildings meeting the historic age threshold (45-years):

> ***Policy C2.2: Reusing Abandoned Buildings.*** The reuse of abandoned industrial buildings by non-traditional activities should be encouraged where the uses are consistent with, and will assist in the attainment of, the goals and objectives of all elements of the Plan.
>
> ***Policy C2.3: Providing Vacant or Buildable Sites.*** Development in older industrial areas should be encouraged through the provision of an adequate number of vacant or buildable sites designated for future development.
>
> ***Policy T6.5: Protecting Scenic Routes.*** The City should protect and encourage enhancement of the distinctive character of scenic routes within the city, through prohibition of billboards, design review, and other means.
>
> ***Policy D1.3: Planning for Chinatown.*** The unique character of Chinatown, as a center for Asian-American culture, a regional destination point, and a district with a mixed housing type residential component, should be supported and encouraged.
>
> ***Policy D1.4: Planning for Old Oakland.*** Old Oakland should be respected and promoted as a significant historic resource and character-defining element, with Washington Street as its core. Residential development in Old Oakland should be of mixed housing type, with ground-floor retail where feasible.
>
> ***Policy D1.12: Planning for the Produce Market Area.*** The Produce Market should be recognized as California's last example of an early twentieth century produce market. Should the wholesale distribution of produce be relocated to another site the character and vitality of this unique district should be encouraged in its reuse if economically viable.
>
> ***Policy D2.1: Enhancing the Downtown.*** Downtown development should be visually interesting, harmonize with its surroundings, respect and enhance important views in and of the downtown, respect the character, history, and pedestrian orientation of the downtown, and contribute to an attractive skyline.
>
> ***Policy D6.2: Reusing Vacant or Underutilized Buildings.*** Existing vacant or underutilized buildings should be reused. Repair and rehabilitation, particularly of historic or architecturally significant structures, should be strongly encouraged. However, when reuse is not economically feasible, demolition and other measures should be considered.
>
> ***Policy D10.3: Framework for Housing Densities.*** Downtown Residential areas should generally be within the Urban Density Residential and Central Business District density range where not otherwise specified. The height and bulk should reflect existing and desired district character, the overall city skyline, and the existence of historic structures or areas.
>
> ***Policy W10.5: Reusing the Produce Market Area.*** If preservation of the Produce Market on its current site is not feasible, appropriate reuse of the area should be explored with consideration of a mixture of uses including retail commercial, office, and live/work units.
>
> ***Policy W10.7: Jack London Square Area Design Criteria.*** Developments in this area should be designed to enhance direct access to and along the water's edge, maximize

waterfront views and vistas, and make inviting public pedestrian access and spaces. Development and amenities must be sensitive to the surrounding character of pedestrian-oriented activities with focus on cultural and retail entertainment. Traditional and historic buildings and structures are character defining and should be preserve, adapted for new uses, or integrated into new development, where feasible.

Policy N3.6: Encouraging Retention of Dwellings. The City strongly encourages the moving of dwellings which might otherwise be demolished onto vacant lots, where appropriate and economically feasible, such as onto infill lots.

Policy N9.5: Marking Significant Sites. Identify locations of interest and historic significance by markers, signs, public art, landscape, installation, or by other means.

Policy N9.8: Preserving History and Community. Locations that create a sense of history and community within the City should be identified and preserved where feasible.

Policy N9.9: Respecting Architectural Integrity. The City encourages rehabilitation efforts which respect the architectural integrity of a building's original style.

2023-2031 Housing Element

The 2023-2031 Housing Element presents the City of Oakland's strategy to address Oakland's housing needs, policies, and actions directly and indirectly related to cultural resources include the following:

Policy 2.1: Existing Housing Stock Improvement

Action 2.1.1: Support home rehabilitation programs.

Action 2.1.4: Support historic preservation and rehabilitation.

Policy 2.2: Preserve the Affordability of Existing Homes

Action 2.2.1: Continue to implement resale controls on assisted housing.

Action 2.2.2: Enforce, monitor, and preserve affordable housing covenants with an emphasis on "at-risk" units.

Action 2.2.3: Enforce residential demolition and conversion restrictions for residential hotels.

Action 2.2.5: Extend local replacement unit provisions.

Action 2.2.6: Reduce short-term home purchases/sales (i.e., "house flipping") to ensure affordability and prevent displacement.

Policy 3.2: Create a More Diverse Mix of Homes to Meet Community Needs

Action 3.2.1: Develop zoning standards to encourage missing middle and multi-unit housing types in currently single-family-dominated neighborhoods, including flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and ADUs.

Action 3.2.2: Promote and protect live/work housing and housing for artists

Action 3.2.3: Promote flexibility in adaptive reuse to increase the housing stock.

Policy 3.3: Expand Resources for the Construction of Affordable Homes

Action 3.3.1: Sale or ground-lease of City-owned property for affordable housing.

Action 3.3.4: Development of permanent housing affordable to extremely-low-income (ELI) households on public land.

Action 3.3.5: Implement an affordable housing overlay.

Policy 3.4: Reform Zoning and Land Use to Address Community Priorities

Action 3.4.1: Revise development standards, including allowable building heights, densities, open space and setbacks requirement.

Action 3.4.2: Study the Relationship Between Zoning and Racial Segregation as Part of the Phase 2 General Plan Update

Action 3.4.3: Revise Conditional Use Permit (CUP) requirements.

Action 3.4.7: Capture the diversity of existing built fabric in zoning.

Action 3.4.8: Implement objective design standards.

Action 3.4.10: Implement a Housing Sites Overlay Zone to permit sites included in the Housing Sites Inventory to develop with affordable housing by right

Policy 3.6: Streamline the Approval of New Housing

Action 3.6.2: Provide increased flexibility in development standards

Action 3.6.3: Expand by-right approvals and implement entitlement reform for affordable housing.

Action 3.6.4: Continue SB 35 streamlining and encourage projects to use it.

Policy 3.8: Convert Vacant Land and Units to Housing

Action 3.8.5: Partner with Alameda County Tax Collector to redevelop tax defaulted properties.

Policy 5.2: Promote Resilient and Sustainable Development

Action 5.2.2: Promote infill, transit-oriented development (TOD), and mixed-use development.

Action 5.2.5: Encourage earthquake-resilient housing.

Action 5.2.7: Consider the adoption of a disaster reconstruction overlay zone.

Action 5.2.8: Encourage new affordable housing in higher resource neighborhoods.

Action 5.2.9: Prioritize improvements to meet the needs of low-resourced and disproportionately burdened communities.

Action 5.2.10: Promote the development of mixed-income housing to reduce income-based concentration.

Estuary Policy Plan

The Estuary Policy Plan (1999) serves as the Land Use Element for much of the land along the Oakland Estuary, and guides development along Oakland's waterfront between Castro Street, I-880, East Creek Slough, and the estuary shoreline. The estuary area includes both City of Oakland and Port of Oakland jurisdictional areas, so the Estuary Policy Plan is a key document in balancing the roles of these agencies.

Objective LU-5: Provide for the orderly transformation of land uses while acknowledging and respecting cultural and historical resources.

Objective SA-6: Encourage the development of educational and cultural programs and interpretive facilities that enhance understanding of the waterfront environment.

***Policy JL-4*:** Preserve the historic character of the Produce District and encourage activities that create a viable urban mixed-use district.

JL-4.1 Encourage the sensitive rehabilitation and adaptive reuse of existing buildings.

***Policy JL-5*:** In areas outside the existing boundaries of the historic district (API) and east to the Lake Merritt Channel, encourage the development of a mix of uses, including housing, within a context of commercial, light industrial/manufacturing uses, and ancillary parking.

***Policy JL-6*:** Encourage the preservation and adaptive reuse of existing buildings in a new Waterfront Warehouse District. Use of building and new infill development should include joint living and working quarters, residential, light industrial, warehouse & distribution, wholesaling, offices and other uses which preserve and respect the district's unique character.

***Policy OAK-1*:** Protect and enhance the natural and built components that establish the waterfront's unique environment.

OAK-4.2: Promote development of educational and cultural interpretive facilities.

***Policy SAF-6*:** Encourage the reuse of existing warehouse properties south of Alameda Avenue and west of High Street for high-quality retail uses that complement adjacent commercial uses.

Central Estuary Area Plan (2013)

The Central Estuary Area Plan was adopted in 2013 and includes 416 acres of the estuary shoreline and surrounding neighborhoods, roughly from 19th Avenue south to 54th Avenue between the estuary (west) and I-880 (east). This plan was developed in response to increased development interest. The Plan includes the policies noted above for the Estuary plan as well as additional policies and goals that address conflicting land use priorities and infrastructure deficiencies within the CEAP to promote the goal of developing a vibrant destination that supports a mix of uses. It recommends several transportation improvements and street redesigns for safer, pedestrian-oriented streets, and many objectives focus on public space and public access to the shoreline.

Objective CE-4.1: Provide for a mixture of compatible uses with emphasis on a variety of affordable housing types, while maintaining the area's character of small scale buildings.

***Policy CE-6*:** Encourage the reuse of existing warehouse properties south of Alameda Avenue and west of High Street for high-quality retail uses that complement adjacent commercial uses.

Oakland Planning Code

Under Section 17.158.090 of the City of Oakland Planning Code (2005), for purposes of evaluating environmental impacts under CEQA, a historical resource is a resource that meets any of the following criteria:

1. A resource listed in, or determined to be eligible for listing in, the California Register;
2. A resource included in Oakland's Local Register of historical resources (defined in General Plan Historic Preservation Element Policy 3.8), unless the preponderance of evidence demonstrates that it is not historically or culturally significant;
3. A resource identified as significant (e.g., rated 1–5) in a historical resource survey recorded on Department of Parks and Recreation (DPR) Form 523, unless the preponderance of evidence demonstrates that it is not historically or culturally significant;
4. Any object, building, structure, site, area, place, record, or manuscript which the Oakland City Council determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the determination is supported by substantial evidence in light of the whole record. Generally, a resource is considered "historically significant" if it meets the criteria for listing on the California Register *CEQA Guidelines* Section 15064.5; or
5. A resource that is determined by the City Council to be historically or culturally significant even though it does not meet the other four criteria listed here.

Regular Design Review Criteria

Design review is intended to ensure high quality attractive designs that will complement and benefit the surrounding neighborhood and city as a whole. Design review is primarily focused on site planning and the exterior appearance of structures. This can include architectural style; design quality; building materials; building mass and bulk; façade articulation; landscaping; preservation of sunlight, views, and privacy; screening of parking and loading areas; and other design related issues. Section 17.136.075 of the City of Oakland Planning Code defines design review findings for removal or demolition of certain categories of historic resources. Section 17.136.075 currently also includes demolition findings applicable to CIX-1A zoned properties; for purposes of clarity, the zoning code package included in the Proposed Project would relocate the CIX-1A findings to a new Planning Code section within Chapter 17.136.

4.4.2.4 City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to reducing impacts on historic architectural resources and archaeological resources are listed below. All SCAs would be adopted as enforceable conditions of approval and required, as applicable, to be implemented during construction and operation of future development under the Proposed Project to help ensure less-than-significant impacts to historic architectural resources and archaeological resources. The

SCAs are incorporated and required as part of the Proposed Project, so they are not listed as mitigation measures.

- **SCA 35: Property Relocation**

  Requirement: Pursuant to Policy 3.7 of the Historic Preservation Element of the Oakland General Plan, the project applicant shall make a good faith effort to relocate the historic resource to a site acceptable to the City. A good faith effort includes, at a minimum, all of the following:

  a) Advertising the availability of the building by: (1) posting of large visible signs (such as banners, at a minimum of 3' x 6' size or larger) at the site; (2) placement of advertisements in Bay Area news media acceptable to the City; and (3) contacting neighborhood associations and for-profit and not-for-profit housing and preservation organizations;

  b) Maintaining a log of all the good faith efforts and submitting that along with photos of the subject building showing the large signs (banners) to the City;

  c) Maintaining the signs and advertising in place for a minimum of 90 days; and

  d) Making the building available at no or nominal cost (the amount to be reviewed by the Oakland Cultural Heritage Survey) until removal is necessary for construction of a replacement project, but in no case for less than a period of 90 days after such advertisement.

- **SCA 70: Vibration Impacts on Adjacent Structures or Vibration-Sensitive Activities**

  Requirement: The project applicant shall submit a Vibration Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities located adjacent to the project site or within an established boundary from the project site. The Vibration Analysis shall identify design means and methods of construction that shall be utilized in order to not exceed the thresholds. The applicant shall implement the recommendations during construction.

- **SCA 32: Archaeological and Paleontological Resources – Discovery During Construction**

  Requirement: Pursuant to *CEQA Guidelines* Section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented.

  In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified

archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense.

In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.

- **SCA 33: Archaeologically Sensitive Areas – Pre-Construction Measures**

  Requirement: The project applicant shall implement either Provision A (Intensive Pre-Construction Study) or Provision B (Construction ALERT Sheet) concerning archaeological resources.

  Provision A: Intensive Pre-Construction Study. The project applicant shall retain a qualified archaeologist to conduct a site-specific, intensive archaeological resources study for review and approval by the City prior to soil-disturbing activities occurring on the project site. The purpose of the site-specific, intensive archaeological resources study is to identify early the potential presence of history-period archaeological resources on the project site. At a minimum, the study shall include:

  a) Subsurface presence/absence studies of the project site. Field studies may include, but are not limited to, auguring and other common methods used to identify the presence of archaeological resources.

  b) A report disseminating the results of this research.

  c) Recommendations for any additional measures that could be necessary to mitigate any adverse impacts to recorded and/or inadvertently discovered cultural resources.

  If the results of the study indicate a high potential presence of historic-period archaeological resources on the project site, or a potential resource is discovered, the project applicant shall hire a qualified archaeologist to monitor any ground disturbing activities on the project site during construction and prepare an ALERT sheet pursuant to Provision B below that details what could potentially be found at the project site. Archaeological monitoring would include briefing construction personnel about the type of artifacts that may be present (as referenced in the ALERT sheet, required per Provision B below) and the procedures to follow if any artifacts are encountered, field recording and sampling in accordance with the Secretary of Interior's Standards and Guidelines for Archaeological Documentation, notifying the appropriate officials if human remains or cultural resources are discovered, and preparing a report to document negative findings after construction is completed if no archaeological resources are discovered during construction.

Provision B: Construction ALERT Sheet. The project applicant shall prepare a construction "ALERT" sheet developed by a qualified archaeologist for review and approval by the City prior to soil-disturbing activities occurring on the project site. The ALERT sheet shall contain, at a minimum, visuals that depict each type of artifact that could be encountered on the project site. Training by the qualified archaeologist shall be provided to the project's prime contractor, any project subcontractor firms (including demolition, excavation, grading, foundation, and pile driving), and utility firms involved in soil-disturbing activities within the project site.

The ALERT sheet shall state, in addition to the basic archaeological resource protection measures contained in other standard conditions of approval, all work must stop and the City's Environmental Review Officer contacted in the event of discovery of the following cultural materials: concentrations of shellfish remains; evidence of fire (ashes, charcoal, burnt earth, fire- cracked rocks); concentrations of bones; recognizable Native American artifacts (arrowheads, shell beads, stone mortars [bowls], humanly shaped rock); building foundation remains; trash pits, privies (outhouse holes); floor remains; wells; concentrations of bottles, broken dishes, shoes, buttons, cut animal bones, hardware, household items, barrels, etc.; thick layers of burned building debris (charcoal, nails, fused glass, burned plaster, burned dishes); wood structural remains (building, ship, wharf); clay roof/floor tiles; stone walls or footings; or gravestones. Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, and supervisory personnel. The ALERT sheet shall also be posted in a visible location at the project site.

- **SCA 34: Human Remains – Discovery During Construction**

  Requirement: Pursuant to *CEQA Guidelines* Section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the project applicant.

4.4.3 Environmental Analysis

4.4.3.1 Significance Criteria

The City of Oakland has established thresholds of significance for CEQA impacts, which incorporate those in Appendix G of the *CEQA Guidelines* (City of Oakland, 2020). Adoption of the Proposed Project would have a significant adverse impact related to cultural resources if it would:

1. Cause a substantial adverse change in the significance of an historical resource as defined in *CEQA Guidelines* Section 15064.5. Specifically, a substantial adverse change includes physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be "materially impaired." The significance of an historical resource is "materially impaired" when a project

demolishes or materially alters, in an adverse manner, those physical characteristics of the resource that convey its historical significance and that justify its inclusion on, or eligibility for inclusion on an historical resource list (including the California Register of Historical Resources, the National Register, Local Register, or historical resources survey form (DPR Form 523) with a rating of 1-5);

2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to *CEQA Guidelines* Section 15064.5;

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

4.4.3.2 Approach to Analysis / Methodology

This is a program-level Draft EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Impacts on cultural resources are evaluated using the criteria listed above and based on information included in the City of Oakland General Plan, Map Atlas and the documents listed in Section 4.4.6, *References – Cultural Resources.*

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the Proposed Project *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future development under the Proposed Project, this Draft EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas and analyzes the impacts of housing development through the projection period ending in 2030.

Architectural Resources

Potential impacts on architectural resources are assessed by identifying any activities (either during construction or operations) that could affect resources that have been identified as historical resources for the purposes of CEQA. Once a resource has been identified as a CEQA historical resource, it then must be determined whether the impacts of the Proposed Project would "cause a substantial adverse change in the significance" of the resource according to Criterion 1 above. Where potential impacts on historical resources are identified, *CEQA Guidelines* Section 15126.4(b) states that compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings will generally reduce potential impacts to a less than significant level. In addition, "in some circumstances, documentation of an historical resource…as mitigation for the effects of demolition of the resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur" (*CEQA Guidelines* Section 15126.4(b)(2)).

Archaeological Resources

Archaeological resources can include historical resources according to *CEQA Guidelines* Section 15064.5 as well as unique archaeological resources as defined in *CEQA Guidelines* Section 21083.2(g). The significance of most pre-contact and historic-era archaeological sites is usually assessed under National Register and California Register Criteria D/4. These criteria stress the importance of the information potential contained within the site, rather than its significance as a

surviving example of a type or its association with an important person or event. Although it is less common, archaeological resources may also be assessed under California Register Criteria 1, 2, and/or 3.

Impacts to unique archaeological resources or archaeological resources that qualify as historical resources are assessed pursuant to Section 21083.2 of the CEQA statute, which states that the lead agency shall determine whether the Proposed Project may have a significant effect on archaeological resources. As with architectural resources above, whether the impacts of the Proposed Project would "cause a substantial adverse change in the significance" of the resource must be determined (*CEQA Guidelines* Section 15064.5(b)).

Human Remains

Human remains, including those buried outside of formal cemeteries, are protected under several State laws, including PRC Section 5097.98 and Health and Safety Code Section 7050.5. These laws are identified above in Section 4.4.2, *Regulatory Setting*. Specifically, *CEQA Guidelines* Section 15064.5(d) requires a lead agency to work with Native Americans to develop an agreement for treating, with appropriate dignity, human remains and any items associated with the burials. Upon discovery of human remains that the County Coroner determines to be Native American in origin, the Native American Heritage Commission identifies the person or persons it believes to be the most likely descended from the deceased Native American. This analysis considers impacts on human remains including intentional disturbance, mutilation, or removal of interred human remains.

4.4.3.3 Proposed 2045 General Plan Policies, Land Use, and Zoning

Safety Element

The following policy is proposed as a part of the Safety Element Update in the Proposed Project. This policy generally pertains to cultural resources because it would intensify development.

> ***SAF-1.2: Structural Hazards.*** Continue, enhance or develop regulations and programs designed to minimize seismically related structural hazards from new and existing buildings.

Proposed Planning Code Amendments

The following Proposed Planning Code amendments, summarized below, would alter the procedures by which projects are reviewed by the City of Oakland.

> ***Section 17.136.030.C.2 Small Project Design Review – Track Two Procedure.*** This section addressed small project design review for proposal involving a local register property. The proposed amendments eliminate the special conditions that would subject projects involving upper story additions of more than 250 square feet to undergo a separate review process. This consolidates review of projects involving historic resources to a single process, regardless of the location or type of small project being considered.
>
> ***Section 17.136.030.D – Design Review Criteria.*** This is a new section that would require that proposals subject to small project design review that include work on a local register property would not substantially impair the visual, architectural, or historic value of the property. This new subsection acts to relocate section 17.136.035 – Small Project Design

Review Criteria, into a subsection of Section 17.136.030 – Small Project Design Review, without substantive change.

Section 17.136.072 – Special Regulations for Demolition or Removal of CIX-1A Zoned Properties. This new section imposes demolition findings requirements for any structure in the CIX-1A Zone that is not a historic property as defined in Section 17.136.075. The new requirements are similar to those applied to the demolition of historic resources as presented in Section 17.136.075. This change removes the CIX-1A properties from Section 17.136.075 and places consideration of them in a separate section of the code. It removes the requirement that the replacement structure be of equal or greater design quality to the building or structure being demolished.

Section 17.136.075 – Special Regulations for Demolition or Removal of Designated Historic Properties and Potentially Designated Historic Properties. This is the primary section governing review of projects that include historic resources. It would be modified to relocate the above-described CIX-1A Zone findings to new Section 17.136.072.

Objective Design Review. Objective design review is a new section of the planning code design review chapter that would allow for streamlined review of projects against a new set of citywide design criteria. The City is in the process of developing objective design standards applicable to all residential, mixed-use with residential, and for many non-residential land uses. These objective standards will help streamline development approvals by enabling project proponents to comply with them and thus obviate the need for discretionary design review, which can often add to development approval timeline and complexity. These objective standards would be in addition to zoning standards currently in place, and will address topics such as building massing, relationship to street, and responding to context. Project proponents will have the ability to request standard/normal design review, should they desire to deviate from the objective standards. Projects that include demolition of identified CEQA Historic Resources would continue to require discretionary design review for the demolition while the Objective Design Standards would apply to the design of the new proposal.

4.4.3.4 Topics Considered and Determined to Have No Impact

All cultural resources topics are analyzed below.

4.4.4 Impacts of the Project

Impact CUL-1: Future development under the Proposed Project could cause a substantial adverse change in the significance of a historic architectural resource pursuant to CEQA Guidelines Section 15064.5. (Criterion 1) (*Significant and Unavoidable*)

The Proposed Project would not directly approve any physical development but the HEI would encourage and guide the type and location of housing production throughout the Plan Area such as changes in allowable densities, changes in development standards, adoption of incentives, and entitlement reform. Future development under the Proposed Project would be facilitated by the potential reduction in project oversight through implementation of permit and environmental streamlining measures that would allow for greater numbers of ministerial-only project approvals. One such streamlining measure is the Affordable Housing Overlay (AHO) Zone where 100 percent affordable housing projects would benefit from by-right approvals and other development standards such as bonus heights and additional lot coverage. Parcels with historic resources

currently designated at the national, State, and local level would be excluded from the AHO Zone and demolition of existing historic structures within APIs would not be permitted as a part of a qualifying project.

Nonetheless, development facilitated by streamlining actions and policies within the HEI could result in damage to or destruction of historic architectural resources. For example, streamlined review could result in damage or destruction to a structure that could be eligible for designation but has not been identified as a historic resource at the time of application for streamlined review. Further, construction of a new building on a vacant parcel located within an existing historic district would be considered utilizing the objective design review process. This could potentially result in a design that is incompatible with the district and in some cases could adversely impact the eligibility of the district as a resource.

Similarly, the Safety Element would not directly approve any physical development but would implement policies that could result in structural improvements to existing historic-age buildings (to address seismic strengthening, climate resiliency improvements, maintenance and renovation to reduce structural hazards, etc.) that may not be subject to discretionary review. As such, policies within the Safety Element could result in damage to or destruction of historic architectural resources.

The proposed Planning Code amendments would reorganize the existing code to simplify design review Any project including a historic resource would be exempt from the proposed objective design standards. As such, the impacts to known historic resources as a result of the Planning Code amendments would be less than significant.

The LUTE and Historic Preservation Element include policies designed to identify and protect architectural historic resources. Historic Preservation Element Policy 1.1 establishes a methodology for identification of historic properties, and Policy 3.8 defines a subset of those as resources for environmental review under CEQA. The Policy 2 series establishes regulations and incentives to protect locally designated landmarks. Policies 3.1, 3.5, 3.7 and others in the 3.x series seek to avoid or minimize impacts to all historic resources through City processes, but they cannot eliminate the possibility of impacts to historic architectural resources altogether. Historic Preservation Element Policy 3.13 requires that vacant Designated or Potential Designated Historic Properties are secured to prevent damage. Many policies in the LUTE serve to protect historic architectural resources. For example, policies C2.2 and D6.2 encourage the reuse of abandoned buildings, policies D1.3, D1.4, D1.12, D2.1, and W10.7 call for the thoughtful planning of future development to consider the unique character of Chinatown, Old Oakland, the Produce Market Area, Downtown, and Jack London Square; and policy D10.3 calls for new development to be compatible with existing character of the area. In addition, policy N9.8 seeks to identify and preserve locations that reflect history and community and policy N9.9 encourages rehabilitation that is consistent with a building's original style.

In addition to existing General Plan policies, Oakland's SCAs are intended to reduce impacts on historic architectural resources. SCA 35 requires a property owner, if feasible, to relocate a

historic resource rather than demolishing it. SCA 70 requires project applicants to submit a Vibration Analysis to ensure that construction activities do not damage existing buildings.

While the aforementioned regulations, policies, and SCAs are designed to protect architectural historic resources by requiring projects to identify and mitigate impacts to potential architectural historic resources, there remains the potential for construction activities to damage or destroy architectural historic resources. Further, even with implementation of the protective policies and SCAs described above, there remains the possibility that the City could approve the demolition of a previously unidentified or currently underrated historic building or structure either to implement the goals and policies of the Safety Element or by taking advantage of the Proposed Project's streamlining policies and actions. Therefore, the Proposed Project would result in a significant impact to historic architectural resources. The following apply to the significant impact:

> **Mitigation Measure CUL-1: Identify Architectural Historic Resources.**
>
> To facilitate the protection of architectural historic resources, the City shall create a ministerial process involving a screening assessment incorporated into the City of Oakland basic application for development review to determine when a building or structure is an eligible historic resource. The screening assessment shall be reviewed and approved by a City of Oakland Preservation Planner. Once the process is established, the City shall require discretionary review for the issuance of demolition permits of eligible historic resources unless, consistent with City regulations: rehabilitation is not feasible; demolition is necessary to protect health, safety, and/or welfare; or the benefit of demolition outweighs the loss of the structure.
>
> **Significance after Mitigation:** Future development under the Proposed Project could result in the demolition or significant alteration of historical resources, which would constitute a substantial adverse change in the significance of the resources. While the mitigation measures included above would require identification and documentation of the resources, they would not fully mitigate these actions to a less-than-significant level if these resources were permanently lost. Therefore, even with implementation of Mitigation Measure CUL-1 the impact would be significant and unavoidable.

Summary

Even with adherence to the aforementioned SCAs, mitigation measures, and other regulatory compliance, adoption of the Proposed Project would result in a significant impact to architectural historic resources.

Impact CUL-2: Future development under the Proposed Project could cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. (Criterion 2) (*Less than Significant with Mitigation*)

Archaeological resources can be considered historical resources, according to Section 15064.5, as well as unique archaeological resources, as defined in Section 21083.2(g). Nearly 100 archaeological resources have been previously identified in the Plan Area. The Historic Preservation Element goal and policy for archaeological resources (Policy 4.1) and compliance with federal, State, and local laws and regulations would protect recorded and unrecorded

archaeological deposits in the Plan Area by providing for the early detection of potential conflicts between development and resource protection, and by preventing or minimizing the material impairment of the ability of archaeological deposits to convey their significance through excavation or preservation. SCA 32, Archaeological and Paleontological Resources – Discovery During Construction, would protect resources if inadvertently discovered during construction activities. SCA 33, Archaeologically Sensitive Areas – Pre-construction Measures, ensures that the project applicant implement either Provision A (Intensive Pre- Construction Study) or Provision B (Construction ALERT Sheet) in areas determined to be archaeologically sensitive. However, Policy 4.1 and SCA 33 would not reduce impacts to archaeological resources in all cases. To avoid significant impacts in areas of archaeological sensitivity, both Provision A and Provision B of SCA 33 should be followed because project applicants do not have the qualifications to determine whether to implement an Intensive Pre-Construction Study or provide a Construction ALERT Sheet. That determination should be made by a Secretary of the Interior-qualified archaeologist.

In addition, if Native American archaeological resources are identified or suspected in a project site, a Native American representative(s) registered with the Native American Heritage Commission that is traditionally and culturally affiliated with the geographic area as described in Public Resources Code Section 21080.3 shall be consulted. Implementation of Mitigation Measure CUL-2 would reduce impacts to archaeological resources to a less-than-significant level by requiring minor text changes to SCA 33.

> **Mitigation Measure CUL-2: Text changes to SCA 33: Archaeological and Paleontological Resources – Discovery During Construction.**
>
> Requirement: The project applicant shall implement ~~either~~ Provision A (Intensive Pre-Construction Study) ~~or~~ and Provision B (Construction ALERT Sheet) concerning archaeological resources. If Native American archaeological resources are identified or suspected in a project site, the City shall consult with a Native American representative(s) registered with the Native American Heritage Commission that is traditionally and culturally affiliated with the geographic area as described in Public Resources Code Section 21080.3.
>
> **Significance after Mitigation:** Less than Significant.

Summary

With adherence to the aforementioned SCAs, mitigation measures, and other regulatory compliance, adoption of the Proposed Project would result in a less than significant impact on archaeological resources.

Impact CUL-3*: Future development under the Proposed Project would not disturb human remains, including those interred outside of formal cemeteries. (Criterion 3) (Less than Significant*)

Based on a review of known archaeological site information, there are previously identified locations with Native American human remains in the Plan Area and there is the potential for

additional human remains to be encountered within the Plan Area during ground disturbing activities. The disturbance of human remains would constitute a significant impact because descendant communities may ascribe religious or cultural significance to the remains.

To address this potential significant impact, SCA 34, Human Remains – Discovery During Construction, which follow State laws, includes provision for all work to halt in the vicinity of the discovery of any human remains and for the County Coroner to be notified. If the Coroner determines the remains are Native American in origin the Native American Heritage Commission is contacted. This SCA is sufficient to address potential impacts to human remains from future development under the Proposed Project and no mitigation is required.

Mitigation: None required.

Summary

With adherence to the aforementioned SCAs, mitigation measures, and other regulatory compliance, adoption of the Proposed Project would result in a less than significant impact with respect to human remains.

4.4.5 Cumulative Impacts

This section presents an analysis of the cumulative effects of future development under the Proposed Project in combination with other past, present, and reasonably foreseeable future development that could cause cumulatively significant impacts. Significant cumulative impacts related to historic architectural resources or archaeological resources could occur if the incremental impacts of future development under the Proposed Project combined with the incremental impacts of cumulative development would be significant, and if the Proposed Project's contribution would be considerable.

Impact CUL-4: Future development under the Proposed Project, combined with cumulative development, could result in cumulatively considerable impacts for historic architectural resources. (*Significant and Unavoidable*)

Geographic Context

The geographic context for the analysis of cumulative architectural historical resources, impacts is cumulative development in the City of Oakland.

Cumulative Impacts – Construction and Operations

Adoption of and development under the Proposed Project, when combined with the cumulative development citywide, could result in cumulatively considerable impacts to historic architectural resources. There is a possibility that if demolition or major alteration of a historic resource occurs with adoption of and development under the Proposed Project, and avoidance, adaptive reuse, and appropriate relocation are not feasible, and the same circumstance occurs with other projects in the Plan Area that may likely affect potential historic resources, a significant and unavoidable cumulative impact could result, even with the application of the requirements identified in all

SCAs and Mitigation Measures are incorporated to all development projects. Therefore, this impact is significant and unavoidable.

Mitigation Measure CUL-1: Identify Architectural Historic Resources.

Significance after Mitigation: Significant and Unavoidable.

Summary

Adoption of the Proposed Project, with adherence to the aforementioned SCAs, mitigation measures, and other regulatory compliance, would result in a significant and unavoidable cumulative impact on architectural historic resources.

Impact CUL-5: Adoption of the Proposed Project, combined with cumulative development, could result in less than significant cumulative impacts for archaeological resources and human remains. (*Less than Significant with Mitigation*)

Geographic Context

The geographic context for the analysis of cumulative archaeological resources and human remains impacts is cumulative development in the City of Oakland.

Cumulative Impacts – Construction and Operations

Future development under the Proposed Project and cumulative projects could include excavation and grading that could potentially impact archaeological resources and human remains that may be present. The cumulative effect of this future development is the continued loss of cultural remains. Potential future development increases the likelihood that additional archaeological resources could be uncovered, so it is therefore possible that cumulative development could result in the demolition or destruction of unique archaeological resources, which could contribute to the erosion of the pre-contact record of the City and the wider region. However, adherence to SCAs 32 through 34 and implementation of Mitigation Measures 4.4-3 would effectively mitigate these effects. With implementation of these SCAs and mitigation measures, any potential cumulative impacts to archaeological resources and human remains would be reduced to a less than significant level.

Mitigation Measure CUL-2: Text changes to SCA 33: Archaeological and Paleontological Resources – Discovery During Construction.

Summary

Adoption of the Proposed Project, with adherence to the aforementioned SCAs, mitigation measures, and other regulatory compliance, would result in a less than significant cumulative impact on archaeological resources and human remains.

4.4.6 References – Cultural Resources

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4.5 Energy

This section describes conditions and potential environmental effects of the Proposed Project pertaining to energy. The section discusses relevant existing environmental conditions of the Plan Area and regulations pertinent to this section, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts to the physical environment that could result from implementation of the Proposed Project and its associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that would reduce potential impacts to this environmental topic are identified; both existing and proposed updated/new General Plan policies and SCAs are considered. This section incorporates relevant information from the General Plan Update Map Atlas (see Appendix A) prepared in support of the Proposed Project. No scoping comments related to energy were received in response to the NOP (Notice of Preparation) of this Draft EIR.

4.5.1 Environmental Setting

4.5.1.1 State Energy Profile

In 2020, total energy usage in California was 6,923 trillion British thermal units (Btu) (the most recent year for which this specific data is available), which equates to an average of 175 million Btu per capita per year. These figures place California second among the 50 states in total energy use and forty eighth in per-capita consumption. Of California's total energy usage, the breakdown by sector is roughly 34 percent transportation, 25 percent industrial, 20 percent commercial, and 22 percent residential. Electricity and natural gas in California are generally consumed by stationary users such as residences and commercial and industrial facilities, whereas petroleum-based fuel consumption is generally accounted for by transportation-related energy use (United States Energy Information Administration [USEIA], 2022).

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, coal, and nuclear gas generation resources. Approximately 70 percent of the electrical power needed to meet California's demand is produced in the State; the balance, approximately 30 percent, is imported from the Pacific Northwest and the Southwest. In 2021, California's total power mix was derived from natural gas (37.9 percent); coal (3 percent); large hydroelectric resources (9.2 percent); nuclear sources (9.3 percent); unspecified sources (6.8 percent); other thermal and non-renewable sources (0.2 percent); and renewable sources that include geothermal, biomass, small hydroelectric resources, wind, and solar (33.6 percent) (CEC, 2022a).

4.5.1.2 Regional/Local Setting

Electricity

Electricity, as consumptive utility, is a human-made resource. The production of electricity requires the consumption or conversion of resources – including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources – into useable energy. The delivery of electricity involves several system components for distribution and use. Electricity is distributed through a network of transmission and distribution lines commonly called a power grid.

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

Pacific Gas and Electric Company (PG&E) provides electrical and natural gas services to approximately 16 million people throughout its 70,000-square-mile service area in northern and central California, from Eureka in the north to Bakersfield in the south, and from the Pacific Ocean in the west to the Sierra Nevada in the east (PG&E, 2022a). PG&E produces and purchases energy from a mix of conventional and renewable generating sources. Approximately 31 percent of PG&E's 2020 electricity purchases were from renewable sources (PG&E, 2022b). Refer to **Table 4.5-1** for a summary of electricity use in the State and PG&E service area.

TABLE 4.5-1
EXISTING ANNUAL STATE AND REGIONAL ENERGY USE IN 2020

Source	Amount
Electricity (State/PG&E)[a]	279,510 GWh / 78,519 GWh
Natural Gas (State/PG&E)[a]	1,232,858,651 MMBtu / 450,746,630 MMBtu
Gasoline (Statewide/Alameda County)[b]	12,572 million gallons / 442 million gallons
Diesel (Statewide/Alameda County)[b]	4,254 million gallons / 53 million gallons

NOTES: MMBtu = million British thermal units; MWh = megawatt-hours; PG&E = Pacific Gas and Electric Company.

SOURCES: [a] CEC, 2022b; [b] CEC, 2020a

Electricity in Alameda County (with the exception of the City of Alameda), Tracy, and (beginning in 2024) Stockton, is procured and overseen by East Bay Community Energy (EBCE). Alameda County and eleven of its cities, including Oakland, entered into a Joint Powers Agreement to launch EBCE in 2016 as an independent public agency. EBCE is a community-governed, local power supplier that provides low-carbon electricity to Oakland residents and businesses under Alameda County's community choice energy (CCE) program at rates that are lower or comparable to PG&E's rates. Under a CCE program, the utility company (in this case PG&E) continues to operate and service the transmission and delivery system and provides billing and customer service. EBCE's standard electricity product that has a higher renewable energy content than PG&E at rates marginally lower than PG&E's base offering. It also provides a 100 percent renewable product at a rate equivalent to PG&E's base offering. In 2021, EBCE received 60 percent of its electricity supply from carbon-free sources, with unspecified power representing the other 40 percent (EBCE, 2022). In addition to securing and supplying electrical energy for residents and businesses, EBCE leads energy-related climate programs, including transportation and building electrification.

Natural Gas

Natural gas is a combustible fossil fuel mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs, generally through fracking, and delivered through high-pressure transmission pipelines. Natural gas provides almost one-third of California's total energy requirements and is measured in terms of both cubic feet and Btu.

PG&E provides natural gas transportation services to "core" customers and to "non-core" customers (industrial, large commercial, and natural gas–fired electric generation facilities) that are connected to its gas system in its service territory. Core customers can purchase natural gas procurement service (natural gas supply) from either PG&E or non-utility third-party gas procurement service providers (referred to as "core transport agents"). When core customers purchase gas supply from a core transport agent, PG&E still provides gas delivery, metering, and billing services to those customers. When PG&E provides both transportation and procurement services, PG&E refers to the combined service as "bundled" natural gas service.

PG&E does not provide procurement service to non-core customers, who must purchase their gas supplies from third-party suppliers. PG&E offers backbone gas transmission, gas delivery (local transmission and distribution), and gas storage services as separate and distinct services to its non-core customers. Access to PG&E's backbone gas transmission system is available for all natural gas marketers and shippers, as well as non-core customers. PG&E also delivers gas to off-system customers (i.e., outside of PG&E's service territory) and to third-party natural gas storage customers. 2020 natural gas usage for the State and the PG&E service region are also shown in Table 4.5-1.

Transportation Energy

In 2020, 12.5 billion gallons of gasoline and 4.3 billion gallons of diesel fuel were sold in California (CEC, 2020a). The transportation sector uses approximately 85 percent of the petroleum consumed in the State (USEIA, 2022).

The State is now working on developing flexible strategies to reduce petroleum use. Over the last decade, California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and GHG emissions from the transportation sector, and reduce vehicle miles traveled (VMT). Accordingly, total gasoline consumption in California has declined. According to fuel sales data from the California Energy Commission (CEC), fuel consumption in Alameda County was approximately 442 million gallons of gasoline and 53 million gallons of diesel in 2020 (CEC, 2020a). Refer to Table 4.5-1 for a summary of statewide fossil fuel consumption.

4.5.2 Regulatory Setting

4.5.2.1 Federal

National Energy Conservation Policy Act

The National Energy Conservation Policy Act (NECPA) serves as the underlying authority for federal energy management goals and requirements. Signed into law in 1978, NECPA has been regularly updated and amended by subsequent laws and regulations. This law is the foundation of most federal energy requirements. NECPA established energy-efficiency standards for consumer products and includes a residential program for low-income weatherization assistance, grants, and loan guarantees for energy conservation in schools and hospitals, and energy-efficiency standards for new construction. New and continuing initiatives in these areas are ongoing.

Energy Policy Act of 1992

The Energy Policy Act of 1992 was enacted to reduce U.S. dependence on foreign petroleum and improve air quality. This law includes several provisions intended to build an inventory of alternative-fueled vehicles in large, centrally fueled fleets in metropolitan areas. The Energy Policy Act of 1992 requires certain federal, state, and local governments and private fleets to purchase a percentage of light-duty alternative fuel vehicles capable of running on alternative fuels each year. Financial incentives are also included. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of alternative fuel vehicles. The Energy Policy Act of 1992 also requires states to consider a variety of incentive programs to help promote alternative-fuel vehicles.

Energy Policy Act of 2005

The Energy Policy Act of 2005 includes provisions for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy. Executive Order 13423 (Strengthening Federal Environmental, Energy, and Transportation Management), signed in 2007, strengthens the key energy management goals for the federal government and sets more challenging goals than the Energy Policy Act of 2005. The energy reduction and environmental performance requirements of Executive Order 13423 were expanded upon in Executive Order 13514 (Federal Leadership in Environmental, Energy, and Economic Performance), which was signed in 2009.

Corporate Average Fuel Economy Standards

Established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA) jointly administer the CAFE standards. Congress has specified that CAFE standards must be set at the "maximum feasible level" with consideration given to

(1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) the need for the nation to conserve energy.[1]

On April 1, 2022, the NHTSA announced its new CAFE standards that would require an industry fleet-wide average of approximately 49 miles per gallon (mpg) for passenger cars and light trucks in model year 2026. Overall, the new standards will increase fuel efficiency by eight percent for model years 2024 through 2025 and ten percent for model year 2026. It is estimated that the new CAFE standards for 2024-2026 will reduce fuel use by more than 200 billion gallons through 2050 as compared to continuing under the old standards (USDOT, 2022).

Influence of the U.S. Department of Transportation, U.S. Department of Energy, and U.S. Environmental Protection Agency on Transportation Energy

On the federal level, the U.S. Department of Transportation, U.S. Department of Energy, and EPA have substantial influence over energy policies related to fuel consumption in transportation. Generally, federal agencies influence transportation energy consumption by establishing and enforcing fuel economy standards for automobiles and light trucks, and by funding projects for energy-related research and development for transportation infrastructure.

4.5.2.2 State

California Public Utilities Commission

The California Public Utilities Commission (CPUC) is a State agency created by a constitutional amendment to regulate privately owned utilities providing telecommunications, electric, natural gas, water, railroad, rail transit, and passenger transportation services, and in-state moving companies. The CPUC is responsible for assuring that California utility customers have safe, reliable utility services at reasonable rates, while protecting utility customers from fraud. The CPUC regulates the planning and approval for the physical construction of electric generation, transmission, and distribution facilities, and the local distribution pipelines for natural gas.

California Energy Commission

The CEC is the primary energy policy and planning agency in California. Created by the California Legislature in 1974, the CEC has five major responsibilities: (1) forecast future energy needs and keep historical energy data; (2) license thermal power plants 50 MW or larger; (3) promote energy efficiency through appliance and building standards; (4) develop energy technologies and support renewable energy; and (5) plan for and direct the State response to energy emergencies.

Senate Bill 1389

Senate Bill (SB) 1389 (PRC Sections 25300–25323) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the electricity, natural gas, and transportation fuel sectors in California, and to provide policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State economy; and protect public health and safety (PRC Section 25301(a)).

[1] For more information on the CAFE standards, refer to https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy.

The 2019 Integrated Energy Policy Report provides the results of CEC assessments on a variety of energy issues facing California:

- Energy efficiency;
- Strategies related to data for improved decisions in the Existing Buildings Energy Efficiency Action Plan;
- Building energy efficiency standards;
- The impact of drought on California's energy system;
- Achieving 50 percent renewables by 2030;
- The California Energy Demand Forecast;
- The Natural Gas Outlook;
- The Transportation Energy Demand Forecast;
- Alternative and Renewable Fuel and Vehicle Technology Program benefits updates;
- An update on electricity infrastructure in Southern California;
- An update on trends in California sources of crude oil;
- An update on California nuclear plants; and
- Other energy issues.

California Global Warming Solutions Act of 2006

In 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (codified in the California Health and Safety Code, Division 25.5), which focused on reducing GHG emissions in California to 1990 levels by 2020. Under Health and Safety Code Division 25.5, the California Air Resources Board (CARB) has the primary responsibility for reducing GHG emissions in California; however, AB 32 also tasked the CEC and CPUC with providing information, analysis, and recommendations to CARB regarding strategies to reduce GHG emissions in the energy sector.

In 2016, Governor Jerry Brown signed SB 32 and its companion bill, AB 197. SB 32 and AB 197 amended Health and Safety Code Division 25.5 and established a new climate pollution reduction target of 40 percent below 1990 levels by 2030, with provisions to ensure that the benefits of State climate policies reach into EJ communities. Refer to Section 4.7, *Greenhouse Gas Emissions*, for additional details regarding these statutes.

Senate Bill 350 - Clean Energy and Pollution Reduction Act of 2015

Senate Bill (SB) 350, known as the Clean Energy and Pollution Reduction Act of 2015, was enacted on October 7, 2015 and provides a new set of objectives in clean energy, clean air, and pollution reduction by 2030. The objectives include the following:

1. To increase from 33 percent to 50 percent, the procurement of our electricity from renewable sources.

2. To double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.

Senate Bills 1078, 107, and 100, and Executive Order S-14-08

The State of California adopted standards to increase the percentage of electricity that retail sellers, including investor-owned utilities and community choice aggregators, must provide from renewable resources. The standards are referred to as the Renewables Portfolio Standard (RPS). The reduces use of non-renewable energy sources, thereby reducing GHG emissions and other negative impacts that are associated with use of non-renewable, finite energy sources. The legislation requires utilities to increase the percentage of electricity obtained from renewable sources to 33 percent by 2020 and 50 percent by 2030.

On September 10, 2018, Governor Brown signed SB 100, which further increased the California RPS and requires retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024; 52 percent by December 31, 2027; and 60 percent by December 31, 2030. SB 100 also specifies that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045.

CPUC and the CEC jointly implement the RPS program. The responsibilities of the CPUC are to: (1) determine annual procurement targets and enforce compliance; (2) review and approve the renewable energy procurement plan of each investor-owned utility; (3) review contracts for RPS-eligible energy; and (4) establish the standard terms and conditions used in contracts for eligible renewable energy (CPUC, 2022). Refer to Section 4.7, *Greenhouse Gas Emissions*, for additional details regarding this program.

Assembly Bill 117 and Senate Bill 790

In 2002, the State of California passed AB 117, enabling public agencies and joint power authorities to form a Community Choice Aggregation (CCA). SB 790 strengthened it by creating a "code of conduct" that the incumbent utilities must adhere to in their activities relative to CCAs. CCAs allow a city, county, or group of cities and counties to pool electricity demand and purchase/generate power on behalf of customers within their jurisdictions in order to provide local choice. CCAs work with PG&E to deliver power to its service area. The CCA is responsible for the electric generation (procure or develop power) while PG&E is responsible for electric delivery, power line maintenance, and monthly billing.

California Building Standards Code (Title 24, Parts 6 and 11)

The California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations [CCR] Title 24, Part 6) were adopted to ensure that building construction and system design and installation achieve energy efficiency and preserve outdoor and indoor environmental quality. The current California Building Energy Efficiency Standards (Title 24 standards) are the 2019 Title 24 standards, which became effective on January 1, 2020. These standards include requirements for solar photovoltaic systems in all new homes, requirements for newly constructed healthcare facilities that were previously not included, the encouragement of demand response and light-emitting diode (LED) technology for both

residential and nonresidential buildings, and the use of more efficient air filters to trap hazardous particulates (CEC, 2020b).

The current (2019) version of the California Green Building Standards Code (CCR Title 24, Part 11) is commonly referred to as the CALGreen Code. The 2019 CALGreen Code includes mandatory measures for non-residential development related to site development, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality (California Buildings Standards Commission, 2019). The 2019 Building Energy Efficiency Standards include provisions for smart residential photovoltaic systems, updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa), residential and nonresidential ventilation requirements, and nonresidential lighting requirements. The 2019 Building Energy Efficiency Standards aims to reduce energy use in new homes by requiring that all new homes include individual or community solar photovoltaic systems or community shared battery storage systems that achieve equivalent time-dependent value energy use reduction.

On August 11, 2021, the CEC adopted the 2022 Building Energy Efficiency Standards. In December, it was approved by the California Building Standards Commission for inclusion into the California Building Standards Code. The 2022 Building Energy Efficiency Standards encourage efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery storage standards, strengthens ventilation standards, and more. Buildings whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Building Energy Efficiency Standards.

Assembly Bill 1493

In 2019, the transportation sector accounted for approximately 40 percent of carbon dioxide equivalent (CO_2e) emissions in California (CARB, 2021a). AB 1493 (commonly referred to as the Pavley regulations), enacted on July 22, 2002, requires CARB to set GHG emissions standards for new passenger vehicles, light-duty trucks, and other vehicles manufactured in and after 2009 whose primary use is non-commercial personal transportation. Phase I of the legislation established standards for model years 2009–2016 and Phase II established standards for model years 2017–2025 (CARB, 2013; USEPA, 2012). Refer to Section 4.7, *Greenhouse Gas Emissions*, for additional details regarding this regulation.

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, CARB adopted the Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling to reduce public exposure to diesel particulate matter emissions (13 CCR Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure prohibits diesel-fueled commercial vehicles from idling for more than five minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

Airborne Toxic Control Measure for Stationary Compression Ignition Engines

In 2004, CARB adopted an Airborne Toxic Control Measure to reduce public exposure to emissions of diesel particulate matter and criteria pollutants from stationary diesel-fueled compression ignition engines (17 CCR Section 93115). The measure applies to any person who owns or operates a stationary compression ignition engine in California with a rated brake horsepower greater than 50, or to anyone who either sells, offers for sale, leases, or purchases a stationary compression ignition engine. This measure outlines fuel and fuel additive requirements; emissions standards; recordkeeping, reporting and monitoring requirements; and compliance schedules for compression ignition engines.

Truck and Bus Regulation

In addition to limiting exhaust from idling trucks, in 2008 CARB approved the Truck and Bus Regulation to reduce the emissions of oxides of nitrogen and particulate matter from existing diesel vehicles operating in California (13 CCR Section 2025). The phased regulation aims to reduce emissions by requiring installation of diesel soot filters and encouraging the retirement, replacement, or retrofit of older engines with newer emission-controlled models. This regulation will be implemented in phases, with full implementation by 2023.

CARB also promulgated emissions standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel-Fueled Fleets regulation adopted by CARB on July 26, 2007, aims to reduce emissions by installing diesel soot filters and encouraging the retirement, replacement, or repowering of older, dirtier engines with newer emissions-controlled models (13 CCR Section 2449). The compliance schedule requires full implementation by 2023 in all equipment for large and medium fleets and by 2028 for small fleets.

California Air Resources Board Advanced Clean Trucks Program

On June 25, 2020, CARB adopted the Advanced Clean Trucks rule, which requires truck manufacturers to transition from diesel vehicles to electric zero-emission vehicles beginning in 2024, with the goal of reaching 100 percent zero-emission vehicles by 2045. The goal of the legislation is to help California meet its climate targets of a 40 percent reduction in GHG emissions and a 50 percent reduction in petroleum use by 2030, and an 80 percent reduction in GHG emissions by 2050.

Truck manufacturers will be required to sell zero-emission vehicles as an increasing percentage of their annual sales from 2024 through 2035. Companies with large distribution fleets (50 or more trucks) will be required to report information about their existing fleet operations in an effort to identify future strategies for increasing zero-emission fleets Statewide (CARB, 2021b).

Zero-emission vehicles are two to five times more energy efficient than diesel vehicles, and the Advanced Clean Trucks rule will reduce GHG emissions with the co-benefit of reducing dependence on petroleum fuels.

California Air Resources Board Advanced Clean Car Program

The Advanced Clean Cars emissions-control program, approved by CARB in 2012, is closely associated with the Pavley regulations (CARB, 2013). The program requires a greater number of zero-emissions vehicle models for years 2015 through 2025, to control smog, soot, and GHG emissions. This program includes the Low-Emissions Vehicle regulations to reduce emissions of criteria air pollutants and GHGs from light- and medium-duty vehicles; and the Zero-Emissions Vehicle regulations, which require manufacturers to produce an increasing number of pure zero-emissions vehicles (battery and fuel cell electric vehicles) and include the provision to produce plug-in hybrid electric vehicles between 2018 and 2025. The increase in low- and zero-emissions vehicles will result in a decrease in the consumption of non-renewable fuels such as gasoline and diesel. The Advanced Clean Cars II Regulations require that all new passenger cars, trucks, and SUVs sold in California will be zero emissions by 2035. CARB adopted the ACC II regulations on August 25, 2022.

California Air Resources Board Mobile Source Strategy

The Mobile Source Strategy (2016) includes an expansion of the Advanced Clean Cars program (which further increases the stringency of emissions for all light-duty vehicles, and 4.2 million zero-emission and plug-in hybrid light-duty vehicles by 2030). It also calls for more stringent GHG requirements for light-duty vehicles beyond 2025 as well as GHG reductions from medium-duty and heavy-duty vehicles and increased deployment of zero-emission trucks primarily for classes 3 through 7 “last mile” delivery trucks in California. Statewide, the Mobile Source Strategy would result in a 45 percent reduction in GHG emissions, and a 50 percent reduction in the consumption of petroleum-based fuels and associated criteria pollutants. CARB’s Mobile Source Strategy includes measures to reduce total light-duty VMT by 15 percent compared to business-as-usual in 2050.

CARB is developing the 2020 Mobile Source Strategy to take an integrated planning approach to identify the level of transition to cleaner mobile source technologies needed to achieve all of California’s targets. The 2020 Mobile Source Strategy was heard by the Board on October 28, 2021, and will be forwarded to the appropriate policy and fiscal committees of the California Legislature as required by California Senate Bill 44. The programs and concepts in the 2020 Mobile Source Strategy will be incorporated in other planning efforts, including the State Implementation Plans (SIP), the 2022 Climate Change Scoping Plan Update, and community emissions reduction plans developed as a part of Assembly Bill 617’s Community Air Protection Program. CARB will translate the concepts in the 2020 Mobile Source Strategy into federally-enforceable SIP measures and commitments to be included in the 2022 State SIP Strategy to support attainment of federal ozone standards across the State.

Sustainable Communities and Climate Protection Act of 2008 (SB 375)

Signed into law on October 1, 2008, SB 375 supplements the greenhouse gas (GHG) emissions reductions from new vehicle technology and fuel standards with reductions from more efficient land use patterns and improved transportation. Under the law, CARB approved GHG reduction targets in February 2011 for California’s 18 federally designated regional planning bodies, known as Metropolitan Planning Organizations. The target reductions for the Bay Area are a regional

reduction of per-capita CO_2 emissions from cars and light-duty trucks by 7 percent by 2020 and by 15 percent by 2035, compared to a 2005 baseline. The Association of Bay Area Governments (ABAG) addresses these goals in *Plan Bay Area*, which identifies Priority Development Areas near transit options to reduce use of on-road vehicles.

4.5.2.3 Regional Plans

Plan Bay Area

The Metropolitan Transportation Commission (MTC) is the federally recognized Metropolitan Planning Organization for the nine-county Bay Area, which includes Alameda County. On July 18, 2013, *Plan Bay Area* was jointly approved by ABAG's Executive Board and the MTC (MTC & ABAG, 2013). The plan includes the region's Sustainable Communities Strategy, as required under SB 375, and the 2040 Regional Transportation Plan. The Sustainable Communities Strategy lays out how the region will meet GHG reduction targets set by CARB. CARB's current targets call for the region to reduce per-capita vehicular GHG emissions 10 percent by 2020 and 19 percent by 2035 from a 2005 baseline (CARB, 2018).

A central GHG emissions reduction strategy of *Plan Bay Area* is to concentrate future growth in Priority Development Areas (PDA) and Transit Priority Areas (TPA). To be eligible for designation as a PDA, an area must be within an existing community, near existing or planned fixed transit or served by comparable bus service and planned for more housing. A TPA is defined in California Public Resource Code, Section 21099 as an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program or applicable regional transportation plan. The ABAG/MTC have designated a large portion of Oakland as PDAs due to proximity to and availability of transit. The PDA designations do not demand growth; however, they may support the growth that the City is planning and experiencing. These designations will enable the City to establish guidelines and policies to foster and guide growth through technical assistance, planning grants, and capital grants.

On October 21, 2021, the MTC and the Executive Board of the ABAG jointly adopted Plan Bay Area 2050 and its related supplemental reports. Plan Bay Area 2050 connects the elements of housing, the economy, transportation and the environment through 35 strategies that will make the Bay Area more equitable for all residents and more resilient in the face of unexpected challenges. In the short-term, the plan's Implementation Plan identifies more than 80 specific actions for MTC, ABAG and partner organizations to take over the next five years to make headway on each of the 35 strategies (MTC & ABAG, 2021). It will be several years before the regional transportation model (and therefore county and local transportation models) are updated to reflect Plan Bay Area 2050; the models currently incorporate data from Plan Bay Area 2040 (MTC & ABAG, 2017).

4.5.2.4 Local Plans, Ordinances and Policies

City of Oakland General Plan

The Open Space, Conservation and Recreation (OSCAR) Element of the Oakland General Plan describes the following policies regarding energy resources, adopted for the purpose of avoiding or mitigating an environmental effect, and that apply to the Proposed Project (City of Oakland, 1996).

Objective CO-13: Energy Resources. To manage Oakland's energy resources as efficiently as possible, reduce consumption of non-renewable resources, and develop energy resources which reduce dependency on fossil fuels.

Policy CO-13.1: Reliable Energy Network. Promote a reliable energy network which meets future needs and long-term economic development objectives at the lowest practical cost.

Policy CO-13.2: Energy Efficiency. Support public information campaigns, energy audits, the use of energy-saving appliances and vehicles, and other efforts which help Oakland residents, businesses, and City operations become more energy efficient.

Policy CO-13.3: Construction Methods and Materials. Encourage the use of energy-efficient construction and building materials. Encourage site plans for new development which maximize energy efficiency.

Policy CO-13.4: Alternative Energy Sources. Accommodate the development and use of alternative energy resources, including solar energy and technologies which convert waste or industrial byproducts to energy, provided that such activities are compatible with surrounding land uses and regional air and water quality requirements.

City of Oakland GHG Reduction Targets and Equitable Climate Action Plan

In October 2018, the Oakland City Council passed Resolution 87183 adopting an interim citywide GHG emissions reduction target of 56 percent below 2005 levels by the year 2030 to keep the City on track to meet its 2050 target.

In July 2020, via Resolution 88267, Oakland City Council adopted the 2030 Equitable Climate Action Plan (ECAP), a comprehensive plan to achieve the 2030 GHG reduction target and increase Oakland's resilience to the impacts of the climate crisis - both through a deep equity lens (City of Oakland, 2020a). Alongside the 2030 ECAP, Council also adopted a goal to achieve community-wide carbon neutrality no later than 2045 (City of Oakland, 2020b). Achieving carbon neutrality will require complete decarbonization (ensuring that all mechanical systems run on clean electricity) of Oakland's building and transportation sectors.

Oakland Municipal Code

As of March 2017, Chapter 15.04, Article II, Part 11 of the Oakland Municipal Code requires all new multifamily and non-residential buildings to include full circuit infrastructure for plug-in electric vehicle (PEV) charging stations for at least 10 percent of the total parking spaces. In addition, inaccessible conduits for future expansion of PEV spaces must be installed for 10 percent of the total parking at non-residential buildings. The new requirements are designed to accelerate the installation of vehicle chargers to address demand.

Chapter 18.02 of the Oakland Municipal Code, the Sustainable Green Building Requirements for Private Development, requires several things which reduce energy use. For example, all new residential development must comply with "Build It Green" and/or Leadership in Energy and Environmental Design (LEED) design standards.

City of Oakland Ordinance Requiring All-Electric Construction in Newly Constructed Buildings

On December 1, 2020, the City of Oakland adopted Ordinance 13632 prohibiting newly constructed buildings (both residential and commercial) from connecting to natural gas or propane, thus eliminating it for any use in new buildings. Newly constructed buildings must use a permanent supply of electricity as the source of energy for all appliances. The prohibition does not affect existing buildings, renovations or additions made to a structure, including attached Accessory Dwelling Units (ADUs). The Ordinance includes a waiver for developers who can demonstrate that it is not feasible for a new building to go 100 percent electric.

4.5.2.5 City of Oakland Standard Conditions of Approval

Although there are no City Standard Conditions of Approval (SCAs) directly related to energy-use, there are various SCAs related to air quality, greenhouse gas, utility and service systems, and transportation and circulation that would indirectly reduce energy impacts. All SCAs would be adopted as enforceable conditions of approval and required, as applicable, to be implemented during construction and operation of future development under the Proposed Project to help ensure less-than-significant impacts to related to energy. The SCAs are incorporated and required as part of the Proposed Project, so they are not listed as mitigation measures.

4.5.3 Environmental Analysis

4.5.3.1 Significance Criteria

The City of Oakland has established thresholds of significance for CEQA impacts, which incorporate those in Appendix G of the *CEQA Guidelines* (City of Oakland, 2020c). Adoption of the Proposed Project would have a significant adverse impact related to energy if it would:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
2. Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

4.5.3.2 Approach to Analysis / Methodology

This is a program-level Draft EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Impacts related to energy use are evaluated using the criteria listed above and based on information included in the City of Oakland General Plan, Map Atlas, and the documents listed in Section 4.5.6, *References – Energy*.

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. This represents the maximum feasible

housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future development under the Proposed Project, this Draft EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas and analyzes the impacts of housing development through the projection period ending in 2030.

CEQA Guidelines Appendix F lists the energy-related topics that should be analyzed in an EIR, and more specifically identifies the following topics for consideration in the evaluation of energy impacts in an EIR, to the extent the topics are applicable or relevant to the proposed project:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project, including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
- The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- The effects of the project on peak and base-period demands for electricity and other forms of energy.
- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.[2]

This analysis considers the State *CEQA Guidelines* Appendix F thresholds in determining whether the adoption of the Proposed Project would result in the inefficient, wasteful, or unnecessary use of energy. The evaluation is based on a review of regulations and determining their applicability to future development that would occur within the Plan Area under the Proposed Project. As discussed earlier, there are several plans and policies at the federal, State, and local levels to increase energy conservation and the use of renewable energy. Consistency of the Proposed Project with these regulations is addressed in this section.

4.5.3.3 Proposed 2045 General Plan Policies, Land Use, and Zoning

Safety Element

The following policy directly and indirectly pertaining to energy use is proposed as a part of the Safety Element Update in the Proposed Project.

> ***SAF-8.6: Emergency Power.*** Participate in East Bay Community Energy's Critical Municipal Facility program with the goal of increasing resilience to power losses, including Public Safety Power Shutoffs (PSPS), and climate-driven extreme weather events for low income, medically dependent, and elderly populations through installation of renewable energy and onsite energy storage with islanding capabilities (such as microgrids).

[2] *CEQA Guidelines* Appendix F(II)(C).

Environmental Justice Element

The following policies and actions directly and indirectly pertaining to energy use are proposed as a part of the Environmental Justice Element in the Proposed Project.

Policies:

EJ-1.2: Truck Emissions and Pollution Exposure. Minimize air pollution and exposure of sensitive uses to truck pollution, particularly in EJ Communities and other areas most burdened by air pollution, while recognizing the Port of Oakland's role as the highest-volume shipping port in Northern California.

EJ-1.7: Truck-Related Impacts. For new warehouses and truck-related businesses, reduce impacts from truck loading and delivery including noise/vibration, odors, air pollution, and greenhouse gas emissions.

EJ-1.9: EV Charging. Require industrial and warehouse facilities to provide electrical connections for electric trucks and transport refrigeration units in support of CARB regulations.

EJ-1.10: Reduce Emissions from Port Operation. Support Port of Oakland's efforts to reduce emissions as part of operation and compliance with CARB regulations. This could include:

- Support of zero-emission drayage truck operations through appropriate local ordinance amendments, including allowable weight limits for single-axle, zero-emission trucks on local streets, and developing an investment plan for needed upgrades.
- Provision of data or staff time to study of the effects on truck flow and congestion due to increasing visits from larger container ships, the feasibility of an off-terminal container yard that utilizes zero-emission trucks to move containers to and from the marine terminals, and the potential efficiency gains from increasing the number of trucks hauling loaded containers on each leg of a roundtrip to the Port.

EJ-11: Building Electrification. Continue to enforce compliance with the Building Electrification Ordinance, which requires new buildings to be natural gas-free and support the transition of existing buildings to natural gas alternatives in order to improve safety and air quality and reduce health risks.

EJ-1.13: Emissions from Construction Activities. Require projects to implement construction air pollution and greenhouse gas emissions controls and any applicable mitigation strategies for all construction sites to the maximum extent feasible. Refer to Best Construction Practices and Best Available Retrofit Control Technology (BARCT) recommended by BAAQMD.

EJ-1.17: Data Informed Efforts. Collaborate with BAAQMD, community organizations, and other stakeholders, to use air quality monitoring data to inform area-specific improvement actions outside of SB 617. Such actions may include:

- Prioritizing areas for capital investments with co-benefits for air quality, such as the planting of trees and installation of EV charging infrastructure.
- Integrating air quality improvement actions into planning efforts, such as new specific plans, master plans, or area plans that will guide development in impacted areas.

- Limiting the establishment of new sources of air pollutants in areas with elevated levels of pollutant concentrations unless appropriate mitigation is implemented.
- Obtaining and using hyperlocal data along with community ground-truthing to more accurately inform development of air quality improvement strategies that are most effective and responsive to the needs of EJ Communities.
- Seeking opportunities to enhance existing air monitoring efforts, such as by working with BAAQMD and helping to expand the current monitoring network, especially where sensitive uses are within close proximity (within 500 feet) of pollution sources.
- Partnering with industrial and warehouse facility owners, community-based environmental and energy justice organizations to install rooftop solar PV systems to power EV charging stations.

Actions:

EJ-A.4: In partnership with representative groups from EJ Communities, develop a Carbon Sequestration Incubator in Oakland to incubate and develop green jobs in urban agriculture, urban forestry, aquatic and riparian restoration, engineering technology, and/or other forms of carbon removal. Assess market opportunities, policy drivers, potential locations, and existing businesses and nonprofits that may benefit from collaborating in such a space.

EJ-A.8: As part of the LUTE update in Phase 2, explore modifications to truck routes and truck management in partnership with the Port of Oakland and WOIEP.

EJ-A.9: Designate an adequate system of roads connecting port terminals, warehouses, freeways and regional arterials, and other important truck destinations that minimizes impacts to sensitive uses. This system should rely upon arterial streets away from residential neighborhoods.

EJ-A.10: Adopt requirements that new commercial and employment uses that generate truck traffic are located along existing truck routes to the extent feasible and work with project proponents to develop preferred truck routing that avoids sensitive land uses, such as schools, hospitals, elder and childcare facilities, and residences wherever feasible.

EJ-A.11: Coordinate with public agencies in the Bay Area region to catalyze the development and deployment of zero emission medium- and heavy-duty fleets and support development of shared charging hubs and resources. Support advocacy efforts for significant additional funding for retrofitting or replacing diesel trucks with zero-emission EV trucks, prioritizing a just transition approach by including economic support for independent truckers to compensate for lost wages while waiting for retrofitted or new EV trucks.

4.5.3.4 Topics Considered and Determined to Have No Impact

All topics related to energy are analyzed below.

4.5.4 Impacts of the Proposed Project

Impact ENE-1: Adoption of the Proposed Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources during project construction and operation or conflict with or obstruct a State or local plan for renewable energy or energy efficiency. (Criteria 1 and 2) (*Less than Significant*)

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. Construction and operation of the future development under the Proposed Project would increase energy consumption within the Plan Area. Future development facilitated by the Proposed Project would be subject to project-level approval of permits prior to construction and operation of any new development.

Construction Impacts

Energy use during construction of future development under the Proposed Project would primarily occur in association with fuel use in construction equipment and vehicles. Energy use would vary throughout the construction period of projects based on the construction activities being performed and would cease upon completion of construction. Fuels used for construction would typically include diesel and gasoline; use of natural gas and electricity would be minimal.

Heavy-duty equipment associated with construction of future development under the Proposed Project would rely on diesel fuel, as would vendor trucks involved in delivery of material to the individual construction sites and haul trucks exporting demolition material or other materials offsite. Construction workers would travel to and from each of the future development sites throughout the duration of construction; however, construction worker trips in light-duty vehicles would primarily be gasoline-powered.

All future development under the Proposed Project would be subject to CARB's In-Use Off-Road Diesel Vehicle Regulation that applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower. The regulation: (1) imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles; (2) requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System) and labeled; (3) restricts the adding of older vehicles into fleets starting on January 1, 2014; and (4) requires fleets to reduce their emissions by retiring, replacing, or repowering older engines or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits). The fleet must either show that it has either met the fleet average target for that year, or that it has met the Best Achievable Control Technology requirements (CARB, 2016).

Construction activities would use fuel-efficient equipment consistent with federal and State regulations such as fuel efficiency regulations in CARB's Pavley Phase II standards, the anti-idling regulation in 13 CCR Section 2485, and fuel requirements for stationary equipment in 17 CCR Section 93115 (concerning the Airborne Toxic Control Measures). In accordance with 13 CCR Sections 2485 and 2449, idling by commercial vehicles over 10,000 pounds and off-road equipment over 25 horsepower would be limited to a maximum of five minutes. The intent of

these regulations is to reduce construction emissions; however, compliance with the anti-idling and emission reduction regulations discussed above would also result in fuel savings from the more efficient use of equipment.

The diesel and gasoline use for construction activities would be temporary and constitute a small fraction of the regional usage; therefore, the construction energy demand of future development under the Proposed Project would be within the supply and infrastructure capabilities of local and regional fuel suppliers and would not require additional local or regional capacity.

Overall, construction activities that would occur with future development under the Proposed Project would not be unusual as compared to overall local and regional demand for energy resources and would not involve characteristics that require equipment that would be less energy-efficient than at comparable construction sites in the region or State. Therefore, the Proposed Project would not result in the inefficient, wasteful, or unnecessary consumption of energy during construction and the impact would be less than significant, and no mitigation is required.

Operational Impacts

Operational energy use would primarily include building energy use and transportation use, with a smaller contribution from area sources.

Building Efficiency

Future development under the Proposed Project would require electricity for building operation (e.g., appliances, lighting, air conditioning, heating). Prior to development of individual projects, applicants would be required to ensure that proposed development would meet Title 24 requirements applicable at that time, as required by State regulations through their plan review process. Title 24 reduces energy use in residential and commercial buildings through progressive updates to both the Green Building Standards Code (Title 24, Part 11) and the Energy Efficiency Standards (Title 24, Part 6). Title 24 standards are updated every three years. Provisions added to Title 24 over the years include consideration and incorporation of new energy efficiency technologies and methods for building features such as space conditioning, water heating, and lighting, as well as construction waste diversion goals. Additionally, some standards focus on larger energy-saving concepts such as reducing loads at peak periods and seasons, improving the quality of energy-saving installations, and performing energy system inspections.

Past updates to the Title 24 standards have proven very effective in reducing building energy use; the 2013 update to the energy efficiency standards was estimated to reduce energy consumption in residential buildings by 25 percent relative to the 2008 standards (CEC, 2012). The current 2019 Title 24 standards further reduce energy use compared to the 2016 standards, with single-family residential savings of 79 percent for electricity and 9 percent for natural gas. For low-rise multi-family buildings, savings are 79 percent for electricity and 5 percent for natural gas by requiring photovoltaic (PV) systems for new low-rise residential buildings under three stories (CEC, 2018). Additional energy use reductions beyond the current 2019 standards can be anticipated from future Title 24 code revision cycles and building permits for future development would be required to meet the Title 24 requirements applicable at the time.

Local plans, ordinances, and policies would also reduce energy use from future development. Goals and policies encouraged by the City, including those set forth in the Proposed Project, support increased energy conservation in new development. Proposed policy SAF-8.6, Emergency Power, would encourage participation in East Bay Community Energy's Critical Municipal Facility program with the goal of increasing resilience to power losses through installation of renewable energy and onsite energy storage; and EJ-1.11, Building Electrification, would enforce compliance with the City's Building Electrification Ordinance. Future development under the Proposed Project must also comply with Chapter 18.02 of the Oakland Municipal Code by complying with Build It Green and/or LEED design standards. Further, most subsequent projects developed under the Proposed Project would be required to demonstrate consistency with the City's ECAP via the ECAP Consistency Checklist (checklist), which is required for all projects undergoing discretionary review (see Section 4.7, *Greenhouse Gas Emissions*). Item number 9 of the checklist requires all projects to be all-electric with no natural gas hookups, consistent with City of Oakland Ordinance 13632 prohibiting newly constructed buildings from connecting to natural gas or propane, thus eliminating it for any use in new buildings without justifying a waiver (City of Oakland, 2020a). Item number 10 requires all projects to comply with the City of Oakland Green Building Ordinance. These requirements would decrease the amount of energy required for building operation and ensure that building energy use related to future development under the Proposed Project would not be inefficient or wasteful.

In addition, as part of the RPS program detailed earlier, electric utilities including investor-owned utilities and community choice aggregators are required to increase the percentage of electricity provided from renewable resources. The legislation requires utilities to increase the percentage of electricity obtained from renewable sources to 33 percent by 2020 and 50 percent by 2030. SB 100 furthered these standards to require electric utilities to procure eligible renewable electricity for 44 percent of retail sales by 2024, 52 percent by 2027, and 60 percent by December 2030. SB 100 also specifies that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045. CPUC and the CEC jointly implement the RPS program and PG&E, electric utility providers to the City of Oakland are required to adhere to these standards and deadlines. Future development under the Proposed Project would be consistent with these regulations. Though these programs do not necessarily increase energy efficiency, implementation reduces use of non-renewable energy sources.

Transportation Energy

Vehicle trips generated by future development under the Proposed Project would increase use of transportation fuels, primarily gasoline and diesel. Enhanced fuel economics realized pursuant to federal and State regulatory actions such as increasingly stringent CAFE/Pavley standards for vehicle fuel efficiency, and transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would decrease future gasoline fuel demands per VMT. Additionally, the City of Oakland is served by regional and local transit facilities that reduce VMT within the region, acting also to reduce regional vehicle energy demands.

Proposed General Plan actions EJ-A.8, related to truck management; EJ-A.10, locating and regulating new truck traffic-generating uses; and Policy EJ-1.10, Reduce Emissions from Port Operations would improve efficiency of truck routes which would result in more efficient

transportation energy use. In addition, Proposed Policies EJ-1.7, Truck-Related Impacts; EJ-1.9, EV Charging; EJ-1.10, Reduce Emissions from Port Operations; EJ-1.17, Data Informed Efforts; and Action EJ-A.11, Zero Emissions Fleets would encourage implementation of EV charging infrastructure for cars and trucks, including drayage trucks at the Port of Oakland. These electrification measures would reduce transportation fuel use. As noted above, most subsequent projects developed under the Proposed Project would be required to demonstrate consistency with the City's ECAP via the ECAP Consistency Checklist (see Section 4.7, *Greenhouse Gas Emissions*). Items number 2 through number 8 of the checklist would serve to reduce vehicle trips and/or transportation energy use. For example, items number 4 and number 5 of the checklist requires projects to include transit passes for residents or other measures to reduce dependency on single-occupancy vehicles such as on-site carshare programs (City of Oakland, 2020a). All future projects must also comply with the City's PEV Charging Infrastructure requirements (Chapter 15.04 of the Oakland Municipal Code). These requirements would reduce the energy demand of future development under the Proposed Project.

Furthermore, approval of the Proposed Project, as a policy document update, would not change any of the regulations listed above and would not provide any goals, policies, or programs that would result in transportation energy consumption. Therefore, transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary and the Proposed Project would be consistent with regulations to reduce transportation energy use.

Considering these requirements, energy use associated with the construction and operation of development under the Proposed Project would not be considered unnecessary and wasteful and would be consistent with all applicable plans, policies, and regulations developed to encourage energy conservation and renewable energy use. Therefore, impacts would be less than significant.

Mitigation: None required.

Summary

Even with adherence to the aforementioned regulatory compliance, adoption of the Proposed Project would result in a significant impact with respect to energy resources.

4.5.5 Cumulative Impacts

This section presents an analysis of the cumulative effects of future development under the Proposed Project in combination with other past, present, and reasonably foreseeable future development that could cause cumulatively significant impacts. Significant cumulative impacts related to energy could occur if the incremental impacts of future development under the Proposed Project combined with the incremental impacts of cumulative development would be significant, and if the Proposed Project's contribution would be considerable.

Impact ENE-2: Adoption of the Proposed Project, combined with cumulative development, would not result in energy use that would be considered wasteful and unnecessary or conflict with or obstruct a State or local plan for renewable energy or energy efficiency under cumulative conditions. (*Less than Significant*)

Geographic Context

The geographic context for the analysis of cumulative energy resources impacts is cumulative development in the City of Oakland and throughout PG&E's service area.

Cumulative Impacts – Construction and Operations

Future development under the Proposed Project, in conjunction with cumulative development in the Plan Area, would result in increased energy consumption. Potential impacts to energy resources from future development under the Proposed Project would be site-specific and would require applications for development permits that would be evaluated on a case-by-case basis. Cumulative project requiring discretionary approval would also require evaluation under CEQA, which would address potential energy consumption impacts, if any, and identify necessary mitigation measures, where appropriate. Additionally, future development under the Proposed Project and cumulative development would be subject to compliance with all federal, State, and local requirements for energy efficiency, including the California Energy Code Building Energy Efficiency Standards (CCR Title 24, Part 6), the CALGreen Code (CCR Title 24, Part 11), SB 743, and the proposed policies that directly and indirectly impact energy use including SAF-8.6, Emergency Power; EJ-1.2: Truck Emissions and Pollution Exposure; 1.7: Truck-Related Impacts; EJ-1.9, EV Charging; EJ-1.10, Reduce Emissions from Port Operations; and EJ-1.17, Data Informed Efforts as well as actions EJ-A.8, EJ-A.9, and EJ-A.10 related to truck route modification, management, and traffic-generating use regulation; and EJ.A.11 related to zero emission fleets.

Conclusion

Consequently, future development under the Proposed Project would not result in significant environmental impacts from wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation; and would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Therefore, the contribution of the Proposed Project to the cumulative energy impact would be less than significant.

Mitigation: None required.

Summary

Even with adherence to the aforementioned regulatory compliance, adoption of the Proposed Project would result in a significant cumulative impact with respect to energy resources.

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4.6 Geology, Soils, and Paleontological Resources

This section describes conditions and potential environmental effects of the Proposed Project pertaining to geology, soils, and paleontological resources. The section discusses relevant existing environmental conditions of the Plan Area and regulations pertinent to this section, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts to the physical environment that could result from implementation of the Proposed Project and its associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that would reduce potential impacts to this environmental topic are identified; both existing and proposed updated/new General Plan policies and SCAs are considered. This section incorporates relevant information from the General Plan Update Map Atlas (see Appendix A) prepared in support of the Proposed Project. No scoping comments related geology, soils, and paleontological resources were received in response to the NOP (Notice of Preparation) of this Draft EIR.

4.6.1 Environmental Setting

4.6.1.1 Environmental Setting

The following sections provide environmental setting information for geologic and seismic hazards including fault rupture, seismic shaking, liquefaction and lateral spreading, landslides, and expansive soils, and for paleontological resources in support of the impacts analyses in Section 4.6.4, *Impacts of the Project*.

4.6.1.2 Regional/Local Conditions

Regional Geology

The City of Oakland lies within the geologically complex region of California referred to as the Coast Ranges geomorphic province.[1] The Coast Ranges lie between the Pacific Ocean and the Great Valley, extending from Oregon to near Santa Barbara. The province is characterized by northwest-trending mountain ranges, ridges, and intervening valleys. Much of the province is composed of marine sedimentary and volcanic rocks that form the Franciscan Assemblage (City of Oakland, 2021). The Franciscan Assemblage in this region represents some of the oldest rocks in the region, and consists primarily of greenstone (altered volcanic rocks), basalt, chert (ancient silica-rich ocean deposits), and sandstone that originated as ancient sea floor sediments.

Local Topography

Oakland lies on the eastern side of the San Francisco Bay (Bay) and is divided into flatlands in the western area and hills in the eastern area (City of Oakland, 2021). Much of the flatland area is just above sea level and includes residential neighborhoods, industry, businesses, urban areas, and transportation routes. Oakland Hills forms the eastern border of the Plan Area. The highest point

[1] A geomorphic province is an area that possesses similar bedrock, structure, history, and age. California has 11 geomorphic provinces.

in the Plan Area is near Grizzly Peak Boulevard and is just over 1,760 feet above sea level. The topography and slope of the Plan Area is shown on **Figure 4.6-1**.

Local Geology

Bay is in a broad depression in the Franciscan bedrock resulting from an east-west expansion between the San Andreas and the Hayward fault systems. The bedrock surface can be found at elevations of 200 to 2,000 feet below mean sea level across the Bay Area. Sedimentary deposits overlie the Franciscan bedrock that originated from millions of years of erosion, deposition, and changes in sea level. The regional and local sedimentary geologic units include the following from deepest to shallowest (City of Oakland 2021; Graymer 2000):

- The Alameda Formation is the deepest and oldest of these sedimentary deposits and consists of a mixture of clay, silt, sand, gravel, and some shells with predominantly silt and clay sediments surrounding discontinuous layers of sand and gravel.
- Overlying the Alameda Formation is the San Antonio Formation, which consists of sandy clays, gravelly clays, clayey sands, and gravels with interbedded silty clay deposits.
- Younger alluvial deposits, previously referred to as the Temescal Formation, are deposited on top of the San Antonio Formation and consist of sandy clays, clayey sands, sands, and gravels. The younger deposits include Bay Mud, which mostly consists of organic-rich clay.

The geologic units underlying the majority of the Plan Area in the more urban and developed areas are primarily Holocene (present to 11,700 years ago) and Pleistocene (11,700 to 2.6 million years ago) sedimentary deposits. The units that occur in the hills in the eastern portion of the Plan Area are older sedimentary deposits of Miocene (5.3 million to 23 million years ago), Cretaceous (66 million to 145 million years ago), and Jurassic (145 million to 201 million years ago) age, with some Cretaceous and Jurassic age igneous deposits.

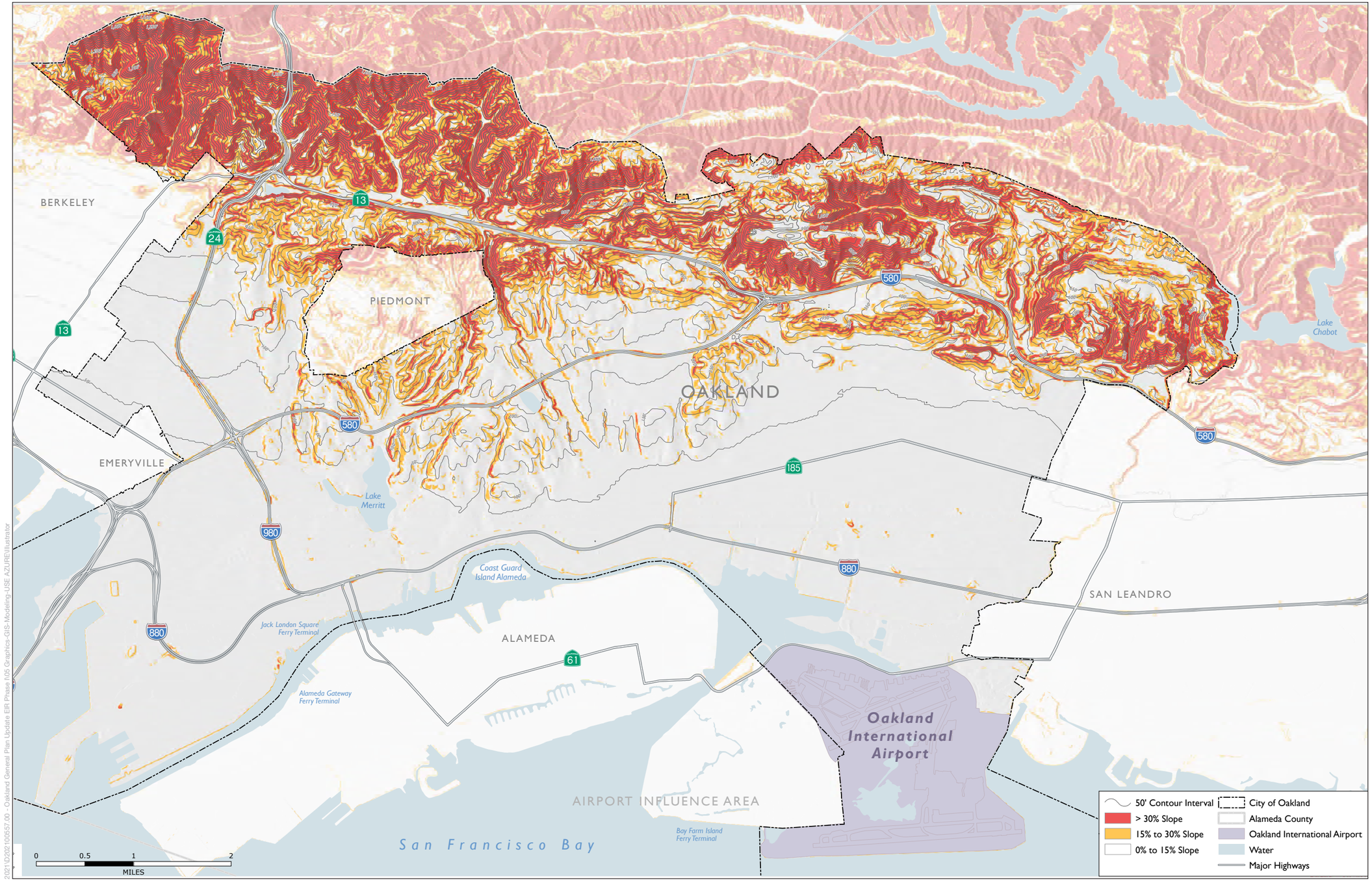
Soil Types

Soil types within the Plan Area are summarized below in **Table 4.6-1**.

TABLE 4.6-1
SOIL TYPES IN OAKLAND

Soil Type	Soil Description	Percent of City Area
Reyes-Urban Land	Very poorly drained clays on tidal flats, and urban land	23.0
Clear Lake-Omni-Urban Land	Poorly drained clays and silty clay loams, and urban land	17.0
Xeropsamments-Urban land-Baywood	Somewhat excessively drained sands and loamy sands	8.0
Xerorthents-Maymen-Millsholm	Well drained and somewhat excessively drained soils with various textures	17.0
Danville-Botella	Well drained loams and silty clay loams	16.0
Tierra-Urban Land	Moderately well drained loams, and urban land; on upland terraces	7.0
Sycamore-Yolo	Well drained and poorly drained silt loams, on flood plains and alluvial fans	12.0

SOURCE: City of Oakland 2021



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SOURCE: Dyett & Bhatia, 2022

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Figure 4.6-1
Topography and Slope

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Geologic and Seismic Hazards

Expansive Soils

Expansive soils are soils that possess a "shrink-swell" characteristic, also referred to as linear extensibility. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying; the volume change is reported as a percent change for the whole soil. Changes in soil moisture can result from rainfall, landscape irrigation, utility leakage, roof drainage, and/or perched groundwater.[2] This cyclical change in soil volume is measured using the coefficient of linear extensibility (COLE) (NRCS, 2017). The Natural Resources Conservation Service (NRCS) relies on linear extensibility measurements to determine the shrink-swell potential of soils. If the linear extensibility percent is more than 3 percent (COLE=0.03), shrinking and swelling may cause damage to building, roads, and other structures (NRCS, 2017). Structural damage may occur incrementally over a long period of time, usually as a result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils.

Soil expansion generally occurs in fine-grained clayey sediments, which could be present within the Plan Area. The NRCS Web Soil Survey data is generally useful at a large scale (i.e., regional). As such, Web Soil Survey expansive soil data is not as useful at a small scale (i.e., local). The varying geology of the area is indicative of varying soil conditions across the Plan area. As discussed above, expansive soils generally occur in fine-grained clayey sediments, which could be present throughout the Plan Area.

Faults and Seismicity

Surface Fault Rupture

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) addresses the hazard of surface fault rupture through the regulation of development in areas near Holocene-active faults.[3] Under this Act, the California Geological Survey (CGS) has established "Zones of Required Investigation" on either side of an active fault that delimits areas susceptible to surface fault rupture. The zones are referred to as Earthquake Fault Zones (EFZs) and are delineated on official maps published by the CGS. Surface rupture occurs when the ground surface is broken due to a fault movement during an earthquake; typically, these types of hazards occur within 50 feet of a Holocene-active fault.

The Plan Area is located between two known Holocene-active fault zones: the Hayward fault zone (which trends northwest-southwest through the Plan Area along California State Route 13) and the San Andreas fault zone (which runs parallel to the Hayward fault zone, approximately 15 miles west of the Plan Area's western limit).

[2] Perched groundwater is a local saturated zone above the water table that typically exists above an impervious layer (such as clay) of limited extent.

[3] Holocene-active faults show evidence of displacement (surface rupture) within the Holocene Epoch (from the present to 11,700 years ago) are considered active (CGS, 2018)

Hayward Fault Zone, Northern Hayward Section

The Hayward Fault Zone (depicted in **Figure 4.6-2**) trends northwest to southeast approximately 55 miles from San Jose to Point Pinole. It is a right-lateral, strike-slip fault[4] and is designated as an EFZ. The fault is Holocene-active, producing large historic earthquakes, fault creep, and abundant geomorphic evidence of fault rupture. The most recent and largest historic earthquake occurred in 1868 and was assigned Magnitude (M_w) 6.8 (Harris et al, 2021). The Hayward Fault Zone has a 14.1 percent probability of generating an earthquake with a magnitude equal to or greater than M_w 6.7 over the next 30 years (Field et al., 2015).

San Andreas Fault Zone, Peninsula Section

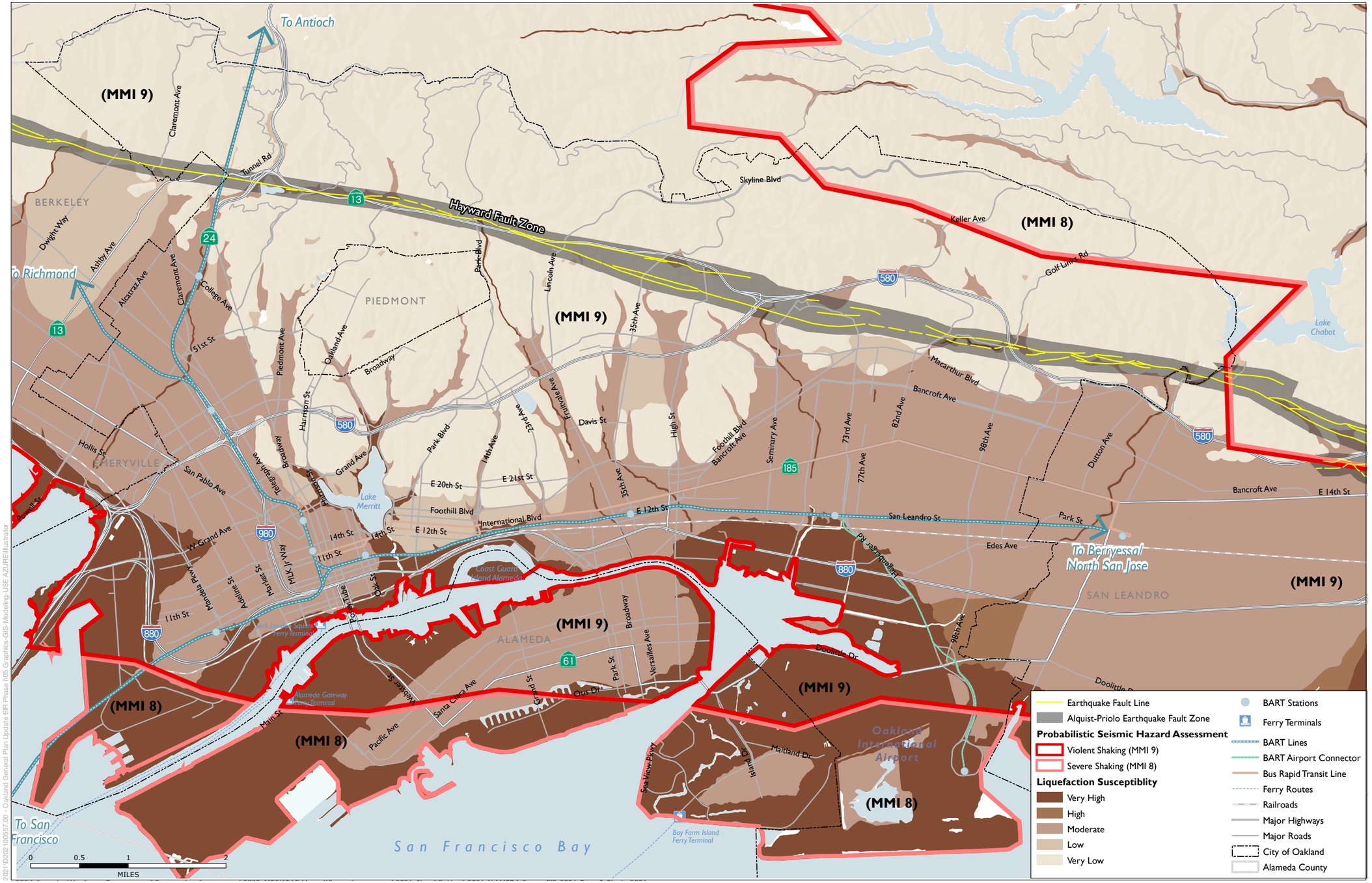
The San Andreas Fault Zone is the major structural feature in the region and forms a boundary between the North American and Pacific tectonic plates. The San Andreas Fault is a major northwest-trending, right-lateral, strike-slip fault zone. The fault zone extends for about 600 miles from the Gulf of California in the south to Cape Mendocino in the north. The San Andreas Fault Zone has produced numerous large earthquakes, including the 1906 San Francisco earthquake, and the 1989 Loma Prieta earthquake. The San Andreas Fault Zone has a 6.4 percent probability of generating an earthquake in the Bay Area with a magnitude equal to or greater than M_w 6.7 over the next 30 years (Field et al., 2015).

Seismic Ground Shaking

Ground shaking occurs due to a seismic event and can cause extensive damage to life and property and may affect areas hundreds of miles away from the earthquake's epicenter. The extent of the damage varies by event and is determined by several factors, including but not limited to magnitude and depth of the earthquake, distance from epicenter, duration and intensity of the shaking, underlying soil and rock types, and integrity of structures. The amplitude and frequency of ground shaking is related to the size of an earthquake, the distance from the causative fault, the type of fault (e.g., strike-slip), and the response of the geologic materials. Ground shaking can be described in terms of acceleration, velocity, and displacement of the ground. As a rule, the greater the earthquake magnitude and the closer the fault rupture to a site, the greater the intensity of ground shaking.

The entire Bay Area, including the Plan Area, could be subject to strong groundshaking during earthquakes. The Working Group on California Earthquake Probabilities (WGCEP) comprised of the United States Geological Survey (USGS), CGS, and the Southern California Earthquake Center, evaluated the probability of one or more earthquakes of magnitude (M_w) 6.7 or higher occurring in California over the next 30 years.[5] It is estimated that the Bay Area as a whole has a 72 percent chance of experiencing an earthquake of M_w 6.7 or higher over the next 30 years; with the Hayward and San Andreas fault zones being the most likely to cause such an event (Field et al., 2015). Figure 4.6-2 also identifies areas where seismic shaking could be severe to violent.

[4] A strike-slip fault is a fault on which movement is parallel to the fault's strike or lateral expression at the surface.
[5] Study conducted in 2015.



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SOURCE: Dyett & Bhatia, 2022

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Figure 4.6-2
Seismic Hazard

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Liquefaction and Lateral Spreading

Liquefaction is the rapid loss of shear strength experienced in saturated, predominantly loose granular soils below the groundwater level during strong earthquake ground shaking and occurs due to an increase in pore water pressure (VT, 2013). The potential damaging effects of liquefaction include differential settlement, loss of ground support for foundations, ground cracking, heaving and cracking of structure slabs due to sand boiling,[6] and buckling of deep foundations due to ground settlement. Dynamic settlement (i.e., pronounced consolidation and settlement from seismic shaking) may also occur in loose, dry sands above the water table, resulting in settlement of and possible damage to overlying structures. In general, a relatively high potential for liquefaction exists in loose, sandy soils that are within 40-feet of the ground surface and are saturated (below the groundwater table). Lateral spreading is a variety of minor landslide that occurs when unconsolidated liquefiable material breaks and spreads due to the effects of gravity, usually down gentle slopes. Liquefaction-induced lateral spreading is defined as the finite, lateral displacement of gently sloping ground as a result of pore-pressure buildup or liquefaction in a shallow underlying deposit during an earthquake. The occurrence of this phenomenon is dependent on many complex factors, including the intensity and duration of ground shaking, particle-size distribution, and density of the soil. Lateral spreading can move blocks of soil, placing strain on buried pipelines that can lead to leaks or pipe failure.

The areas of varying liquefaction susceptibility are shown on Figure 4.6-2, which indicates that the liquefaction susceptibility within the Plan Area varies from very low in eastern areas to very high in areas closer to the shoreline (City of Oakland, 2021). Areas of very high liquefaction susceptibility are concentrated along the shoreline (where the water table is highest) and the soils get progressively less susceptible the further inland.

Landslides

Landslides are one of the various types of downslope movements in which rock, soil, and other debris are displaced due to the effects of gravity. The potential for material to detach and move down slope depends on multiple factors including the type of material, water content, and steepness of terrain. Generally, earthquake-induced landslides occur when ground shaking triggers slope failures during or as a result of a nearby earthquake. Landslides can also occur in steep landslide-prone areas due to excavation of the toe of a landslide that removes materials preventing the upper area from sliding downhill, or the addition of water to upper slopes of landslide-prone areas that adds weight and/or lubricates slide planes and triggering movement of the landslide soils.

Existing landslide areas and areas designated by the California Geological Survey (CGS) as known landslide zones requiring investigation prior to development are shown on **Figure 4.6-3** (City of Oakland, 2021). The urbanized, developed areas of the Plan Area have a no landslide potential due to the relatively flat topography and lack of slopes and hills. Throughout the rest of the Plan Area the landslide hazard potential varies from low to very high with the highest potential in the eastern portion of the Plan Area in the hills.

[6] Sand boils may occur when groundwater under pressure comes out to penetrate the sandy layer. Groundwater that comes out will look like boiling water mixed with sand

Paleontological Resources

Paleontological resources are the mineralized (fossilized) remains or impressions of prehistoric plants and animals, including vertebrates (animals with backbones; mammals, birds, fish, etc.), invertebrates (animals without backbones; starfish, clams, coral, etc.), and microscopic plants and animals (microfossils) (bark or wood, and shell). Paleontological resources also include trace fossils such as shell, leaf, skin, or feather impressions; footprints; burrows; or other evidence of an organism's life or activity). These resources are located within sedimentary rocks or alluvium and are nonrenewable and are valuable, non-renewable, scientific resources used to document the existence of extinct life forms and to reconstruct the environments in which they lived. Fossils can be used to determine the relative ages of the depositional layers in which they occur and of the geologic events that created those deposits. The age, abundance, and distribution of fossils depend on the geologic formation in which they occur and the topography of the area in which they are exposed. The geologic environments within which the plants or animals became fossilized usually were quite different from the present environments in which the geologic formations now exist.

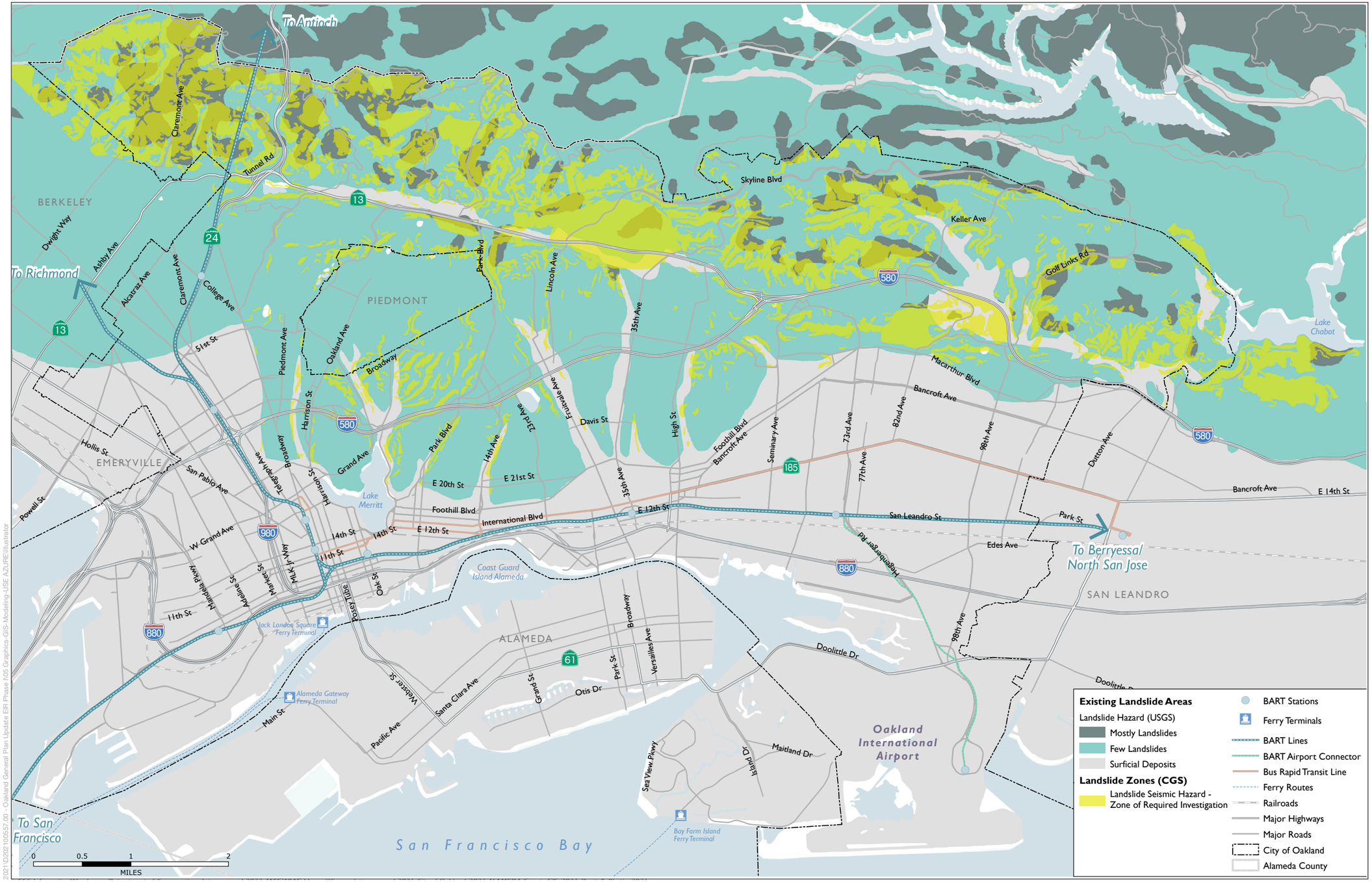
The Society of Vertebrate Paleontology (SVP) has established standard guidelines that outline professional protocols and practices for conducting paleontological resource assessments and surveys; monitoring and mitigation; data and fossil recovery; sampling procedures; and specimen preparation, identification, analysis, and curation (SVP, 2010). Most practicing professional vertebrate paleontologists adhere closely to the SVP's assessment, mitigation, and monitoring requirements as provided in its standard guidelines.

The SVP (SVP, 2010: 11) defines a significant fossil resource as:

> *fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).*

Based on the significance definitions of SVP (2010), all identifiable vertebrate fossils are considered to have significant scientific value. This position is adhered to because vertebrate fossils are relatively uncommon, and only rarely would a fossil locality yield a statistically significant number of specimens of the same genus. Therefore, every vertebrate fossil found has the potential to provide significant new information on the taxon it represents, its paleoenvironment, and/or its distribution.[7] Furthermore, all geologic units in which vertebrate fossils have previously been found are considered to have high sensitivity. Identifiable plant and invertebrate fossils are considered significant if found in association with vertebrate fossils or if defined as significant by project paleontologists, specialists, or local government agencies.

[7] A paleoenvironment is the past environment of an area during a given time period in the past.



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SOURCE: Dyett & Bhatia, 2022

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Figure 4.6-3
Landslide Hazards

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Paleontological sensitivity is defined as the potential for a geologic formation to produce scientifically significant fossils. This is determined by rock type, past history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey. In its *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Non-renewable Paleontologic Resources,* the SVP (2010:1–2) defines four categories of paleontological sensitivity (potential) for rock units: high, low, undetermined, and no potential:

- **High Potential:** Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources.
- **Low Potential:** Rock units that are poorly represented by fossil specimens in institutional collections, or based on general scientific consensus only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule.
- **Undetermined Potential:** Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment.
- **No Potential:** Rock units like high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites) that will not preserve fossil resources.

As discussed, in general, Holocene-age alluvial deposits are considered to have a low potential to contain significant paleontological resources, based on the relatively recent age of the deposits (SVP, 2010); the youngest Holocene-age deposits (i.e., younger than 5,000 radiocarbon years) have a particularly low potential. Deposits that date to the middle Holocene (i.e., older than 5,000 radiocarbon years) have a potential that increases as the depth into the deposits increases.

A record search of the University of California Museum of Paleontology (UCMP) online fossil locality database indicates that there are several significant vertebrate and invertebrate fossil localities within Alameda County (UCMP, 2022a). While the UCMP online database does not include exact locations (or depths) of the fossil localities (due to confidentiality), the locations can be inferred based on the locality name. In this case there are at least two vertebrate fossil localities within the Plan Area that can be inferred: a locality at the Oakland Coliseum and one along 81st Avenue. Both localities are from within Pleistocene-age deposits (UCMP, 2022a). Additionally, there are 387 invertebrate fossil localities, several being within the Plan Area (UCMP, 2022b).

In summary, the more urban areas of the Plan Area are underlain by highly disturbed artificial fill and would have no paleontological potential and the surficial materials immediately underlying the fill would have a very low potential for paleontological resources. Similarly, the igneous rocks that are present in the hills would have no paleontological potential, given the temperature and pressure that is associated with forming igneous rocks. The surficial Holocene-age alluvial deposits are considered to have a low potential to contain significant paleontological resources, with the potential increasing to high within the older and deeper layers of the unit (i.e., Pleistocene-age and older). The deeper Pleistocene-age deposits throughout the Plan Area are

considered to have a high potential to contain significant paleontological resources, due to the presence of similar significant finds within Alameda County.

4.6.2 Regulatory Setting

4.6.2.1 Federal

There are no federal laws or regulations that are applicable to geology, soils, or paleontological resources is it relates to the adoption of the Proposed Project.

4.6.2.2 State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy (CGS, 2018). In accordance with the Alquist-Priolo Act, the State Geologist established regulatory zones, called "Earthquake Fault Zones," (EFZs) around the surface traces of active faults and published maps showing the earthquake fault zones. Within the fault zones, buildings for human occupancy cannot be constructed across the surface trace of active faults. Each earthquake fault zone extends approximately 200- to 500-feet on either side of the mapped fault trace because many active faults are complex and consist of more than one branch that may experience ground surface rupture. California Code of Regulations (CCR) Title 14, Section 3601(e) defines buildings intended for human occupancy as those that would be inhabited for more than 2,000 hours per year.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act was passed in 1990 following the Loma Prieta earthquake to reduce threats to public health and safety and to minimize property damage caused by earthquakes. The Seismic Hazards Mapping Act requires the State Geologist to delineate various seismic hazard zones, and cities, counties, and other local permitting agencies to regulate certain development projects within these zones. For projects that would locate structures for human occupancy within designated Zones of Required Investigation, the Seismic Hazards Mapping Act requires project applicants to perform a site-specific geotechnical investigation to identify the potential site-specific seismic hazards and corrective measures, as appropriate, prior to receiving building permits. The *CGS Guidelines for Evaluating and Mitigating Seismic Hazards* (Special Publication 117A) provides guidance for evaluating and mitigating seismic hazards (CGS, 2008). The CGS is in the process of producing official maps based on USGS topographic quadrangles, as required by the Seismic Hazards Mapping Act. The Plan Area lies within the Oakland West Quadrangle and the Oakland East Quadrangle, and the CGS has identified the potential for seismic hazards throughout the Plan Area.

California Building Code

The California Building Code (CBC), which is codified in Title 24 of the California Code of Regulations, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, means of egress to facilities (entering and exiting), and general stability of buildings. The purpose of the CBC is to regulate

and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under State law, all building standards must be centralized in Title 24 or they are not enforceable. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The 2022 edition of the CBC is based on the 2021 International Building Code (IBC) published by the International Code Council, which replaced the Uniform Building Code (UBC). The code is updated triennially, and the 2022 edition of the CBC was published by the California Building Standards Commission on July 1, 2022, and took effect starting January 1, 2023. The 2019 CBC contains California amendments based on the American Society of Civil Engineers (ASCE) Minimum Design Standard ASCE/SEI 7-22, Minimum Design Loads for Buildings and Other Structures, provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (such as wind loads) for inclusion into building codes. Seismic design provisions of the building code generally prescribe minimum lateral forces applied statically to the structure, combined with the gravity forces of the dead and live loads of the structure, which the structure then must be designed to withstand. The prescribed lateral forces are generally smaller than the actual peak forces that would be associated with a major earthquake. Consequently, structures 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 to the current building code recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake; however, it is reasonable to expect that a structure designed in accordance with the seismic requirements of the CBC should not collapse in a major earthquake.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, all of which are used to determine a seismic design category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site; SDC ranges from A (very small seismic vulnerability) to E/F (very high seismic vulnerability and near a major fault). Seismic design specifications are determined according to the SDC in accordance with CBC Chapter 16. CBC Chapter 18 covers the requirements of geotechnical investigations (Section 1803), excavation, grading, and fills (Section 1804), load-bearing of soils (Section 1806), as well as foundations (Section 1808), shallow foundations (Section 1809), and deep foundations (Section 1810). For SDs D, E, and F, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses measures to be considered in structural design, which may include ground stabilization, selecting appropriate foundation type and depths, selecting appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil

strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions.

Requirements for geotechnical investigations are included in Appendix J, CBC Section J104, Engineered Grading Requirements. As outlined in Section J104, applications for a grading permit are required to be accompanied by plans, specifications, and supporting data consisting of a soils engineering report and engineering geology report. Additional requirements for subdivisions requiring tentative and final maps and for other specified types of structures are in California Health and Safety Code Sections 17953 to 17955 and in 2022 CBC Section 1802. Testing of samples from subsurface investigations is required, such as from borings or test pits. Studies must be done as needed to evaluate slope stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on load-bearing capacity, compressibility, liquefaction, differential settlement, and expansiveness. The design of the future projects and associated infrastructure would be required to comply with CBC requirements, which would make future development under the Proposed Project consistent with the CBC.

California Occupational Safety and Health Administration (Cal/OSHA) Regulations

Occupational safety standards exist in federal and State laws to minimize worker safety risks from both physical and chemical hazards in the workplace. In California, the California Division of Occupational Safety and Health (Cal/OSHA) and the federal OSHA are the agencies responsible for ensuring worker safety in the workplace.

The OSHA Excavation and Trenching standard (29 CFR 1926.650) covers requirements for excavation and trenching operations, which are among the most hazardous construction activities. OSHA requires that all excavations in which employees could potentially be exposed to cave-ins be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area. Cal/OSHA is the implementing agency for both State and federal OSHA standards.

NPDES Construction General Permit

Construction associated with projects that would disturb more than one acre of land surface, or less than one acre but would be part of a larger plan of development or sale, affecting the quality of stormwater discharges into waters of the U.S. would be subject to the *NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The permit regulates discharges of pollutants in stormwater to waters of the U.S. associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines. The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific best management practices (BMPs) designed to prevent sediment and pollutants from contacting stormwater and moving off site into receiving waters. In the Plan Area, the Construction General Permit is implemented and enforced by the San Francisco Bay Regional Water Quality Control

Board (RWQCB), which administers the stormwater permitting program. The NPDES Construction General Permit is described in detail in Section 4.9, *Hydrology and Water Quality.*

4.6.2.3 Local Plans, Ordinances and Policies

City of Oakland Municipal Regional Stormwater Permit

The City of Oakland is covered by Municipal Regional Stormwater NPDES Permit No. CAS612008 and Order No. R2-2015-0049 (MRP). In accordance with the MRP requirements, new development and redevelopment projects are required to incorporate treatment measures and other appropriate source control and site design features to reduce the pollutant load in stormwater discharges and manage runoff flows. Among many other stormwater management requirements included in the MRP, Provision C.3 contains specific post-construction runoff requirements for new development and redevelopment. Provision C.3 governs storm drain systems and regulates post-construction stormwater runoff. The provision requires new development and redevelopment projects to incorporate treatment measures and other appropriate source control and site design features to reduce the pollutant load in stormwater discharges and to manage runoff flows.

City of Oakland 2021- 2026 Hazard Mitigation Plan

The City developed the *2021 – 2026 Local Hazard Mitigation Plan* to establish and promote a comprehensive mitigation strategy and efforts to protect the whole community and environment from identified natural and manmade hazards (City of Oakland, 2021). The Plan assesses the risk from natural and manmade hazards and describes mitigation strategies to reduce those risks. The identified hazards of concern included fault rupture, seismic shaking, liquefaction, and landslides. For each topic, the existing conditions and risks are described, relevant regulations are identified, and the mitigation strategy developed to address those topics.

City of Oakland General Plan

Chapter 3, Geologic Hazards, of the *Safety Element* of the City of Oakland General Plan describes various existing policies and actions regarding geological hazards, adopted for the purpose of avoiding or mitigating an environmental effect, and that apply to the Proposed Project. However, in concert with this Proposed Project, the Safety Element is being updated. The updated policies are provided below in *Proposed 2045 General Plan Policies.*

Oakland Municipal Code Title 15

Within the Oakland Municipal Code, Title 15 is known as the Oakland Amendments of the 2022 Edition of The California Building Standards Code, or the 2022 Oakland Building Construction Code. This chapter of the Municipal Code adopts the standards and requirements of the California Building Code and requires that they be applied to any new developments within the City.

Oakland Municipal Code Chapter 13.16

The City's *Creek Protection, Stormwater Management, and Discharge Control Ordinance* (Chapter 13.16 of the Oakland Municipal Code) prohibits activities that would result in the discharge of pollutants to Oakland's waterways or in damage to creeks, creek functions, or habitat. The ordinance requires the use of standard BMPs to prevent pollution or erosion to creeks

and/or storm drains. Additionally, a creek protection permit is required for any construction work on creekside properties. The Ordinance establishes comprehensive guidelines for the regulation of discharges to the City's storm drain system and the protection of surface water quality. Under the Ordinance, the City of Oakland Public Works Agency issues permits for storm drainage facilities that would be connected to existing City drainage facilities. The Ordinance includes enforcement provisions to provide more effective methods to deter and reduce the discharge of pollutants to the storm drain system, local creeks, and the Bay.

4.6.2.4 City of Oakland Standard Conditions of Approval

The City's Standard Conditions Approval (SCAs) relevant to the Proposed Project's geologic, soil, and paleontological impacts are presented below. All SCAs would be adopted as enforceable conditions of approval and required, as applicable, to be implemented during construction and operation of future development under the Proposed Project to help ensure less-than-significant impacts related to geology, soils, and paleontological resources. The SCAs are incorporated and required as part of the Proposed Project, so they are not listed as mitigation measures.

- **SCA 32: Archaeological and Paleontological Resources – Discovery during Construction.** (See Section 4.4, *Cultural Resources*)

- **SCA 36: Construction-Related Permit(s)**

  Requirement: The Project applicant shall obtain all required construction-related permits/ approvals from the City. The Project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction.

- **SCA 37: Soils Report**

  Requirement: The project applicant shall submit a soils report prepared by a registered geotechnical engineer for City review and approval. The soils report shall contain, at a minimum, field test results and observations regarding the nature, distribution and strength of existing soils, and recommendations for appropriate grading practices and project design. The project applicant shall implement the recommendations contained in the approved report during project design and construction.

- **SCA 38: Earthquake Fault Zone**

  Requirement: The project applicant shall submit a site-specific fault location investigation, as defined in California Geological Survey Note 49 (as amended), prepared by a certified engineering geologist for City review and approval containing at a minimum the results of subsurface investigations, locations of hazardous faults adjacent to the project site, recommended setback distances of proposed structures from hazardous faults, and additional recommended measures to accommodate warping and distributive deformation associated with faulting (e.g., strengthened foundations, engineering design, flexible utility connections). The project applicant shall implement the recommendations contained in the approved report during project design and construction.

- **SCA 39: Seismic Hazards Zone (Landslide/Liquefaction).** The Project applicant shall comply with the following restrictions:

  Requirement: The Project applicant shall submit a site-specific geotechnical report, consistent with California Geological Survey Special Publication 117 (as amended), prepared by a registered geotechnical engineer for City review and approval containing at a minimum a description of the geological and geotechnical conditions at the site, and evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The Project applicant shall implement the recommendations contained in the approved report during project design and construction.

- **SCA 40: Oakland Area Geologic Hazard Abatement District (GHAD)**

  Requirement: Prior to approval of the final map or issuance of a building permit (whichever occurs first), the project applicant shall provide to the City: 1) all required resolutions from the GHAD and City Council showing that the project property has been annexed into the GHAD, and 2) a state from the GHAD Manager stating that an adequate funding mechanism is in place to fund the GHAD operations for the annexed property. To begin the annexation process, the project applicant shall submit a petition for annexation to the GHAD Manager which shall include but is not limited to a proposed Plan of Control as defined in the Public Resources Code Section 26509, specifying all anticipated operations and maintenance responsibilities of the GHAD for the annexed property. The project applicant will be required to pay to the GHAD costs and fees associated with the annexation request, which included the preparation and review of all necessary documents and resolutions by the GHAD Manager and/or GHAD Attorney. The GHAD Manager may require the project applicant to provide initial funding to allow the GHAD to operate with respect to the annexed property during the time a secure and stable financing source is obtained to ultimately fund the long-term operations of the GHAD for the annexed property. If a real property assessment is proposed as a financing mechanism, the project applicant shall prepare an engineer's report identifying the projected costs and budget for GHAD operations for the annexed property and comply with all assessment voting requirements and other requirements in Proposition 218. If annexation is not approved by the GHAD and/or City Council, the project applicant shall demonstrate to the City's satisfaction that: 1) Another entity will and has assumed the responsibilities proposed for the GHAD ("Other Responsible Party") and 2) there is an adequate financial mechanism in place to carry out those responsibilities.

  The project applicant shall defend, hold harmless, and indemnify the GHAD, its officers, and agents against any and all liability, damages, claims, demands, judgements, losses, or other forms of legal or equitable relief relating to the GHAD annexation process and the securing/ approval of funding sources by the GHAD and in the case of the City Council members, actions taken by said members while acting as the GHAD Board of Directors.

  The project applicant shall request the GHAD or Other Responsible Entity to defend, hold harmless, and indemnify the Indemnified Parties (as defined in these Conditions of Approval) and their insurers against any and all liability, damages, claims, demands, judgements, losses, or other forms of legal or equitable relief related to the responsibilities and operation of the GHAD or Other Responsible Entity (including, without limitation, maintenance of GHAD/Other Responsibility Entity owned property) relating to the annexed property.

4.6.3 Environmental Analysis

4.6.3.1 Significance Criteria

The City of Oakland has established thresholds of significance for CEQA impacts, which incorporate those in Appendix G of the *CEQA Guidelines* (City of Oakland, 2020). The Proposed Project would have a significant adverse impact related to geology, soils, and paleontological resources if it would:

1. Expose people or structures to substantial risk of loss, injury, or death involving:
    a. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or Seismic Hazards Map issued by the State Geologist for the area or based on other substantial evidence of a known fault[8];
    b. Strong seismic ground shaking;
    c. Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, collapse; or
    d. Landslides;
2. Result in substantial soil erosion or loss of topsoil, creating substantial risks to life, property, or creeks/waterways;
3. Be located on expansive[9] soil creating substantial risks to life or property;
4. Be located above a well, pit, swamp, mound, tank vault, or unmarked sewer line, creating substantial risks to life or property;
5. Be located above landfills for which there is no approved closure and post-closure plan, or unknown fill soils, creating substantial risks to life or property; or
6. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.
7. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

4.6.3.2 Approach to Analysis / Methodology

This is a program-level Draft EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Impacts relative to geology, soils, and paleontological resources are evaluated using the criteria listed above and based on information included in the City of Oakland General Plan, Map Atlas, and the documents listed in Section 4.6.6, *References – Geology, Soils, and Paleontological Resources.*

8 Refer to California Geological Survey (CGS) 2018 Special Publication 42 and 117 and Public Resources Code section 2690 et. seq.

9 The CBC, based on the International Building Code and the now defunct Uniform Building Code, no longer includes a Table 18-1-B. Instead, Section 1803.5.3 of the CBC describes the criteria for analyzing expansive soils.

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future development under the Proposed Project, this Draft EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas and analyzes the impacts of housing development through the projection period ending in 2030.

Future development under the Proposed Project would be regulated by the various laws, regulations, and policies summarized in Section 4.6.2, *Regulatory Setting*. Compliance by the Proposed Project with applicable federal, State, and local laws and regulations is assumed in this analysis, and local and State agencies would be expected to continue to enforce applicable requirements to the extent that they do so now. Note that compliance with many of the laws and regulations is a condition of permit approval.

Upon completion of the CEQA documentation, future development under the Proposed Project would be required by the CBC, and the City of Oakland Building Code and Grading Regulations, to conduct a final geotechnical investigation that would inform the final project design and provide recommendations to address all identified geotechnical issues. The structural elements of each future project would undergo appropriate design-level geotechnical evaluations prior to final design and construction. Implementing the regulatory requirements in the CBC and County ordinances and ensuring that all buildings and structures constructed in compliance with the law is the responsibility of the Project engineers and building officials. The geotechnical engineer, as a registered professional with the State of California, is required to comply with the CBC and local codes while applying standard engineering practice and the appropriate standard of care for the particular region in California, which in this case is the City of Oakland.[10] The California Professional Engineers Act (Building and Professions Code Sections 6700-6799), and the Codes of Professional Conduct, as administered by the California Board of Professional Engineers and Land Surveyors, provides the basis for regulating and enforcing engineering practice in California. The local Building Officials are typically with the local jurisdiction (i.e., City of Oakland) and are responsible for inspections and ensuring CBC compliance prior to approval of the building permit.

4.6.3.3 Proposed 2045 General Plan Policies, Land Use and Zoning

Safety Element

Below is a list of proposed 2045 General Plan policies and actions that are applicable to geology, soils, and paleontological resources.

[10] A geotechnical engineer (GE) specializes in structural behavior of soil and rocks. GEs conduct soil investigations, determine soil and rock characteristics, provide input to structural engineers, and provide recommendations to address problematic soils.

Policies

SAF-1.1: Seismic Hazards. Develop and continue to enforce and carry out regulations and programs to reduce seismic hazards and hazards from seismically triggered phenomena. Prioritize programs in areas of highest seismic risk and seismic vulnerability.

SAF-1.2: Structural Hazards. Continue, enhance or develop regulations and programs designed to minimize seismically-related structural hazards from new and existing buildings.

SAF-1.3: Limit Development in Hazardous Areas and Minimize Erosion. Minimize threats to structures and humans by limiting development in areas subject to landslides or other geologic threat and undertake efforts to limit erosion from new development.

SAF-1.4 Seismic Hazard Coordination. Work with other public agencies to reduce potential damage from earthquakes to "lifeline" utility, economic, and transportation systems, including Caltrans; BART; PG&E, EBMUD, and other utilities providers; the Port of Oakland, and others.

SAF-2.4: Slope-Density Regulations. Reduce permitted development densities and intensities by slope tiers—such as between 15 and 30 percent slope, and greater than 30 percent slope—in hills/hillside areas. This consideration would be considered and reflected as part of the LUTE update.

SAF-3.1: Minimize Storm Induced Flooding. Continue or strengthen city programs that seek to minimize the storm-induced flooding hazard.

SAF-3.2: Storm-Induced Flooding Structural Risk. Enforce and update local ordinances, and comply with regional orders that would reduce the risk of storm-induced flooding.

Actions:

SAF-A.1: Continue to require site-specific geologic reports for development proposals in the Hayward Fault Special Studies Zone, or Zones of Required Investigation, as shown in Figure SAF-1. Restrict development within 50 feet of the fault trace.

SAF-A.2: Ensure on a continual basis that the City's geologic-hazard mapping is up-to-date.

SAF-A.3: Regulate development by slope categories and Continue to enforce provisions that require geotechnical reports and soil hazards investigations be made in areas prone to landslides.

SAF-A.4: Continue to enforce ordinances for grading, erosion, and sedimentation; provisions under the creek protection, storm water management and discharge control ordinance; and regulations for site-design and source control techniques for peak stormwater runoff flows and impacts from increased runoff volumes.

SAF-A.5: Design fire-preventive vegetation-management techniques and practices for creeksides and high-slope areas that align with practices designed to stabilize hillsides and prevent erosion and sedimentation in order to help prevent landslide and erosion hazard.

SAF-A.6: Continue implementation of the Mandatory Soft Story Retrofit Program and explore expansion of the retrofit program to include buildings with non-ductile

concrete construction. Invest in and seek grant funding to support the seismic structural retrofit of structures within the city, prioritizing socially vulnerable neighborhoods shown in Figure SAF-1. Within these areas, prioritize low-income homeowners and landlords that provide affordable housing.

SAF.A-14: Ensure that new construction and major improvements to existing structures within flood zones are in compliance with federal requirements and, thus, remain a participant in the National Flood Insurance Program (NFIP).

SAF-A.16: Continue to repair, maintain make structural improvements to storm drains to enable them to perform to their design capacity in handling water flows.

SAF-A.18: Comply with performance standards pursuant to the Alameda countywide National Pollutant Discharge Elimination System municipal stormwater permit.

SAF-A.19: Continue to enforce the grading, erosion, and sedimentation ordinance and provisions under the creek protection, storm water management and discharge control ordinance to keep watercourses free of obstructions and protect drainage facilities.

4.6.3.4 Topics Considered and Determined to Have No Impact

Based on the Proposed Project characteristics, its geographical location, and underlying site conditions, the Proposed Project is considered to have no impact related to the following topics. Therefore, these topics are not addressed further in this document for the following reasons:

- **Landfills** (Criterion 5). Future development under the Proposed Project would not be proposed on any existing landfills. Therefore, the Proposed Project would have no impact under this criterion.
- **Wastewater Disposal** (Criteria 6). The Plan Area is located within an urban area where all development would connect with the existing wastewater sewer infrastructure. Therefore, the Proposed Project would not require the use of septic or other alternative disposal wastewater systems and no impact is associated with this hazard.

4.6.4 Impacts of the Project

Impact GEO-1: Adoption of the Proposed Project would not expose people or structures to substantial risk of loss, injury, or death involving: rupture of a known earthquake fault, strong seismic ground shaking; seismic-related ground failure, including liquefaction, lateral spreading, subsidence, or collapse. (Criteria 1a through 1c) (*Less than Significant*)

Construction Impacts

As discussed in Section 4.6.1, *Environmental Setting, Faults and Seismicity*, the Hayward Fault Zone transects the eastern portion of the Plan Area and is considered an EFZ. While the San Andreas Fault Zone is also an EFZ and is within 15 miles of the Plan Area, because it does not directly transect the Plan Area it is not considered when assessing the impacts associated with surface rupture. While the Hayward Fault Zone can result in surface rupture impacts within the Plan Area, the Alquist-Priolo Act (discussed in Section 4.6.2, *Regulatory Setting*) prohibits the placement of habitable structures within 50 miles of either side of the fault zone.

Future development under the Proposed Project would be subject to the seismic design criteria of the CBC and City of Oakland building codes, which require that all development under the Proposed Project be constructed to withstand potential impacts related to being in proximity to an EFZ. Each new development would be required to obtain a site-specific geotechnical report prior to the issuance of individual grading permits; each new development would be required to retain a licensed geotechnical engineer to design new structures to withstand impacts from seismic shaking. The CBC standards and County codes require all new developments to be designed consistent with a site-specific, design-level geotechnical report, which are required to be fully compliant with the seismic recommendations of a California-registered professional geotechnical engineer.

In addition, proposed 2045 General Plan Policy SAF-1.1, Seismic Hazards, and actions SAF-A.1 and SAF-A.2, requires restricting development within 50 feet of an active fault and preparing site-specific geotechnical reports for areas subject to seismic hazards that include recommendations to address seismic shaking and seismic induced ground failures (e.g., liquefaction).

These regulations and policies are reinforced by SCAs 36, Construction Related Permits; 37, Soils Report; 38, Earthquake Fault Zone; and 39, Seismic Hazards Zone, which collectively require future development under the Proposed Project to conduct geotechnical investigations to identify seismic hazards and provide recommendations to address seismic hazards in compliance with the CBC and Oakland Building Codes.

Operational Impacts

Upon completion of the construction activities, future development under the Proposed Project would have complied with the CBC, the City of Oakland Building Code, proposed policies, and SCAs requirements regarding seismic shaking and seismic-induced ground failures (i.e., liquefaction, lateral spreading, and settlement).

Mitigation: None required.

Summary

Adherence to proposed policies, SCAs, and with the numerous laws and regulations described above would ensure that future development under the Proposed Project would be designed to resist seismic shaking and seismic-induced ground failures. Adoption of the Proposed Project would result in a less than significant impact related to seismic shaking and seismic-induced ground failures.

Impact GEO-2: Adoption of the Proposed Project would not expose people or structures to substantial risk of loss, injury, or death involving landslides. (Criterion 1d) (*Less than Significant*)

Construction Impacts

As previously discussed, the Plan Area is mostly urbanized, developed, and relatively flat with minimal slopes and hillsides. However, there are areas of moderate to high landslide hazard potential within the eastern portions of the Plan Area.

Future development under the Proposed Project would be subject to the design criteria of the CBC and City of Oakland building codes, which require that all development under the Proposed Project conduct a site-specific geotechnical investigation to identify whether a given development site is susceptible to landslides prior to the issuance of individual grading permits, and provide recommendations to address landslide hazards if present. The CBC standards and County codes require all new developments to be designed consistent with a site-specific, design-level geotechnical report, which would be fully compliant with the recommendations of a California-registered professional geotechnical engineer.

In addition, proposed 2045 General Plan Policy SAF-1.2, Limit Development in Hazardous Areas and Minimize Erosion Hazards and SAF-2.4: Slope-Density Regulations; as well as actions SAF-A.2, related to regulating development by slope categories; SAF-A.3, related to enforcing grading ordinances, provisions under creek protection; and regulations for site-design; and SAF-A.4, related to fire-preventive vegetation-management techniques; requires regulating development and design in areas susceptible to landslides. These regulations and policies are reinforced by SCAs 36, Construction Related Permits; SCA 37, Soils Report; SCA 38, Earthquake Fault Zone; and SCA 39, Seismic Hazards Zone, which collectively require future development under the Proposed Project to conduct geotechnical investigations to identify geologic hazards such as landslides and provide recommendations to address landslide hazards, if present, in compliance with the CBC and Oakland Building Codes.

Operational Impacts

Upon completion of the construction activities, future development under the Proposed Project would have complied with the relevant CBC, City of Oakland Building Code and Grading Regulations, proposed 2045 General Plan policies, and SCAs regarding landslides.

Mitigation: None required.

Summary

Adherence to proposed policies, SCAs, and regulatory compliance would ensure that future development under the Proposed Project would result in a less than significant impact related to landslides.

Impact GEO-3: Adoption of the Proposed Project would not result in substantial soil erosion or loss of topsoil, creating substantial risks to life, property, or creeks/waterways. (Criterion 2) (*Less than Significant*)

Construction Impacts

Construction of future development under the Proposed Project would involve ground disturbing activities such as trenching and excavation, removal of trees and other vegetation, and grading. Soil disturbing activities that occur across a landscape have the potential to cause erosion or loss of topsoil that could cause substantial risks to life, property, or creeks/waterways through flooding and the movement of sediment.

As described in Section 4.6.2, *Regulatory Setting, NPDES Construction General Permit*, construction projects that disturb one or more acres of ground, or less than one acre but would be part of a larger plan of development or sale, would be required to obtain coverage under the NPDES Construction General Permit. Preparation of a SWPPP, along with its implementation during construction, is required to comply with the NDPES Construction General Permit. Moreover, development projects implemented under the Proposed Project would be subject to controls and requirements described in Section 13.16 of the Oakland Municipal Code, which establishes permanent stormwater pollution prevention measures for development and redevelopment projects. This code specifies that a stormwater management plan be prepared for such projects, subject to the City's guidelines. Consistent with General Plan Policy CO-5.3, these standards are required to minimize pollutants in stormwater runoff and protect watercourses. These requirements cover managing the volume and rate of runoff to prevent erosion and the potential to carry sediment and other pollutants or cause erosion and flooding both onsite and offsite. In addition, proposed 2045 General Plan Policies SAF-3.1, Minimize Storm-Induced Flooding; SAF-3.2, Storm-Induced Flooding Structural Risk, and actions SAF-A.14, SAF-A.16, and SAF-A.19, require actions to reduce flood risk that could cause erosion, flooding, the exceedance of the capacity of a stormwater system, or adversely affect water quality. Action SAF-A.18also requires compliance with the Construction General Permit, which also serves to prevent erosion and loss of topsoil. These measures are reinforced by SCAs 48 through 55 that establish requirements to control runoff during construction, as well as construct permanent measures to control runoff during operations and prevent pollution from entering waterways (see Section 4.9, *Hydrology and Water Quality*.

Operational Impacts

Once constructed, future development under the Proposed Project would be subject to municipal stormwater requirements (MRP Order No. R2-2015-0049), which regulate stormwater discharges within the City of Oakland. The City of Oakland *Storm Drainage Design Standards*, as well as Provision C.3 of the Municipal Regional Stormwater NDPES Permit, contain post-construction stormwater control requirements that would ensure that erosion and loss of topsoil from stormwater do not occur. In addition, proposed 2045 General Plan Policies SAF-3.1, Minimize Storm-Induced Flooding, SAF-3.2, Storm-Induced Flooding Structural Risk, and Actions SAF-A.4, SAF-A.16, SAF-A.18, and SAF-A.19 require that future developments under the Proposed Project include infrastructure to collect and control stormwater. In addition, SCAs 51, 52, and 53 reinforce compliance with Provision C.3 requirements. Stormwater falling on a given site would

be required to be collected, treated using bioswales, bioretention basins, or other best management practices, and, if not entirely infiltrated down to groundwater, released from the development site in a controlled manner that does not cause erosion or loss of topsoil.

Mitigation: None required.

Summary

Adherence to the City's proposed 2045 General Plan policies, SCAs, and the numerous laws and regulations described above that regulate water quality, would prevent adverse effects to erosion and siltation and would ensure that substantial soil erosion or loss of topsoil impacts associated with construction and operation of future development under the Proposed Project would be less than significant.

Impact GEO-4: Adoption of the Proposed Project would not be located on expansive soil creating substantial risks to life or property. (Criterion 3) (*Less than Significant*)

Construction Impacts

As discussed in Section 4.6.1, *Environmental Setting, Expansive Soils*, expansive soils are present in some areas of the Plan Area. As required by the CBC and Oakland Building Codes, site-specific geotechnical investigations would be required for future development under the proposed Project. The geotechnical investigations would be required to survey for expansive soils on individual project site. If present, the geotechnical investigation would be required to provide recommendations to address expansive soils, which could include removal and replacement with properly compacts non-expansive imported fill, or treatment with lime to reduce expansive properties. These regulations would be reinforced by SCA 36, Construction-Related Permit, and SCAs 37 through 39, which require compliance with the CBC and the Oakland Building Code City.

Operational Impacts

Upon completion of the construction activities, future development under the Proposed Project would have complied with the CBC, Oakland Building Code, and SCAs by implementing geotechnical investigation recommendations to address expansive soils.

Mitigation: None required.

Summary

Adherence to CBC, Oakland Building Code, SCAs and geotechnical investigation recommendations would ensure that future development under the Proposed Project would result in a less than significant impact relative to expansive soils.

Impact GEO-5: Adoption of the Proposed Project would not be located above a well, pit, swamp, mound, tank vault, or unmarked sewer line, creating substantial risks to life or property. (Criterion 4) (*Less than Significant*)

Construction Impacts

As required by the CBC and Oakland Building Codes, site-specific geotechnical investigations would be required to investigate proposed development sites for geotechnical issues prior to development of a given site under the Proposed Project. The investigation would include researching records and conducting onsite investigation of the site for wells, pits, swampy areas, mounds with an unknown purpose, tank vaults, or unmarked sewer lines. If such items are identified, the geotechnical investigation would be required to provide recommendations to address such issues, such as removal, backfilling, or not constructing structures on such items. If research does not identify such items and instead they are discovered during construction, the CBC and Oakland Building Codes would require such items be removed or backfilled, or change the project design so structures are not constructed on such items. These regulations would be reinforced by SCA 36, Construction-Related Permit, and SCAs 37 through 39, which require compliance with the CBC and the Oakland Building Code City.

Operational Impacts

Upon completion of the construction activities, future development under the Proposed Project would have complied with the relevant CBC, City of Oakland Building Code and SCAs regarding being located on a well, pit, swamp, mound, tank vault, or unmarked sewer line.

Mitigation: None required.

Summary

Adherence to CBC, Oakland Building Code, SCAs and geotechnical investigation recommendations, future development under the Proposed Project would result in a less than significant impact relative to wells, pits, swamps, mounds, tank vaults, or unmarked sewer lines.

Impact GEO-6: Adoption of the Proposed Project would not directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature. (Criterion 7) (*Less than Significant*)

Construction Impacts

Geologic mapping indicates that the surficial deposits within the Plan Area are composed of Holocene-age alluvial deposits. The Holocene-age alluvium has a low potential to contain significant paleontological resources near the surface, but the potential increases in the deeper, older layers of these deposits. A review of the UCMP online fossil localities database indicates that there are recorded vertebrate fossil localities within Holocene-age sediments from Alameda County, with at least two localities within the Plan Area. Additionally, there are recorded invertebrate fossil localities within Alameda County, several being within the Plan Area.

Future development under the Proposed Project would require grading and excavation during the construction phases. While Holocene-age alluvial deposits are considered to have a low potential

to contain significant paleontological resources near the surface, paleontological resources may be encountered in deeper excavations (generally, approximately 6 or more feet below ground surface, depending on site-specific information) into previously undisturbed Holocene-age deposits. Future development under the Proposed Project could potentially encounter and inadvertently destroy significant paleontological resources during construction which would constitute a significant impact.

To ensure paleontological resources are preserved, SCA 32, Archeological and Paleontological Resources – Discovery during Construction, would require that all construction within 50 feet of the discovery is stopped in the event of a fossil discovery. Project applicants are then required to notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented. In the event of excavation of paleontological resources, project applicants are required to submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant paleontological resources recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.

Operational Impacts

Operation of the Proposed Project would result in no further disturbance of geologic units or paleontological resources, and accordingly, would have a less than significant impact.

Mitigation: None required.

Summary

With adherence to SCA 32, future development under the Proposed Project would result in a less than significant impact relative paleontological resources.

4.6.5 Cumulative Impacts

This section presents an analysis of the cumulative effects of the Proposed Project in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to geology, soils, and paleontological resources could occur if the incremental impacts of the Proposed Project combined with the incremental impacts of one or more cumulative projects would be significant and if the Proposed Project contribution is considerable.

As previously discussed, the Proposed Project would have no impact with respect to being located on a landfill or wastewater disposal. Accordingly, the Proposed Project could not contribute to cumulative impacts related to these topics and are not discussed further.

Impact GEO-7: Adoption of the Proposed Project, combined with cumulative development, would not result in significant cumulative impacts to geology, soils, and paleontological resources. (*Less than Significant*)

Geographic and Temporal Context

Impacts related to geologic hazards and paleontological resources are generally site-specific, and the geographic scope of analysis for cumulative geologic, soils, and paleontological resources impacts encompasses and is limited to the extent of a given project site and its immediately adjacent area. For example, the effect of erosion would tend to be limited to the localized area of a project and could only be cumulative if e0rosion occurred as the result of two or more adjacent projects that spatially overlapped. For this reason, the geographic area affected by a given project and its potential to contribute to cumulative impacts varies based on the environmental resource under consideration. In addition, impacts relative to geologic hazards are generally time-specific. Geologic hazards could only be cumulative if two or more geologic hazards occurred at the same time, as well as overlapping at the same location.

Cumulative Impacts – Construction

Future development under the Proposed Project that could be constructed near or adjacent to a cumulative project site and that could be constructed at the same time, could result in cumulative erosion effects. However, as with the Proposed Project, the State Construction General Permit would require cumulative projects to prepare and implement a SWPPP that includes BMPs to control runoff and prevent erosion for each project. Through compliance with this requirement, the potential for erosion impacts would be controlled. The Construction General Permit has been developed to address cumulative conditions arising from construction throughout the State and is intended to maintain cumulative effects of projects subject to this requirement to less than significant levels. For example, two adjacent construction sites would be required to implement BMPs to reduce and control the release of sediment and/or other pollutants in any runoff leaving their respective sites. The runoff water from both sites would be required to achieve the same action levels, measured as a maximum amount of sediment or pollutant allowed per unit volume of runoff water. Thus, even if the runoff waters were to combine after leaving the sites, the sediments and/or pollutants in the combined runoff would still be at concentrations (amount of sediment or pollutants per volume of runoff water) below action levels and would not be cumulatively considerable.

Seismically induced groundshaking, liquefaction and lateral spreading, and expansive soils could cause structural damage or ruptures during construction of cumulative projects. However, as discussed for the Proposed Project, the State CBC, Oakland Building Code regulations, and SCAs 36 through 39 have been established to address and reduce the potential for such impacts to occur. The purpose of the CBC, Oakland Building Code, and SCAs is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction; by design, it is intended to reduce the cumulative risks from buildings and structures. Based on compliance with these requirements, the incremental

impacts of future development under the Proposed Project, combined with impacts of cumulative projects in the area, would result in a significant cumulative impact related to seismically induced groundshaking, liquefaction, and lateral spreading, or expansive soils.

Regarding paleontological resources, any cumulative development would be required to comply with the same provisions and requirements of SCA 32, Archaeological and Paleontological Resources – Discovery During Construction. These measures would require protocols for responding in the event of inadvertent discovery of paleontological resources. Through compliance with applicable regulations and implementation of associated avoidance and minimization measures, future development under the Proposed Project would not have a considerable contribution to adverse effects on paleontological resources. This cumulative impact would be less than significant.

Cumulative Impact – Operations

Seismically induced groundshaking, liquefaction and lateral spreading, and expansive soils could cause structural damage or pipeline leaks or ruptures. However, the CBC, Oakland Building Code, and SCA 36 through 39 have been established to address and reduce the potential for such impacts to occur. Upon completion of construction, future development under the Proposed Project and cumulative projects would have been constructed in compliance with the applicable construction and design laws and regulations. As explained in the *Regulatory Setting*, the purpose of the CBC, Oakland Building Code, and SCAs is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction; by design, it is intended to reduce the cumulative risks from buildings and structures. Therefore, based on compliance with these requirements, the incremental impacts of future development under the Proposed Project combined with impacts of cumulative projects in the area would not cause a significant cumulative impact related to seismically induced groundshaking, liquefaction and lateral spreading, or expansive soils and the Proposed Project's contribution to cumulative effects would not be cumulatively considerable.

Proposed Project operations do not include any activities that would pose a threat to any paleontological resources. As stated above, the Proposed Project and cumulative projects would have been constructed in compliance with applicable laws and regulations. Through compliance with these requirements, the potential for impacts would be reduced, and would not cause a significant cumulative impact related to paleontological resources.

Summary

Potential exposure to geological and soils hazards, and impacts to paleontological resources, resulting from construction and operation of development of the Proposed Project would not have a cumulatively considerable contribution to a cumulative impact. Cumulative impacts would, therefore, be less than significant.

Mitigation: None required.

4.6.6 References – Geology, Soils, and Paleontological Resources

California Geological Survey (CGS), Special Publication 117A - Guidelines for Evaluating and Mitigating Seismic Hazards in California.

California Geological Survey (CGS), 2018. *Earthquake Fault Zones: A Guide for Government Agencies, Property Owners/Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California*. Special Publication 42. Revised 2018

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4.7 Greenhouse Gas Emissions

This section describes conditions and potential environmental effects of the Proposed Project pertaining to greenhouse gas (GHG) emissions. The section discusses relevant existing environmental conditions of the Plan Area and regulations pertinent to this section, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts to the physical environment that could result from implementation of the Proposed Project and its associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that would reduce potential impacts to this environmental topic are identified; both existing and proposed updated/new General Plan policies and SCAs are considered. Mitigation measures to addressed potentially significant impacts are also identified. This incorporates relevant information from the General Plan Update Map Atlas (see Appendix A) prepared in support of the *Phase I Oakland 2045 General Plan Update*. The NOP (Notice of Preparation) for this EIR received no scoping comments related to GHG.

4.7.1 Environmental Setting

4.7.1.1 Greenhouse Gases and Climate Change

Gases that trap heat in the Earth's atmosphere are called GHGs. GHGs allow sunlight to enter the atmosphere, but trap a portion of the outward-bound infrared radiation, which warms the air. The process is similar to the effect greenhouses have in raising the internal temperature, hence the name GHGs. Both natural processes and human activities emit GHGs. The natural accumulation of GHGs in the atmosphere regulates the Earth's temperature; however, emissions from human activities such as fossil fuel-based electricity production, the use of internal combustion engines and motor vehicles have elevated the concentration of GHGs in the atmosphere. This anthropogenic accumulation of GHGs has contributed to an increase in the temperature of the Earth's atmosphere and has contributed to global climate change.

Global climate change is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is a disagreement as to the rate of global climate change, multiple studies published in peer-reviewed scientific journals show that 97 percent or more of actively publishing scientists agree: climate-warming trends over the past century are very likely due to human activities (National Aeronautic and Space Administration [NASA], 2022). The principal GHGs are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs) and nitrogen trifluoride (NF_3). CO_2 is the reference gas for estimating GHG emissions.

To account for the global warming potential of different GHGs, emissions are often quantified and reported as CO_2 equivalents (CO_2e). For example, SF_6 is a GHG commonly used in the utility industry as an insulating gas in circuit breakers and other electronic equipment. SF_6, while comprising a small fraction of the total GHGs emitted annually world-wide, is a much more potent

GHG with 22,800 times the global warming potential (GWP) as CO_2.[1] GWP expresses the impact of a given gas on the global greenhouse effect as compared to CO_2. For example, methane has a 100- year GWP of 25, meaning that it is 25 times stronger than CO_2 in trapping heat in the Earth's atmosphere over a 100-year lifetime.[2] Expressing GWP or CO_2e is challenging, as greenhouse gases degrade over varying periods of time in the atmosphere. Methane degrades to CO_2 over time. Its instantaneous GWP, or the GWP at the exact moment it is released in the atmosphere, is far higher, but its 20-year GWP – the GWP measured at 20 years after its release – has been measured at approximately 84. Methane, like many other GHGs, is therefore referred to as a "climate forcer" or "short-lived climate pollutant," as it exacts an outsized impact on accelerating climate change as it is released.

GWP ratios are provided by the Intergovernmental Panel on Climate Change (IPCC). Historically, GHG emission inventories were calculated using ratios from the IPCC's Second Assessment Report (SAR), published in 1996. The IPCC has since updated the ratios based on the latest science in its Fourth Assessment Report (AR4) and Fifth Assessment Report (AR5), published in 2007 and 2014, respectively (IPCC, 2007, 2014). The California Air Resources Board (CARB) uses ratios in AR4 for the statewide GHG emissions inventory, and in the current Climate Change Scoping Plan (CARB, 2022a, 2022b).

4.7.1.2 Effects of Climate Change

Climate change refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). The scientific community's understanding of the fundamental processes responsible for global climate change has improved over the past decade, and its predictive capabilities are advancing. However, there remain significant scientific uncertainties in, for example, predictions of local effects of climate change, occurrence, frequency, and magnitude of extreme weather events, effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation.

The California Office of Planning and Research (OPR), California Natural Resources Agency (CNRA), and the State of California Energy Commission collaborated to prepare California's Fourth Climate Change Assessment (Fourth Assessment). Published in 2018, the Fourth Assessment finds that the potential impacts in California due to global climate change include: loss in snow pack; sea level rise; more extreme heat days per year; more high ozone days; more extreme forest fires; more severe droughts punctuated by extreme precipitation events; increased

1 The California Emissions Estimator Model (CalEEMod) is the modeling software used chiefly for determining GHG emissions from CEQA projects. CalEEMod currently utilizes the global warming potentials from the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4).

2 GWPs and associated CO_2e values were developed by the Intergovernmental Panel on Climate Change (IPCC) and published in its Second Assessment Report in 1996. Historically, GHG emissions inventories have been calculated using the GWPs from the IPCC's Second Assessment Report. The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). The California Air Resources Board (CARB) reports GHG emissions inventories for California using the GWP values from the IPCC AR4. Therefore, this analysis uses the GWP values from IPCC AR4. Although the IPCC has released its Fifth Assessment Report with updated GWPs, CARB reports the statewide GHG inventory using the AR4 GWPs, which is consistent with international reporting standards.

erosion of California's coastlines and sea water intrusion into the Sacramento and San Joaquin Deltas and associated levee systems; and increased pest infestation (OPR et al., 2018).

The Fourth Assessment's findings are consistent with climate change studies published by the CNRA since 2009, starting with the *California Climate Adaptation Strategy* as a response to the Governor's Executive Order S-13-2008. In 2014, the CNRA rebranded the first update of the 2009 adaptation strategy as the *Safeguarding California Plan* (CNRA, 2009; CNRA, 2014). The 2018 update to the *Safeguarding California Plan* identifies hundreds of ongoing actions and next steps State agencies are taking to safeguard Californians from climate impacts within a framework of 81 policy principles and recommendations (CNRA, 2018). In 2016, the CNRA released *Safeguarding California: Implementation Action Plans* in accordance with Executive Order B-30-15, identifying an agency to lead adaptation efforts in each sector (CNRA, 2016). In accordance with the 2009 *California Climate Adaptation Strategy*, the California Energy Commission (CEC) was directed to develop a website on climate change scenarios and impacts that would be beneficial for local decision makers. The website, known as Cal-Adapt, became operational in 2011.[3] The information provided on the Cal-Adapt website represents a projection of potential future climate scenarios comprised of local average values for temperature, sea-level rise, snowpack and other data representative of a variety of models and scenarios, including potential social and economic factors. Below is a summary of some of the potential effects that could be experienced in California as a result of global warming and climate change.

Temperature Increase

The primary effect of adding GHGs to the atmosphere has been a rise in the average global temperature. The impact of human activities on global temperature is readily apparent in the observational record. In 2021, the average contiguous U.S. temperature was 54.5°F, 2.5°F above the 20th-century average and ranked as the fourth-warmest year in the 127-year period of record. The six warmest years on record have all occurred since 2012 (National Oceanic and Atmospheric Administration [NOAA], 2022), while the 10 warmest years have occurred over the past 12-year period (Climate Central, 2022).

The Fourth Assessment indicates that average temperatures in California could rise 5.6°F to 8.8°F by the end of the century, depending on the global trajectory of GHG emissions (OPR et al., 2018). According to the Cal-Adapt website, the portion of the City of Oakland in which the Project site is located could result in an average increase in temperature of about 4.4 to 7.1°F by 2070–2090, compared to the baseline 1961–1990 period (Cal-Adapt, 2022).

With climate change, extreme heat conditions and heat waves are predicted to impact larger areas, last longer, and have higher temperatures. Heat waves, defined as three or more days with temperatures above 90°F, are projected to occur more frequently by the end of the century. Heat related illness includes a spectrum of illnesses ranging from heat cramps to severe heat exhaustion and life-threatening heat stroke (CalEPA, 2013).

[3] The Cal-Adapt website address is: http://cal-adapt.org.

Wildfires

The hotter and dryer conditions expected with climate change will make forests more susceptible to extreme wildfires. A recent study found that, if GHG emissions continue to rise, the frequency of extreme wildfires burning over approximately 25,000 acres would increase by nearly 50 percent, and the average area burned statewide each year would increase by 77 percent, by the year 2100. In the areas that have the highest fire risk, the cost of wildfire insurance is anticipated to rise by 18 percent by 2055 and the fraction of property insured would decrease (Westerling, 2018).

Air Quality

Higher temperatures, conducive to air pollution formation, would worsen air quality in California and make it more difficult for the State to achieve both national and State ambient air quality standards. Climate change may increase the concentration of ground-level ozone in particular, which can cause breathing problems, can aggravate lung diseases such as asthma, emphysema, and chronic bronchitis, and cause chronic obstructive pulmonary disease. Emissions from wildfires can lead to excessive levels of particulate matter, ozone, and volatile organic compounds. The resulting increase in fine particulate matter from wildfires is a direct threat to human health even during relatively short exposures, particularly for children, the elderly, and people with existing respiratory problems (Kenward et al, 2013). Additionally, severe heath accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the State (CalEPA, 2013).

Water Supply and Water Quality

There is a high degree of uncertainty with respect to the overall impact of global climate change on future water supplies in California. Studies indicate considerable variability in predicting precise impacts of climate change on California hydrology and water resources. Increasing uncertainty in the timing and intensity of precipitation will challenge the operational flexibility of California's water management systems. Warmer, wetter winters would increase the amount of runoff available for groundwater recharge; however, this additional runoff could occur at a time when some basins are either being recharged at their maximum capacity or are already full. Conversely, reductions in spring runoff and higher evapotranspiration because of higher temperatures could reduce the amount of water available for recharge (CNRA, 2014).

Climate change could alter water quality in a variety of ways, including through higher winter flows that reduce pollutant concentrations (through dilution) or increase erosion of land surfaces and stream channels, leading to higher sediment, chemical, and nutrient loads in rivers. Water temperature increases and decreased water flows can result in increasing concentrations of pollutants and salinity. Increases in water temperature alone can lead to adverse changes in water quality, even in the absence of changes in precipitation.

Hydrology and Sea Level Rise

Climate changes could potentially affect: the amount of snowfall, rainfall and snowpack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for saltwater intrusion (CNRA, 2014).

Rising sea level is one of the major areas of concern related to global climate change. Two of the primary causes for a sea level rise are the thermal expansion of ocean waters (water expanding as it heats up) and the addition of water to ocean basins by the melting of land-based ice (i.e., glaciers and polar ice caps). In 2013, the State issued guidance on sea level rise based on the scientific findings from the National Academy of Science National Research Council that indicated sea levels could rise 11 inches by 2050; 36 inches by 2100; and 55 inches by the end of the century as global climate change continues (CO-CAT, 2013). Subsequent to the 2013 guidance, the State's latest guidance adopts a probabilistic approach and includes estimates of the likely range of global sea level rise under different global emission scenarios, where the "likely range" covers the central 66 percent of the probability distribution (i.e., the sea levels that fall within the range created by the value that is 17 percent likely to occur and the value that is 83 percent likely to occur). Sea level rise of this magnitude would increasingly threaten California's coastal regions with more intense coastal storms, accelerated coastal erosion, threats to vital levees, and disruption of inland water systems, wetlands, and natural habitats. Residents may also be affected if wastewater treatment is compromised by inundation from rising sea levels, given that a number of treatment plants that discharge to the Bay.

Agriculture

California has a massive agricultural industry that represents 11.3 percent of total U.S. agricultural revenue. Higher CO_2 levels can stimulate plant production and increase plant water use efficiency. However, a changing climate presents significant risks to agriculture due to "potential changes to water quality and availability; changing precipitations patterns; extreme weather events including drought, severe storms, and floods; heat stress; decreased chill hours; shifts in pollinator lifecycles; increased risks from weeds, pest and disease; and disruptions to the transportation and energy infrastructure supporting agricultural production" (CNRA, 2014).

Ecosystems and Wildlife

Increases in global temperatures and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. With climate change, ecosystems and wildlife will be challenged by the spread of invasive species, barriers to species migration or movement in response to changing climatic conditions, direct impacts to species health, and mismatches in timing between seasonal life-cycle events such as species migration and food availability (CNRA, 2014).

Public Health

Global climate change is also anticipated to result in threats to public health. More frequent extreme heat events caused by climate change increase the risk of death from dehydration, heart attack, stroke, and respiratory distress, especially with people who are ill, children, the elderly, and the poor, who may lack access to air conditioning and medical assistance (OPR et al., 2018). In addition, increases in atmospheric CO2 and resulting climate change causes worsening wildfires which increase rates of smoke pollution (including particulate matter (PM) and increased pollen production in plants that can lead to prolonged and more severe allergy seasons, Further, a warming planet is expected to bring more severe weather events, droughts, a decline in overall air quality, rising sea levels, and increases in in vector-borne diseases, all of which present

significant health and wellbeing risks for California populations (CNRA, 2018). In addition to the health risks posed by these changes to the physical environment, climate change can negatively impact mental health. Mental health impacts associated with climate change can be driven by housing and job displacement, unemployment and underemployment, and other social stressor that affect quality of life.

While the possible outcomes and the feedback mechanisms involved are not fully understood and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term may be great. All of these impacts will have either direct or indirect negative effects for residents and businesses in the City.

4.7.1.3 Need for Action

As discussed in the CARB's 2022 Scoping Plan (see discussion below), to avoid a climate catastrophe, global net anthropogenic CO_2 emissions need to reach net zero by 2050. The 2022 Scoping Plan identifies the State of California's course of action to achieve carbon neutrality in 2045 or sooner. These strategies mainly rely on reducing use of fossil fuels where they are currently used, as well as reducing the amount of chemicals and refrigerants used that have higher global warming potentials than CO_2. Despite efforts to reduce emissions of GHGs, residual emissions will continue from industry, vehicle use, and use of refrigerants. Remaining emissions can be offset through management of natural and working lands to store carbon in the trees, plants, soils, and wetlands, along with carbon capture and sequestration (CCS) from facilities and/or carbon removal from the atmosphere (CARB, 2022).

Natural and working lands can be a carbon source or sink, and carbon stock changes in these lands are dependent on the effects of climate change as well as land management. In California, it is anticipated that natural working lands are projected to be a net source of GHG emissions through 2045; therefore, in addition to the biological sequestration that may be possible through natural and working lands management, CCS from facilities will be another important strategy needed for achieving carbon neutrality. "CCS is a process by which large amounts of CO2 are captured, compressed, transported, and sequestered. CCS projects are paired with a source of emissions, as the CCS project captures CO2 as it leaves a facility's smokestack." Following the carbon capture, CCS includes injection of CO2 into geologic formations or industrial materials. To supplement carbon offsets that may be achieved through natural and working lands management as well as CCS, mechanical carbon dioxide removal (CDR) will also need to be deployed in order to meet carbon neutrality goals and avoid severe climate change impacts. Mechanical CDR captures and concentrates ambient CO2, such as through chemical scrubbing processes. The extent to which mechanical CDR will need to be employed in order to avoid the most damaging effects of climate change will depend on the success of emissions reductions and the ability of natural and working lands to sequester carbon. In addition, mechanical CDR provides an opportunity to remove legacy GHG emissions from the atmosphere (CARB, 2022).

4.7.1.4 Emissions Inventories

Global Emissions

Global estimates are based on country inventories developed as part of programs of the United Nations Framework Convention on Climate Change. Worldwide emissions of GHGs in 1970 were 27 billion metric tons of CO_2e per year. Worldwide human-made emissions of GHGs in 2010 were approximately 49 billion metric tons CO_2e, including ongoing emissions from industrial and agricultural sources and emissions from land use changes (e.g., deforestation). Emissions of CO_2 from fossil fuel use and industrial processes account for 65 percent of the total while CO_2 emissions from all sources accounts for 76 percent of the total. Methane emissions account for 16 percent and N_2O emissions for 6.2 percent (IPCC, 2014). Global GHG emissions have increased, on average, by 1.1 percent per year, from 2012 to 2019, which is a markedly lower growth rate than those seen in the first decade of this century (2.6 percent, on average). GHG emissions in 2019 were about 59 percent higher than in 1990 and 44 percent higher than in 2000. The 2019 global GHG emissions amounted to 57.4 $GTCO_2e$ (PBL, 2020).

United States GHG Emissions

In 2019, the United States emitted about 6,558 million metric tons of CO_2e ($MMTCO_2e$)[4], with 76 percent of those emissions coming from fossil fuel combustion for electricity, heat and transportation. Of the major sectors nationwide, transportation accounts for the highest amount of GHG emissions (approximately 29 percent), followed by electricity (25 percent), industry (23 percent), commercial and residential energy use (13 percent), and agriculture (9 percent). Between 1990 and 2017, total GHG emissions rose by 1.8 percent, but emissions have generally decreased since peaking in 2007 (United States Environmental Protection Agency [U.S. EPA], 2022a).

California GHG Emissions

CARB compiles GHG inventories for the State. Based on the 2020 GHG inventory data (i.e., the latest year for which data are available from CARB), emissions from GHG-emitting activities statewide were 369.2 MMT CO2e (CARB, 2022a). Between 1990 and 2020, the population of California grew by approximately 10 million, from 29.8 to 39.6 million (California Department of Finance, 2021). This represents an increase of approximately 33 percent from 1990 population levels. In addition, the California economy, measured as gross State product, grew from $773 billion in 1990 to $3.01 trillion in 2020, representing an increase of approximately 289 percent (just under three times the 1990 gross State product) in today's dollars (California Department of Finance, 2022).

Despite the population and economic growth, CARB's 2020 statewide GHG inventory indicated that California's net GHG emissions in 2020 were below the 2020 GHG limit of 431 MMT CO2e, codified in the California Health and Safety Code Division 25.2, also known as the California Global Warming Solutions Act (AB 32). **Table 4.7-1** identifies and quantifies statewide anthropogenic GHG emissions and sinks (e.g., carbon sequestration due to forest growth) in 1990

[4] The term metric ton is commonly used in the U.S. to refer to the metric system unit, tonne, which is defined as a mass equal to 1,000 kilograms. A metric ton is approximately 1.1 short tons and approximately 2,204.6 pounds.

and 2020. As shown in the table, the transportation sector is the largest contributor to statewide GHG emissions at approximately 38 percent in 2020.

TABLE 4.7-1
CALIFORNIA GHG EMISSIONS INVENTORY

Category	Total 1990 Emissions Using IPCC SAR ($MMTCO_2e$)	Percent of Total 1990 Emissions	Total 2020 Emissions Using IPCC AR4 ($MMTCO_2e$)	Percent of Total 2020 Emissions
Transportation	150.7	35%	139.9	38%
Electric Power	110.6	26%	59.8	16%
Commercial & Residential Fuel Use	44.1	10%	52.7	14%
Industrial	103.0	24%	85.3	23%
Non-Specified	1.3	<1%	—[a]	—
Agriculture/Forestry	23.6	6%	31.6	9%
Forestry Sinks	-6.7	-2%	—[b]	—
Net Total (IPCC SAR)	**426.6**	**100%**[d]	**—**	**—**
Net Total (IPCC AR4)[c]	**431**	**100%**[d]	**369.2**	**100%**[d]

NOTES:

AR4 = Fourth Assessment Report; GWP = global warming potential; IPCC = Intergovernmental Panel on Climate Change; $MMTCO_2e$ = million metric tons of carbon dioxide equivalents; SAR = Second Assessment Report

[a] Non-specified category is not specifically called out in the 2020 emissions inventory.
[b] Revised methods under development (not reported for 2020).
[c] CARB revised the State's 1990-level GHG emissions using GWPs from the IPCC AR4.
[d] Total of individual percentages may not add up to 100% due to rounding

SOURCES: CARB, 2007; CARB, 2022c.

City of Oakland GHG Emissions

There are two methods of analyzing GHG emissions across a jurisdiction. The first method, called the local emissions approach, looks at emissions produced within city limits from activities such as using natural gas in homes or from driving a car in Oakland. The local emissions approach is the standard used by cities across the United States, which makes drawing comparisons between one city to another easier.

The City of Oakland published their 2019 Greenhouse Gas Emissions Inventory Infographic (2019 Inventory) in 2022. The 2019 Inventory presents local emissions within the City limits. According to the 2019 Inventory, in 2019, local emissions generated within the City's limits equaled 2,627,604 MT CO_2e. In Oakland, the largest source of local GHG emissions was the transportation sector (approximately 64 percent), followed by the buildings and energy sector (approximately 26.8 percent). In addition, the material consumption and waste sector generated 5.3 percent, the Port of Oakland generated 2.8 percent, and local government operations generated the final 1 percent of the City's emissions (City of Oakland, 2022).

The second method, referred to as the lifecycle emissions approach, employs a perspective that includes GHGs emitted globally during the material extraction, manufacturing, and shipping needed to satisfy local demand for goods and services. The lifecycle emissions approach provides

a more thorough portrayal of the emissions for which the Oakland community is responsible, and holds the potential to induce deeper emissions reductions globally. Measurement of lifecycle emissions is a relatively new method and will continue to evolve as better data become available and more local governments refine and improve the approach. The City of Oakland published their 2017 Greenhouse Gas Emissions Inventory Report (Inventory Report) in June 2020. The 2017 Inventory Report includes a presentation of the City's lifecycle emissions, which accounts for GHGs emitted around the world due to the purchasing decisions of Oakland residents. According to the Inventory Report, in 2017, lifecycle emissions equaled 7,418,907 MT CO_2e. The largest source of lifecycle GHG emissions was the material consumption and waste sector (approximately 38.4 percent), followed by the transportation and mobile sources sector (approximately 31.8 percent). The buildings and energy use sector, Port of Oakland, and local government operations represented approximately 19.8 percent, 9.2 percent, and 0.8 percent of the City's lifecycle emissions, respectively (City of Oakland, 2020a).

4.7.2 Regulatory Setting

4.7.2.1 Federal

U.S. Environmental Protection Agency "Endangerment" and "Cause or Contribute" Findings

In 2009, the U.S. Supreme Court held that the United States Environmental Protection Agency (USEPA) must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency* et al., twelve states and cities, including California, together with several environmental organizations sued to require the USEPA to regulate GHGs as pollutants under the Clean Air Act (CAA) (127 S. Ct. 1438 (2007)). The Supreme Court ruled that GHGs fit within the CAA's definition of a pollutant and the USEPA had the authority to regulate GHGs.

On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

- **Endangerment Finding:** The current and projected concentrations of the six key GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

These findings did not, by themselves, impose any requirements on industry or other entities. However, these actions were a prerequisite for implementing GHG emissions standards for vehicles.

Vehicle Emissions Standards

In 1975, Congress enacted the Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the EPA and National Highway Traffic Safety Administration (NHTSA) are responsible for

establishing additional vehicle standards. In August 2012, standards were adopted for model year 2017 through 2025 for passenger cars and light-duty trucks. By 2025, vehicles are required to achieve both 54.5 miles per gallon (mpg) (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO_2 per mile. According to the USEPA, a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010 vehicle (USEPA, 2012). Notably, the State of California harmonized its vehicle efficiency standards through 2025 with the federal standards (see Advanced Clean Car program below).

In January 2017, the USEPA issued it Mid-Term Evaluation of the GHG emissions standards, finding that it would be practical and feasible for automakers to meet the model year 2022-2025 standards through a number of existing technologies. In August 2018, the USEPA and the NHTSA proposed maintaining the 2020 corporate average fuel economy (CAFE) and CO_2 standards for model years 2021 through 2026. The estimated CAFE and CO_2 standards for model year 2020 are 43.7 miles per gallon (mpg) and 204 grams of CO_2 per mile for passenger cars and 31.3 mpg and 284 grams of CO_2 per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012. In September 2019, the USEPA finalized the Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program and announced its decision to withdraw the Clean Air Act preemption waiver granted to the State of California in 2013 (U.S. DOT & USEPA, 2019). In March 2022, the USEPA reinstated California's waiver restoring the State's authority to set and enforce more stringent standards than the federal government, including California's GHG emission standards and zero emission vehicle mandate (USEPA, 2022b).

4.7.2.2 State

California has promulgated a series of executive orders, laws, and regulations aimed at reducing both the level of GHGs in the atmosphere and emissions of GHGs within the State. The major components of California's climate protection initiative are reviewed below. CARB is the agency with regulatory authority over air quality issues in California. CARB adopts regulations designed to reduce criteria pollutants, toxic air contaminants, and GHG emissions; and establishes vehicle emission standards. As discussed earlier, CARB is responsible for preparing, adopting, and updating California's GHG inventory. Additional responsibilities of CARB with respect to specific State mandates are discussed below.

CEQA Guidelines

The *CEQA Guidelines* are embodied in the California Code of Regulations (CCR), Title 14, beginning with Section 15000. The current *CEQA Guidelines* Section 15064.4 states that "a lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project." Section 15064.4 further states:

> *A lead agency should consider the following factors, when determining the significance of impacts from greenhouse gas emissions on the environment:*
>
> *(1) The extent to which the project may increase or reduce greenhouse gas 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.

(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 greenhouse gas emissions (see e.g., section 15183.5(b)).

The *CEQA Guidelines* also state that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including plans or regulations for the reduction of GHG emissions) that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located (*CEQA Guidelines* Section 15064(h)(3)).

The *CEQA Guidelines* do not require or recommend a specific analytical method or provide quantitative criteria for determining the significance of GHG emissions, nor do they set a numerical threshold of significance for GHG emissions. Section 15064.7(c) clarifies that "when adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

When GHG emissions are found to be significant, *CEQA Guidelines* Section 15126.4(c) includes the following direction on measures to mitigate GHG emissions:

Consistent with Section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effects of greenhouse gas emissions may include, among others:

(1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision.

(2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures.

(3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions.

(4) Measures that sequester greenhouse gases.

(5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.

State of California Executive Orders

EO S-1-07 and Update to the Low Carbon Fuel Standard

EO S-1-07, signed by Governor Schwarzenegger in 2007 established a low carbon fuel standard (LCFS) with a goal to reduce the carbon intensity of transportation fuels sold in California by at

least 10 percent by 2020. In September 2018, CARB extended the LCFS program to 2030, making significant changes to the design and implementation of the program, including a doubling of the carbon intensity reduction to 20 percent by 2030.

EO B-16-12

In March 2012, Governor Brown issued an executive order establishing a goal of 1.5 million zero-emission vehicles (ZEVs) on California roads by 2025. In addition to the ZEV goal, EO B-16-12 stipulated that by 2015 all major cities in California would have adequate infrastructure and be "zero-emission vehicle ready"; that by 2020 the State would have established adequate infrastructure to support one million ZEVs; that by 2050, virtually all personal transportation in the State will be based on ZEVs; and that GHG emissions from the transportation sector will be reduced by 80 percent below 1990 levels.

Executive Order B-30-15

Governor Brown signed Executive Order B-30-15 on April 29, 2015, which:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030;
- Ordered all State agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets; and
- Directed CARB to update the Climate Change Scoping Plan (Scoping Plan) to express the 2030 target in terms of $MMTCO_2e$.

EO B-48-18

On January 26, 2018, Governor Brown issued an executive order establishing a goal of 5 million ZEVs on California roads by 2030.

EO B-55-18

On September 10, 2018, Governor Brown signed EO B-55-18, committing California to total, economy-wide carbon neutrality by 2045. EO B-55-18 directs CARB to work with relevant State agencies to develop a framework to implement an accounting to track progress toward this goal. AB 1395 would codify this carbon neutral target.

EO N-79-20

On September 23, 2020, Governor Newsom signed EO N-79-20, which sets new statewide goals for phasing out gasoline-powered cars and trucks in California. EO N-79-20 requires that 100 percent of in-state sales of new passenger cars and trucks are to be zero-emission by 2035; 100 percent of in-state sales of medium- and heavy-duty trucks and busses are to be zero-emission by 2045 where feasible; and 100 percent of off-road vehicles and equipment sales are to be zero-emission by 2035 where feasible.

State of California Policy and Legislation

Assembly Bill 117 and Senate Bill 790

In 2002, the State of California passed AB 117, enabling public agencies and joint power authorities to form a Community Choice Aggregation (CCA). SB 790 strengthened it by creating a "code of conduct" that the incumbent utilities must adhere to in their activities relative to CCAs. CCAs allow a city, county, or group of cities and counties to pool electricity demand and purchase/generate power on behalf of customers within their jurisdictions in order to provide local choice. CCAs work with PG&E to deliver power to its service area. The CCA is responsible for the electric generation (procure or develop power) while PG&E is responsible for electric delivery, power line maintenance, and monthly billing.

Senate Bills 1078 and 107

SB 1078 (Chapter 516, Statutes of 2002) required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.

Assembly Bill 32 and Senate Bill 32

The California Global Warming Solutions Act of 2006 (AB 32) required that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction was to be accomplished by enforcing a statewide cap on GHG emissions that would be phased in starting in 2012. This act defines GHGs as CO_2, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. The California Global Warming Solutions Act assigned CARB the primary responsibility for reducing GHG emissions, by adopting rules and regulations directing State actions that would achieve GHG emissions reductions equivalent to 1990 statewide levels by 2020.

As required by the California Global Warming Solutions Act, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020, originally set at 427 $MMTCO_2e$, using the GWP values from the IPCC Second Assessment Report. CARB established the GHG emissions reduction target based on GWP values from the IPCC Fourth Assessment Report (AR4) and determined that the 1990 GHG emissions inventory and 2020 GHG emissions limit is 431 $MMTCO_2e$.

In 2016, SB 32 and its companion bill AB 197 amended Health and Safety Code Division 25.5, establishing a new climate pollution reduction target of 40 percent below 1990 levels by 2030, and included provisions to ensure that the benefits of State climate policies reach EJ Communities.

Assembly Bill 1279 (California Climate Crisis Act)

In August 2022, the California Legislature passed a package of significant climate legislation that includes a codification of the State's goal to reach net-zero by 2045. With the passage of AB 1279, California has locked in a pathway for it to reach net-zero by no later than 2045. This enables the legislature, communities and businesses to start long-term planning, with certainty, for a safer

future today. Critically, this goal requires California to cut GHG emissions by 85 percent compared to 1990 levels, ensuring the State uses all available solutions to sharply cut pollution from industrial facilities, vehicles, power plants and more. The Governor signed AB 1279 into law on September 16, 2022.

Climate Change Scoping Plan

A specific requirement of AB 32 was to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020. CARB developed and approved the initial scoping plan in 2008, outlining the regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs that would be needed to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives (CARB, 2008).

CARB approved the initial AB 32 Scoping Plan in 2008 (CARB 2008). It approved the *First Update to the Climate Change Scoping Plan* (2014 Scoping Plan) in May 2014 and built upon the 2008 Scoping Plan with new strategies and recommendations (CARB 2014). In 2014, CARB revised the target using the GWP values from the IPCC AR4 and determined that the 1990 GHG emissions inventory and 2020 GHG emissions limit is 431 $MMTCO_2e$. CARB also updated the State's 2020 business-as-usual (BAU) emissions estimate to account for the impact of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that were adopted for motor vehicles and renewable energy. CARB's projected statewide 2020 emissions estimate using the GWP values from the IPCC AR4 is 509.4 $MMTCO_2e$.

In response to the 2030 GHG reduction target, CARB adopted California's 2017 Climate Change Scoping Plan (2017 Scoping Plan) in December 2017. The 2017 Scoping Plan outlines the proposed framework of action for achieving the 2030 GHG target of 40 percent reduction in GHG emissions relative to 1990 levels (CARB, 2017). Through a combination of data synthesis and modeling, CARB determined that the target statewide 2030 emissions limit is 260 $MMTCO_2e$, and that further commitments will need to be made to achieve an additional reduction of 50 $MMTCO_2e$ beyond current policies and programs. The cornerstone of the 2017 Scoping Plan is an expansion of the cap-and-trade program to meet the aggressive 2030 GHG emissions goal and ensure achievement of the 2030 limit set forth by EO B-30-15.

In the 2017 Scoping Plan, CARB recommends statewide targets of no more than 6 $MTCO_2e$ per capita by 2030 and no more than 2 $MTCO_2e$ per capita by 2050. CARB acknowledges that because the statewide per-capita targets are based on the statewide GHG emissions inventory that includes all emissions sectors in the State, it is appropriate for local jurisdictions to derive evidence-based local per-capita goals based on local emissions sectors and growth projections.

To demonstrate how a local jurisdiction can achieve its long-term GHG goals at the community plan level, CARB recommends developing a geographically specific GHG reduction plan (i.e., climate action plan) consistent with the requirements of CEQA Section 15183.5(b). A so-called "CEQA-qualified" GHG reduction plan, once adopted, can provide local governments with a streamlining tool for project-level environmental review of GHG emissions, provided there are

adequate performance metrics for determining project consistency with the plan. Absent conformity with such a plan, CARB recommends "that projects incorporate design features and GHG reduction measures, to the degree feasible, to minimize GHG emissions. Achieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development." While acknowledging that recent land use development projects in California have demonstrated the feasibility to achieve zero net additional GHG emissions (e.g., Newhall Ranch Resource Management and Development Plan), the 2017 Scoping Plan states that:

> *Achieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA. Lead agencies have the discretion to develop evidence-based numeric thresholds (mass emissions, per capita, or per service population) consistent with this Scoping Plan, the State's long-term GHG goals, and climate change science…To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from VMT [vehicle miles traveled], and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits locally.*

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

The 2022 Scoping Plan, adopted by CARB in December 2022, expands on prior Scoping Plans and responds to more recent legislation by outlining a technologically feasible, cost-effective, and equity-focused path to achieve the State's climate target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045 and achieving carbon neutrality[5] by 2045 or earlier (CARB 2022b). The 2022 Scoping Plan outlines the strategies the State will implement to achieve carbon neutrality by reducing GHGs to meet the anthropogenic target and by expanding actions to capture and store carbon through the State's natural and working lands and using a variety of mechanical approaches.

The major element of the 2022 Scoping Plan is the decarbonization of every sector of the economy. This requires rapidly moving to zero-emission transportation for cars, buses, trains, and trucks; phasing out the use of fossil gas for heating; clamping down on chemicals and refrigerants; providing communities with sustainable options such as walking, biking, and public transit to reduce reliance on cars; continuing to build out solar arrays, wind turbine capacity, and other

[5] *Carbon neutrality* means "net zero" emissions of GHGs. In other words, it means that GHG emissions generated by sources such as transportation, power plants, and industrial processes must be less than or equal to the amount of carbon dioxide that is stored, both in natural sinks and through mechanical sequestration. AB 1279 uses the terminology net zero and the 2022 Scoping Plan uses the terminology carbon neutrality or carbon neutral. These terms mean the same thing and are used interchangeably.

resources to provide clean, renewable energy to displace fossil-fuel fired electrical generation; scaling up new options such as renewable hydrogen for hard-to-electrify end uses and biomethane where needed. "Successfully achieving the outcomes called for in the Scoping Plan would reduce demand for liquid petroleum by 94 percent and total fossil fuel by 86 percent by 2045 relative to 2022" (CARB 2022b).

Despite these efforts, some amount of residual emissions will remain from hard-to-abate industries such as cement, internal combustion vehicles still on the road, and other sources of GHGs, including high global warming chemicals used as refrigerants. The 2022 Scoping Plan addresses the remaining emissions by re-envisioning natural and working lands (such as forests, shrublands/chaparral, croplands, wetlands, and other lands) to ensure they incorporate and store as much carbon as possible. Since working lands will not provide enough sequestration or carbon storage on their own to address the residual emissions, additional methods of capturing, removing, and storing carbon dioxide need to be explored, developed, and deployed.

The 2022 Scoping Plan shows that the State must take unprecedented and substantial action to achieve its climate goals, far beyond anything CARB has considered in prior scoping plans. In CARB's own words, the 2022 Scoping Plan "is the most comprehensive and far-reaching Scoping Plan developed to date" and "[m]odeling for this Scoping Plan shows that this decade must be one of transformation on a scale never seen before to set us up for success in 2045" (CARB 2022a). The 2022 Scoping Plan includes the Scoping Plan Scenario, which "builds on and integrates efforts already underway to reduce the State's GHG, criteria pollutant, and toxic air contaminant emissions by identifying the clean technologies and fuels that should be phased in as the State transitions away from combustion of fossil fuels" (CARB 2022b). The 2022 Scoping Plan approaches decarbonization from two perspectives: (1) managing a phasedown of existing energy sources and technology and (2) ramping up, developing, and deploying alternative clean energy sources and technology over time (CARB 2022b).

The 2022 Scoping Plan also discusses the role of local governments in meeting the State's GHG reductions goals because local governments have jurisdiction and land use authority related to community-scale planning and permitting processes, local codes and actions, outreach and education programs, and municipal operations. Local governments' efforts to reduce GHG emissions within their jurisdictions are critical to achieving the State's long-term climate goals. Furthermore, local governments make critical decisions on how and when to deploy transportation infrastructure and can choose to support transit, walking, bicycling, and neighborhoods that allow people to transition away from cars; they can adopt building ordinances that exceed statewide building code requirements; and they play a critical role in facilitating the rollout of ZEV infrastructure (CARB 2022c). The 2022 Scoping Plan encourages local governments to take ambitious, coordinated climate action at the community scale; action that is consistent with and supportive of the State's climate goals (CARB 2022c). These could include:

- Developing local CAPS and strategies consistent with the State's GHG emission reduction goals.
- Incorporating State-level GHG priorities into their processes for approving land use and individual plans and individual projects.

- Implementing CEQA mitigation, as needed, to reduce GHG emissions associated with new land use development projects, and
- Leveraging opportunities for regional collaboration.

Cap-and-Trade Program

Initially authorized by the California Global Warming Solutions Act of 2006 (AB 32) and extended through the year 2030 with the passage of AB 398 (2017), the California Cap-and-Trade Program is a core strategy that the State is using to meet its GHG reduction targets for 2020 and 2030, and ultimately achieve an 80 percent reduction from 1990 levels by 2050. CARB designed and adopted the California Cap-and-Trade Program to reduce GHG emissions from "covered entities"[6] (e.g., electricity generation, petroleum refining, cement production, and large industrial facilities that emit more than 25,000 $MTCO_2e$ per year), setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve reductions.[7] Under the Cap-and-Trade Program, an overall limit is established for GHG emissions from capped sectors. The statewide cap for GHG emissions from the capped sectors commenced in 2013. The cap declines over time. Facilities subject to the cap can trade permits to emit GHGs.[8]

Senate Bill 375

Signed into law on October 1, 2008, SB 375 supplements GHG reductions from new vehicle technology and fuel standards with reductions from more efficient land use patterns and improved transportation. Under the law, CARB approved GHG reduction targets in February 2011 for California's 18 federally designated regional planning bodies, known as Metropolitan Planning Organizations. The target reductions for the Bay Area are a regional reduction of per-capita GHG emissions from cars and light-duty trucks by 7 percent by 2020 and by 15 percent by 2035, compared to a 2005 baseline.

Senate Bill 743

In 2013, Governor Brown signed SB 743, which added Public Resources Code Section 21099 to CEQA. SB 743 changed the way that transportation impacts are analyzed in Transit Priority Areas (TPAs) under CEQA, better aligning local environmental review with statewide objectives to reduce GHG emissions, encourage infill mixed-use development in designated priority development areas, reduce regional sprawl development, and reduce VMT in California.

As required under SB 743, OPR developed potential metrics to measure transportation impacts that may include, but are not limited to, VMT, VMT per capita, automobile trip generation rates, or automobile trips generated. The new VMT metric is intended to replace the use of automobile delay and level of service as the metric to analyze transportation impacts under CEQA.

In its 2018 *Technical Advisory on Evaluating Transportation Impacts in CEQA*, OPR recommends different thresholds of significance for projects depending on land use types (OPR, 2018). For

6 "Covered entity" means an entity in California that has one or more of the processes or operations and has a compliance obligation as specified in Subarticle 7 of the Cap-and-Trade Regulation; and that has emitted, produced, imported, manufactured, or delivered in 2008 or any subsequent year more than the applicable threshold level specified in section 95812(a) of the Regulation.

7 17 CCR 95800–96023.

8 See generally 17 CCR 95811 and 95812.

example, residential and office space projects must demonstrate a VMT level that is 15 percent less than that of existing development to determine whether the mobile-source GHG emissions associated with the project are consistent with statewide GHG reduction targets. With respect to retail land uses, any net increase of VMT may be sufficient to indicate a significant transportation impact.

Senate Bills 1078 and 107

SB 1078 (Chapter 516, Statutes of 2002) required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.

Senate Bill X 1-2

SB X 1-2, signed by Governor Brown in April 2011, enacted the California Renewable Energy Resources Act. The law obligated all California electricity providers, including investor-owned and publicly owned utilities, to obtain at least 33 percent of their energy from renewable resources by the year 2020.

Senate Bill 350

SB 350, the Clean Energy and Pollution Reduction Act of 2015 (Chapter 547, Statutes of 2015), was approved by Governor Brown on October 7, 2015. SB 350 increased the standards of the California RPS program by requiring that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased from 33 percent to 50 percent by December 31, 2030. The act requires the State Energy Resources Conservation and Development Commission to establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in existing electricity and natural gas final end uses of retail customers by January 1, 2030.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, establishing that 100 percent of all electricity in California must be obtained from renewable and zero-carbon energy resources by December 31, 2045. SB 100 also creates new standards for the RPS goals that were established by SB 350 in 2015. Specifically, the law increases the percentage of energy that both investor-owned utilities and publicly owned utilities must obtain from renewable sources from 50 percent to 60 percent by 2030. Incrementally, these energy providers must also have a renewable energy supply of 33 percent by 2020, 44 percent by 2024, and 52 percent by 2027. The updated RPS goals are considered achievable, because many California energy providers are already meeting or exceeding the RPS goals established by SB 350.

Senate Bill 1020

On September 16, 2022, Governor Newsom signed SB 1020, which establishes interim targets to the policy framework originally established in SB 100 to require renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent of all retail electricity sales by 2040. This will help ensure that the State makes steady and accountable progress towards decarbonizing the entire statewide electricity grid. The bill also requires all

State agencies to rely on 100 percent renewable energy and zero-carbon resources to serve their own facilities by 2035.

Senate Bill 1206

On October 3, 2022, Governor Newsom signed SB 1206, which will reduce the emissions and use of hydrofluorocarbons (HFCs), potent synthetic greenhouse gases used primarily as refrigerants in cooling equipment. SB 1206 sets California on a path to transition out of most HFCs to ultra-low or no global warming potential (GWP) alternatives and reclaimed refrigerants by 2035. Specifically, SB 1206 prohibits entry into commerce, sale, or distribution of HFCs above certain GWP limits, except those that are reclaimed. These prohibitions begin at a 2,200 GWP in 2025, progressively reducing to 750 in 2035. Sales and distribution of the HFC most commonly used in supermarkets, R404A, will be prohibited from sale in 2025, while the R410A used in most air conditioners will be cut off in 2030. The bill would require CARB to initiate a rulemaking requiring low and ultra-low global warming potential alternatives to hydrofluorocarbons in a sector unless it is not practicable for entities in the sector to comply with the requirement.

Advanced Clean Cars Program

In January 2012, pursuant to Recommended Measures T-1 and T-4 of the 2008 Scoping Plan, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model years 2017 through 2025. In response to a midterm review of the standards in March 2017, CARB directed staff to begin working on post-2025 model year vehicle regulations (Advanced Clean Cars II) to research additional measures to reduce air pollution from light-duty and medium-duty vehicles. Additionally, as described earlier, in September 2020, Governor Newsom signed EO N-79-20 that established a goal that 100 percent of California sales of new passenger car and trucks be zero-emission by 2035 and directed CARB to develop and propose regulations toward this goal. The primary mechanism for achieving these targets for passenger cars and light trucks is the Advanced Clean Cars II Program.

In 2022, CARB approved the Advanced Clean Cars II Program (CARB 2022d), for model years 2026 through 2035, which requires that all new passenger cars, trucks and SUVs sold in California be zero emissions by 2035. The regulation amends the Zero-emission Vehicle (ZEV) Regulation to require an increasing number of ZEVs, and relies on advanced vehicle technologies, including battery-electric, hydrogen fuel cell electric and plug-in hybrid electric-vehicles, to meet air quality and climate change emissions standards, in support of EO N-79-20 (CARB 2022d). This Program also amended the Low-emission Vehicle Regulations to include increasingly stringent standards for gasoline cars and heavier passenger trucks to continue to reduce smog-forming emissions. By increasing the number of ZEVs on the road and continuing to clean up conventional internal combustion vehicles, the regulations will reduce exposure to vehicle pollution in communities throughout California, including in frontline communities that are disproportionately exposed to vehicular pollution

Mobile Source Strategy

In May 2016, CARB released the updated Mobile Source Strategy that demonstrates how the State can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risk from transportation emissions, and reduce petroleum consumption over the

next 15 years. The strategy promotes a transition to zero-emission and low-emission vehicles, cleaner transit systems and reduction of vehicle miles traveled (VMT). The Mobile Source Strategy calls for 1.5 million ZEVs (including plug-in hybrid electric, battery-electric, and hydrogen fuel cell vehicles) by 2025 and 4.2 million ZEVs by 2030. The strategy also calls for more-stringent GHG requirements for light-duty vehicles beyond 2025 as well as GHG reductions from medium-duty and heavy-duty vehicles and increased deployment of zero emission trucks primarily for class 3 through 7 "last mile" delivery trucks in California. Statewide, the Mobile Source Strategy would result in a 45 percent reduction in GHG emissions from mobile sources and a 50 percent reduction in the consumption of petroleum-based fuels (CARB, 2016).

Similar to the 2016 Mobile Source Strategy, the 2020 Strategy is a framework that identifies the levels of cleaner technologies necessary to meet the many goals and high-level regulatory concepts that would allow the State to achieve the levels of cleaner technology. The 2020 Strategy will inform the development of other planning efforts including the State Implementation Plan (SIP) which will translate the concepts included into concrete measures and commitments for specific levels of emissions reductions, the 2022 Climate Change Scoping Plan (2022 Scoping Plan), and Community Emissions Reduction Plans (CERPs) required for communities selected as a part of CARB's Community Air Protection Program. Central to all of these planning efforts, and CARB actions on mobile sources going forward, will be environmental justice as CARB strives to address longstanding environmental and health inequities from elevated levels of toxics, criteria pollutants, and secondary impacts of climate change (CARB, 2021b). The 2020 Mobile Source Strategy illustrates that an aggressive deployment of ZEVs will be needed for the State to meet federal air quality requirements and the State's climate change targets.

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, CARB adopted the Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling to reduce public exposure to diesel particulate matter emissions (13 CCR Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure prohibits diesel-fueled commercial vehicles from idling for more than five minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in GHG reduction and energy savings in the form of reduced fuel consumption from unnecessary idling.

Airborne Toxic Control Measure for Stationary Compression Ignition Engines

In 2004, CARB adopted an Airborne Toxic Control Measure to reduce public exposure to emissions of diesel particulate matter and criteria pollutants from stationary diesel-fueled compression ignition engines (17 CCR Section 93115). The measure applies to any person who owns or operates a stationary compression ignition engine in California with a rated brake horsepower greater than 50, or to anyone who either sells, offers for sale, leases, or purchases a stationary compression ignition engine. This measure outlines fuel and fuel additive requirements; emissions standards; recordkeeping, reporting and monitoring requirements; and compliance schedules for compression ignition engines.

Truck and Bus Regulation

In addition to limiting exhaust from idling trucks, in 2008 CARB approved the Truck and Bus Regulation to reduce the emissions of oxides of nitrogen and particulate matter from existing diesel vehicles operating in California (13 CCR Section 2025). The phased regulation aims to reduce emissions by requiring installation of diesel soot filters and encouraging the retirement, replacement, or retrofit of older engines with newer emission-controlled models. This regulation will be implemented in phases, with full implementation by 2023.

CARB also promulgated emissions standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel-Fueled Fleets regulation adopted by CARB on July 26, 2007, aims to reduce emissions by installing diesel soot filters and encouraging the retirement, replacement, or repowering of older, dirtier engines with newer emissions-controlled models (13 CCR Section 2449). The compliance schedule requires full implementation by 2023 in all equipment for large and medium fleets and by 2028 for small fleets.

Senate Bill 1383 (Short-Lived Climate Pollutants)

SB 1383, enacted in 2016, requires statewide reductions in short-lived climate pollutants across various industry sectors. The climate pollutants covered under SB 1383 include methane, fluorinated gases, and black carbon—all GHGs with a much higher warming impact than CO_2 and with the potential to have detrimental effects on human health. SB 1383 requires CARB to adopt a strategy to reduce methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The methane emissions reduction goals include a 75 percent reduction in the level of statewide disposal of organic waste from 2014 levels by 2025.

Assembly Bill 341

AB 341, which became law in 2011, established a new statewide goal of 75 percent recycling through source reduction, recycling, and composting by 2020. The new law changed the way that the State measures progress toward the 75 percent recycling goal, focusing on source reduction, recycling, and composting. AB 341 also requires all businesses and public entities that generate four cubic yards or more of waste per week and multifamily residential dwellings with five units or more to have a recycling program in place (California Legislative Information, 2011). The purpose of the law is to reduce GHG emissions by diverting commercial solid waste to recycling efforts and expand the opportunity for additional recycling services and recycling manufacturing facilities in California.

Assembly Bill 1826

AB 1826, known as the Commercial Organic Waste Recycling Law, became effective on January 1, 2016, and requires businesses and multi-family complexes (with five units or more) that generate specified amounts of organic waste (compost) to arrange for organics collection services. The law phases in the requirements on businesses with full implementation realized in 2019:

- **First Tier:** Commenced in April 2016, the first tier of affected businesses included those that generate eight or more cubic yards of organic materials per week.

- **Second Tier:** In January 2017, the affected businesses expanded to include those that generate four or more cubic yards of organic materials per week.
- **Third Tier:** In January 2019, the affected businesses expanded further to include those that generate four or more cubic yards of commercial solid waste per week.

Senate Bill 905, Carbon Capture Removal, Utilization, and Storage Program

The Legislature enacted SB 905 on September 16, 2022. SB 905 requires CARB to establish the Carbon Capture, Removal, Utilization, and Storage Program to evaluate, demonstrate, and regulate carbon capture, utilization, and sequestration (CCUS) and carbon dioxide removal (CDR) project and technology. On or before January 1, 2025, CARB must adopt regulations creating a unified permitting application for approval of CCUS and CDR projects which would expedite the permitting process and other authorizations for the construction and operation of these projects. SB 906 authorizes CARB to develop a centralized database to track the deployment of CCUS and CDR technologies and projects. Additionally, SB 905 requires the Secretary of the Natural Resources Agency to publish framework for governing agreements for two or more trats of land overlying the same geologic storage reservoir for the purposes of a carbon sequestration project.

Senate Bill 1137, Oil and Gas Operations; Location Restrictions; Notice of Intention; Health Protection Zone; Sensitive Receptors

SB 1137 prohibits the development of new oil and gas wells or infrastructure in health protection zones, as defined, except for purposes of public health and safety or other limited exceptions. The bill requires operators of existing oil and gas wells or infrastructure within health protection zones to undertake specified monitoring, public notice, and nuisance requirements. The bill requires CARB to consult and concur with the California Geologic Energy Management Division (CalGEM) on leak detection and repair plans for these facilities, adopt regulations as necessary to implement emission detection system standards, and collaborate with CalGEM on public access to emissions detection data.

Assembly Bill 1757, California Global Solutions act of 2006; Climate Goal; Natural and Working Lands

Requires the California Natural Resources Agency (CNRA), by January 1, 2024, in collaboration with CARB, the California Environmental Protection Agency (CalEPA), the California Department of Food and Agriculture (CDFA), and an expert advisory committee, to set targets for natural carbon sequestration and nature-based climate solutions for 2030, 2038, and 2045, which must be integrated into the Scoping Plan and other State policies. CARB must ensure that double counting of emissions reductions is avoided and emissions reduction projects and actions that receive State funding will not be eligible to generate credits under any market-based compliance mechanism. CARB, by January 1, 2025, must develop standard methods for State agencies to track GHG emissions and reductions, carbon sequestration, and, where feasible, additional benefits from natural and working lands over time. CNRA, by January 1, 2025, in collaboration with CARB, CalEPA, and CDFA, must review and update the Climate Smart Strategy to achieve the targets and post data on its website on progress made toward targets, including on State expenditures made to implement the targets.

Senate Bill 1206, Hydrofluorocarbon Gases; Sale or Distribution

SB 1206 prohibits the sale or distribution of bulk hydrofluorocarbon gases (HFCs) or bulk blends contain HFCs that exceed 2,200 GWP in 2025, 1,400 GWP in 2030, and 750 GWP in 2033, unless the HFCs are reclaimed or for use in medical metered dose inhalers. SB 1206 also requires the State to use reclaimed refrigerant with a GWP greater than 750 to service existing equipment owned/operated by the State starting in 2025. Additionally, SB 1206, requires CARB to initiate a rulemaking requiring low- and ultra-low GWP alternatives to HFCs in all sectors where it is practicable for entities in the sector to comply with the requirement.

Senate Bill 27, Carbon Sequestration; State Goals; Natural and Working Lands; Registry of Projects

SB 27 requires CNRA, in coordination with other State agencies, to establish the Natural and Working Lands Climate Smart Strategy by July 1, 2023. SB 27 also requires CARB to establish specified CO_2 removal targets for 2030 and beyond as part of its Scoping Plan. Under SB 27, CNRA is to establish and maintain a registry to identify projects in the State that drive climate action on natural and working lands and are seeking funding. CNRA also must track carbon removal and GHG emission reduction benefits derived from projects funded through the registry. This bill is reflected in the 2022 Scoping Plan as CO_2 removal and carbon capture targets of 20 $MMTCO_2e$ by 2030 and 100 $MMTCO_2e$ by 2045 in support of carbon neutrality.

Senate Bill 596, Greenhouse Gases; Cement Sector; Net-zero Emissions Strategy

SB 596 requires CARB, by July 1, 2023, to develop a comprehensive strategy for the State's cement sector to achieve net-zero-emissions of GHGs associated with cement used within the State as soon as possible, but no later than December 31, 2045. The bill establishes an interim target of 40 percent below the 2019 average GHG intensity of cement by December 31, 2035. Under SB 596, CARB must: (1) define a metric for GHG intensity and establish a baseline from which to measure GHG intensity reductions, (2) evaluate the feasibility of the 2035 interim target (40 percent reduction in GHG intensity) by July 1, 2028, (3) coordinate and consult with other State agencies, (4) prioritize actions that leverage State and federal incentives, and (5) evaluate measures to support market demand and financial incentives to encourage the production and use of cement with low GHG intensity.

State of California Building Codes

California Building and Energy Efficiency Standards (Title 24)

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the State. Although the standards were not originally intended to reduce GHG emissions, increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and non-residential buildings subject to the standard. The standards are updated periodically (typically every three years) to allow for the consideration and inclusion of new energy efficiency technologies and methods. The current Title 24, Part 6 standards (2019 standards; CEC, 2018) were made effective on January 1, 2020.

On August 11, 2021, the CEC adopted the 2022 Energy Code was approved by the California Building Standards Commission (CBSC) for inclusion into the California Building Standards Code. This update to the building code provides crucial steps in the State's progress toward 100 percent clean carbon neutrality by midcentury (CEC, 2022). The 2022 Energy Code builds on California's technology innovations, encouraging energy efficient approaches to encourage building decarbonization, emphasizing in particular on heat pumps for space heating and water heating. This set of Energy Codes also strengthens ventilation standards to improve indoor air quality and extends the benefits of photovoltaic and battery storage systems and other demand flexible technology to work in combinations with heat pumps to enable California buildings to be responsive to climate change. Buildings whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Energy Code. The Energy Code includes measures that will reduce energy use in single family, multifamily, and nonresidential buildings. These measures will:

1. Affect newly constructed buildings by adding new prescriptive and performance standards for electric heat pumps for space conditioning and water heating, as appropriate for the various climate zones in California;
2. Require photovoltaic (PV) and battery storage systems for newly constructed multifamily and selected nonresidential buildings;
3. Update efficiency measures for lighting, building envelope, HVAC; and
4. Make improvements to reduce the energy loads of certain equipment covered by (i.e., subject to the requirements of) the Energy Code that perform a commercial process that is not related to the occupant needs in the building (such as refrigeration equipment in refrigerated warehouses, or air conditioning for computer equipment in data processing centers).

California Green Buildings Standards Code

The California Green Building Standards Code, Part 11, Title 24, California Code of Regulations, known as CALGreen, is the first-in-the-nation mandatory green building standards code. In 2007, CBSC developed green building standards in an effort to meet the goals of California's landmark initiative AB 32. The CALGreen Code is intended to encourage more sustainable and environmentally friendly building practices, require low-pollution-emitting substances that cause less harm to the environment, conserve natural resources, and promote the use of energy-efficient materials and equipment. CALGreen covers a number of fields, with regulations encompassing energy efficiency, water conservation, sustainable building materials, site design, and air quality.

Since 2011, the CALGreen Code has been mandatory for all new residential and non-residential buildings constructed in the State. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code is reviewed and updated on a three-year cycle.

The 2019 CALGreen Code that took effect on January 1, 2020 included new mandatory measures including EV charging requirements for residential and non-residential buildings (CBSC, 2019). The 2022 CALGreen update simplifies the code and its application in several ways. It offers new voluntary prerequisites for builders to choose from, such as battery storage system controls and heat pump space, and water heating, to encourage building electrification. While the 2019

CALGreen Code only requires provision of EV Capable spaces with no requirement for chargers to be installed at multifamily dwellings, the 2022 CALGreen code mandates chargers (California Energy Codes and Standards, 2022).

4.7.2.3 Regional Plans

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) is the regional government agency that regulates stationary sources of air pollution in the nine San Francisco Bay Area counties. BAAQMD regulates GHG emissions through the following plans, programs, and guidelines.

Clean Air Plan

BAAQMD and other air districts prepare clean air plans in accordance with the federal and State Clean Air Acts. On April 19, 2017, BAAQMD Board of Directors adopted the 2017 *Clean Air Plan: Spare the Air, Cool the Climate*, an update to the 2010 Clean Air Plan (BAAQMD, 2017a). The Clean Air Plan is a comprehensive plan that focuses on the closely related goals of protecting public health and protecting the climate. Consistent with the State's GHG reduction targets, the plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.

BAAQMD Climate Protection Program

In 2005, BAAQMD established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the San Francisco Bay Area Air Basin. The climate protection program includes measures that promote energy efficiency, reduce VMT, and develop alternative sources of energy, all of which assist in reducing GHG emissions and reducing air pollutants that affect the health of residents. BAAQMD also seeks to support current climate protection programs in the region and to stimulate additional efforts through public education and outreach, technical assistance to local governments and other interested parties, and promotion of collaborative efforts among stakeholders.

BAAQMD CEQA Air Quality Guidelines

In 2010, BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed in the Bay Area (BAAQMD, 2010). The guidelines also include recommended assessment methods for air toxics, odors, and GHG emissions. The 2017 update to BAAQMD CEQA Guidelines includes significance thresholds for GHG emissions based on the emission reduction goals for 2020 articulated by the California Legislature in AB 32 (BAAQMD, 2017b). In April 2022, in response to SB 32 and 2017 Scoping Plan targets for 2030 and EO B-15 target for carbon neutrality no later than 2045, BAAQMD adopted updated CEQA significance thresholds for GHGs (BAAQMD, 2022). For land use development projects, BAAQMD recommends using the approach endorsed by the California Supreme Court in *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) (62 Cal.4th 204), which evaluates a project based on its effect on California's efforts to meet the State's long-term climate goals. As the Supreme Court held in that case, a project that would be consistent with meeting those goals can be found to have a less-than-significant impact on climate change under CEQA. If a project would contribute its "fair share" of what will be required to

achieve those long-term climate goals, then a reviewing agency can find that the impact will not be significant because the project will help to solve the problem of global climate change (62 Cal.4th 220–223). Applying this approach, BAAQMD recommends that new land use development projects incorporate BAAQMD-identified design elements to do their "fair share" of implementing the goal of carbon neutrality by 2045.

Alternately, a local government may prepare a qualified GHG reduction strategy that is consistent with SB 32 goals. If a project is consistent with an adopted qualified GHG reduction strategy and general plan that addresses the project's GHG emissions, it can be presumed that the project will not have significant GHG emissions under CEQA (BAAQMD, 2022).

Metropolitan Transportation Commission/Association of Bay Area Governments

Sustainable Communities Strategy—Plan Bay Area

MTC is the federally recognized Metropolitan Planning Organization for the nine-county Bay Area which has adopted Plan Bay Area which includes the region's Sustainable Communities Strategy, as required under SB 375, and the 2040 Regional Transportation Plan. A central GHG reduction strategy of Plan Bay Area is the concentration of future growth in Priority Development Areas (PDAs) and Transit Priority Areas (TPAs). To be eligible for PDA designation, an area must be within an existing community, near existing or planned fixed transit or served by comparable bus service and planned for more housing. Oakland has nine PDAs, which are shown on Figure 3-4 in Chapter 3, *Project Description*. A TPA is an area within 0.5 miles of an existing or planned major transit stop such as a rail transit station, a ferry terminal served by transit, or the intersection of two or more major bus routes (MTC & ABAG, 2013).

On July 26, 2017, MTC adopted *Plan Bay Area 2040*, a focused update that builds upon the growth pattern and strategies developed in the original Plan Bay Area but with updated planning assumptions that incorporate key economic, demographic, and financial trends since the original plan was adopted (MTC & ABAG, 2017).

On October 21, 2021, the MTC and the Executive Board of the ABAG jointly adopted Plan Bay Area 2050 and its related supplemental reports. Plan Bay Area 2050 connects the elements of housing, the economy, transportation and the environment through 35 strategies that will make the Bay Area more equitable for all residents and more resilient in the face of unexpected challenges. In the short-term, the plan's Implementation Plan identifies more than 80 specific actions for MTC, ABAG and partner organizations to take over the next five years to make headway on each of the 35 strategies (MTC & ABAG, 2021). It will be several years before the regional transportation model (and therefore county and local transportation models) are updated to reflect Plan Bay Area 2050; the models currently incorporate data from Plan Bay Area 2040.

4.7.2.4 Local Plans, Ordinances and Policies

City of Oakland General Plan

Land Use and Transportation Element (LUTE)

The LUTE (which includes the Pedestrian Master Plan and Bicycle Master Plan) of the Oakland General Plan contains the following policies that address issues related to reducing transportation-related sources of GHG emissions and their effects on climate change (City of Oakland, 1998a):

> ***Policy T.2.1: Encouraging Transit-Oriented Development:*** Transit-oriented development should be encouraged at existing or proposed transit nodes, defined by the convergence of two or more modes of public transit such as BART, bus, shuttle service, light rail or electric trolley, ferry, and inter-city or commuter rail.
>
> ***Policy T.2.2: Guiding Transit-Oriented Development.*** Transit-oriented developments should be pedestrian oriented, encourage night and day time use, provide the neighborhood with needed goods and services, contain a mix of land uses, and be designed to be compatible with the character of surrounding neighborhoods.
>
> ***Policy T.3.5: Including Bikeways and Pedestrian Walks.*** The City should include bikeways and pedestrian ways in the planning of new, reconstructed, or realigned streets, wherever possible.
>
> ***Policy T.3.6: Incorporating Design Feature for Alternative Travel.*** The City will require new development, rebuilding, or retrofit to incorporate design features in their projects that encourage use of alternative modes of transportation such as transit, bicycling, and walking.
>
> ***Policy T4.1: Incorporating Design Features for Alternative Travel.*** The City will require new development, rebuilding, or retrofit to incorporate design features in their projects that encourage use of alternative modes of transportation such as transit, bicycling, and walking.
>
> ***Policy T.4.2: Creating Transportation Incentives.*** Through cooperation with other agencies, the City should create incentives to encourage travelers to use alternative transportation options.
>
> ***Policy T4.6: Making Transportation Accessible for Everyone.*** Alternative modes of transportation should be accessible for all of Oakland's population. Including the elderly, disable, and disadvantaged.
>
> ***Policy N.3.2: Encouraging Infill Development.*** In order to facilitate the construction of needed housing units, infill development that is consistent with the General Plan should take place throughout the City.
>
> ***Policy T6.1: Posting Maximum Speeds.*** Collector streets shall be posted at a maximum speed (usually a maximum speed of 25 miles per hour), except where a lower speed is dictated by safety and allowable by law.
>
> ***Policy T6.2: Improving Streetscapes.*** The City should make major efforts to improve the visual quality of streetscapes. Design of the streetscape, particularly in neighborhoods and commercial centers, should be pedestrian-oriented and include lighting, directional signs, trees, benches and other support facilities.

Policy D3.2: Incorporating Parking Facilities. New parking facilities for cars and bicycles should be incorporated into the design of any project in a manner that encourages and promotes safe pedestrian activity.

Policy D10.6: Creating Infill Housing. Infill housing that respects surrounding development and the streetscape should be encouraged in the downtown to strengthen or create distinct districts.

Policy N3.2: Encouraging Infill Development. In order to facilitate the construction of needed housing units, infill development that is consistent with the General Plan should take place throughout the City.

Open Space, Conservation and Recreation Element (OSCAR)

The OSCAR Element of the Oakland General Plan includes policies that address GHG emissions reduction and adaptation to global climate change. Listed below are OSCAR policies that encourage the provision of open space, which increases vegetation area (trees, grass, landscaping, etc.) to effect cooler climate, reduce excessive solar gain, and absorb CO_2; OSCAR policies that encourage stormwater management, which relates to the maintenance of floodplains and infrastructure to accommodate potential increased storms and flooding; and OSCAR policies that encourage energy efficiency and use of alternative energy sources, which directly address reducing GHG emissions (City of Oakland, 1996).

Policy CO-12.1: Land Use Patterns Which Promote Air Quality. Promote land use patterns and densities which help improve regional air quality conditions by: (a) minimizing dependence on single passenger autos; (b) promoting projects which minimize quick auto starts and stops, such as live-work development, mixed use development, and office development with ground floor retail space; (c) separating land uses which are sensitive to pollution from the sources of air pollution; and (d) supporting telecommuting, flexible work hours, and behavioral changes which reduce the percentage of people in Oakland who must drive to work on a daily basis.

Policy CO-12.4: Design of Development to Minimize Air Quality Impacts. Require that development projects be designed in a manner which reduces potential adverse air quality impacts. This may include: (a) the use of vegetation and landscaping to absorb carbon monoxide and to buffer sensitive receptors; (b) the use of low-polluting energy sources and energy conservation measures; and (c) designs which encourage transit use and facilitate bicycle and pedestrian travel.

Policy CO.13.2: Energy Efficiency. Support public information campaigns, energy audits, the use of energy-saving appliances and vehicles, and other efforts which help Oakland residents, businesses, and City operations become more energy efficient.

Policy CO.13.3: Construction Methods and Materials. Encourage the use of energy-efficient construction and building materials. Encourage site plans for new development which maximize energy efficiency.

Policy CO13.4: Alternative Energy Sources. Accommodate the development and use of alternative energy resources, including solar energy and technologies which convert waste or industrial byproducts to energy, provided that such activities are compatible with surrounding land uses and regional air and water quality requirements.

Historic Preservation Element

A key Historic Preservation Element policy relevant to climate change encourages the reuse of existing building (and building materials) resources, which could reduce landfill material (a source of methane, a GHG), avoid the incineration of materials (which produces CO_2 as a by-product), avoid the need to transport materials to disposal sites (which produces GHG emissions), and eliminate the need for materials to be replaced by new product (which often requires the use of fossil fuels to obtain raw and manufacture new material) (City of Oakland, 1998b).

2023-2031 Housing Element

The 2023-2031 Oakland Housing Element is one component of the larger effort to update the City of Oakland's General Plan. The 2023-2031 Housing Element describes the City's vision for meeting the housing needs of all Oaklanders, including through housing production, protection, and preservation. Specific policies that seek to encourage and facilitate the types of infill, re-use, mixed-use, and central city/corridor-oriented residential development are the focus of the Housing Element. Urban infill is recognized as a mitigation strategy for reducing community GHG emissions, as infill development is often associated with shorter travel distances and smaller, more efficient homes (Jones, C. M., Wheeler, S. M., Kammen, D. M., 2018). Thus, policies included within the 2023-2031 Housing Element that support infill development and strengthen tenant protections to mitigate displacement of Oakland residents have an indirect effect on GHG emissions reductions.

The following policy and associated actions of the 2023-2031 Housing Element are directly and indirectly relevant to the GHG emissions analysis.

Goal 1: Protect Oakland residents from displacement and prevent homelessness[9].

Policy 1.1: Tenant protections and anti-displacement.

Action 1.1.1: Continue to implement the Rent Adjustment Ordinance.

Action 1.1.2: Enforce Just Cause for Eviction measures.

Action 1.1.4: Implement tenant relocation measures.

Action 1.1.7: Expand the City's ability to enforce rent control to maintain affordability.

Action 1.1.8: Monitor neighborhood displacement risk factors.

Action 1.1.12: Provide a local preference in affordable housing projects.

Action 1.1.14: Protect Oakland residents from displacement and becoming homeless.

Goal 2: Preserve and improve existing affordable housing stock.

Policy 2.1: Existing housing stock improvement.

[9] Housing policies that protect Oakland residents from displacement, such as those included under Goal 1 are an important component of the City's GHG strategy. Tenant protections help to ensure Oakland residents who are employed within the City are not displaced and do not have to increase their commute distance. This mitigates increases in VMT per capita and associated GHG emissions.

Action 2.1.1: Support home rehabilitation programs.

Policy 2.2: Preserve the affordability of existing homes.

Action 2.2.1: Continue to implement resale controls on assisted housing.

Action 2.2.2: Enforce, monitor, and preserve affordable housing covenants with an emphasis on "at-risk" units.

Action 2.2.3: Enforce residential demolition and conversion restrictions for residential hotels.

Action 2.2.4: Limit condominium conversions.

Action 2.2.5: Extend local replacement provisions.

Action 2.2.6: Reduce short-term home purchases/sales (i.e., "house flipping") to ensure affordability and prevent displacement.

Action 2.2.7: Provide additional subsidy for residential hotels.

Action 2.2.8: Investigate a Tenant/Community Opportunity to Purchase Act.

Goal 3: Close the gap between affordable and market-rate housing production by expanding affordable housing opportunities.

Policy 3.1: Facilitate production of deeply affordable housing.

Action 3.1.1: Develop a project-based rental or operating subsidy program for extremely low-income residents.

Action 3.1.2: Align and target Oakland Housing Authority Section 8 Vouchers for permanent supportive housing and extremely-low-income units.

Policy 3.2: Create a more diverse mix of homes to meet community needs.

Action 3.2.1: Develop zoning standards to encourage missing middle and multi-unit housing types in currently single-family-dominated neighborhoods, including flats, duplexes, triplexes, fourplexes, townhomes, rowhouses, and ADUs.

Action 3.2.2: Promote and protect live/work housing and housing for artists.

Action 3.2.3: Promote flexibility in adaptive reuse to increase the housing stock.

Action 3.2.4: Provide financial incentives for lower-income homeowners to legalize ADUs.

Action 3.2.5: Reduce constraints to the development of ADUs.

Action 3.2.6: Monitor affordability of permitted ADUs.

Action 3.2.7: Proactive short-term rental enforcement.

Policy 3.3: Expand resources for the construction of affordable homes.

Action 3.3.1: Sale or ground-lease of City-owned property for affordable housing.

Action 3.3.2: Expansion of Section 8 vouchers.

Action 3.3.3: City of Oakland Emergency Rental Assistance Program.

Action 3.3.4: Development of permanent housing affordable to extremely-low-income (ELI) households on public land.

Action 3.3.5: Implement an affordable housing overlay.

Action 3.3.6: Access to low-cost financing for development.

Action 3.3.7: Study the targeted implementation of an inclusionary housing requirement.

Action 3.3.8: Right-sized development fees on market-rate developments.

Action 3.3.9: Adjusting or waiving City fees and payment timing for affordable housing developments.

Action 3.3.10: Citywide Enhanced Infrastructure Financing District (EIFD).

Action 3.3.11: Support innovations by design.

Action 3.3.12: Continue the Acquisition and Conversion to Affordable Housing (ACAH) Program.

Action 3.3.13: Expand availability of predevelopment funding and low-cost debt products for affordable housing development.

Action 3.3.14: Evaluate the creation of a leveraged acquisition fund or debt/equity funds for small sites to support site acquisitions for affordable housing.

Action 3.3.15: Continue and expand density bonus incentives.

Action 3.3.16: Analyze the Real Estate Transfer Tax structure and its current effect on the Affordable Housing subsidy and the effect on the General Purpose Fund.

Action 3.3.17: Support low-income, grassroots, and BIPOC affordable housing developers.

Action 3.3.18: Implement affordable housing investments contained in Measure U.

Action 3.3.19: Sites inventory and Fair Housing Accomplishments Tracking Program.

Policy 5.2: Promote Resilient and Sustainable Development.

Action 5.2.2: Promote infill, transit-oriented development (TOD), and mixed-use development.

Action 5.2.4: Secure funding from the State's Affordable Housing and Sustainable Communities (AHSC) Program.

Action 5.2.6: Encourage climate-resilient housing.

Action 5.2.8: Encourage new affordable housing in higher resource neighborhoods.

Action 5.2.9: Prioritize improvements to meet the needs of low-resourced and disproportionately burdened communities.

City of Oakland GHG Reduction Targets and 2030 Equitable Climate Action Plan

In October 2018, the Oakland City Council passed Resolution 87183 adopting an interim citywide GHG emissions reduction target of 56 percent below 2005 levels by the year 2030 to keep the City on track to meet its 2050 target. In July 2020, via Resolution 88267, Oakland City Council adopted the ECAP, a comprehensive plan to achieve the 2030 GHG reduction target and increase Oakland's resilience to the impacts of the climate crisis - both through a deep equity lens (City of Oakland, 2020b). Alongside the 2030 ECAP, the City Council also adopted a goal to achieve community-wide carbon neutrality no later than 2045 (City of Oakland, 2020c). Achieving carbon neutrality will require complete decarbonization (ensuring that all mechanical systems run on clean electricity) of Oakland's building and transportation sectors.

City of Oakland 2021-2026 Local Hazard Mitigation Plan

The City of Oakland adopted the 2021-2026 Local Hazard Mitigation Plan to "establish and promote a comprehensive mitigation strategy and efforts to protect the whole community and environment from identified natural and manmade hazards," including climate change (City of Oakland, 2021). As discussed in the City's Hazard Mitigation Plan, climate change may alter exposure and vulnerability of people, property, and critical facilities to hazards including dam failure, drought, earthquake, flood, landslide, sea-level rise, severe weather, tsunami/seiche, and wildfire. The Hazard Mitigation Plan includes a range of mitigation best practices that will mitigate risks from current hazards or help reduce new risk that could result from climate change.

Oakland Green Building Ordinance

The City of Oakland adopted mandatory green building standards for private development projects on October 19, 2010 requiring all buildings or projects to comply with all requirements of the current California Building Energy Efficiency Standards and subsequent updates to those standards, as well as meet a variety of checklist requirements. These standards indirectly reduce GHGs through design features lowering building energy use. Most recently, the City updated the green building requirements for development projects with implementation of the 2022 Building Energy Efficiency Standards (Title 24, Part 6) code revisions, effective January 1, 2023 (City of Oakland, 2020d).

City of Oakland Municipal Code for Plug-in Electric Vehicle Charging Stations

In December 2016, the City of Oakland passed Ordinance 13408, which was designed to accelerate the installation of plug-in electric vehicle (PEV) charging stations to meet demand. At residential buildings, builders in Oakland are required to provide at least 2 full-circuit chargers in all parking lots less than 20 spaces, and in 10 percent of parking spaces in lots over 20 spaces (City of Oakland, 2017). In addition, inaccessible conduits for future expansion of PEV spaces must be installed at the remaining 90 percent of the total parking at multi-family residential buildings. The new requirements are designed to accelerate the installation of vehicle chargers to address demand.

City of Oakland Ordinance Requiring All-Electric Construction in Newly Constructed Buildings

On December 1, 2020, the City of Oakland adopted Ordinance 13632 prohibiting newly constructed buildings (both residential and commercial) from connecting to natural gas or propane (City of Oakland, 2020e). Newly constructed buildings must use a permanent supply of electricity as the source of energy for all space heating, water heating (including pools and spas), cooking appliances, and clothes drying appliances.

4.7.2.5 City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to reducing impacts on GHG emissions are listed below. In addition, there are various air quality-, utility and service system-, and transportation and circulation-related SCAs that would indirectly reduce GHG emissions. All SCAs would be adopted as enforceable conditions of approval and required, as applicable, to be implemented during construction and operation of future development under the Proposed Project to help ensure less-than-significant impacts to GHG emissions. SCAs are incorporated and required as part of the Proposed Project, so they are not listed as mitigation measures.

- **SCA 41: Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist**

  Requirement: The project applicant shall implement all the measures in the Equitable Climate Action Plan (ECAP) Consistency Checklist that was submitted during the Planning entitlement phase.

  a. For physical ECAP Consistency Checklist measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits.

  b. For physical ECAP Consistency Checklist measures to be incorporated into the design of the project, the measures shall be implemented during construction.

  c. For ECAP Consistency Checklist measures that are operational but not otherwise covered by these SCAs, including but not limited to the requirement for transit passes or additional Transportation Demand Management measures, the applicant shall provide notice of these measures to employees and/or residents and post these requirements in a public place such as a lobby or work area accessible to the employees and/or residents.

- **SCA 42: Greenhouse Gas (GHG) Reduction Plan**

  This requirement applies to projects which: (a) involve a land use development (i.e., a project that does not require a permit from the Bay Area Air Quality Management District [BAAQMD] to operate), and (b) does not commit to all of the GHG emissions reductions strategies described on the ECAP Consistency Checklist (SCA 41 above), as originally adopted by the Planning Commission on December 16, 2020 and as may be amended administratively from time to time.

  a. Greenhouse Gas (GHG) Reduction Plan Required

  Requirement: The project applicant shall retain a qualified air quality consultant to develop a Greenhouse Gas (GHG) Reduction Plan for City review and approval and shall implement the approved GHG Reduction Plan.

The goal of the GHG Reduction Plan shall be to increase energy efficiency and to reduce GHG emissions to at least the amount that would be achieved by committing to all of the emissions reductions strategies identified on the ECAP Consistency Checklist as the City's project-level implementation of its Equitable Climate Action Plan (adopted in 2020), which calls for reducing city-wide GHG emissions by 56 percent below 2005 levels by 2030 and 83 percent by 2050. The GHG Reduction Plan shall include, at a minimum, (a) a detailed quantified GHG emissions inventory for the project taking into consideration energy efficiencies included as part of the project (including proposed mitigation measures, project design features, those strategies being implemented and other City requirements), (b) for each ECAP Consistency Checklist strategy that the project will not meet, a quantified calculation of the additional GHG emission reductions that would have occurred had it implemented the GHG emissions reduction measure consistent with the ECAP Consistency Checklist, (c) a quantified strategy for achieving an GHG emission reduction equivalent to the reduction that would have resulted from complying with the ECAP Consistency Checklist strategy, and (d) requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented.

If the project is to be constructed in phases, the GHG Reduction Plan shall provide GHG emission scenarios by phase.

Potential additional GHG reduction measures to be considered include, but are not be limited to, measures recommended in BAAQMD's latest CEQA Air Quality Guidelines, the California Air Resources Board Scoping Plan (December 2008, as may be revised), the California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures (August 2010, as may be revised), the California Attorney General's website, and Reference Guides on Leadership in Energy and Environmental Design (LEED) published by the U.S. Green Building Council. The types of allowable GHG reduction measures include the following (listed in order of City preference): (1) physical design features; (2) operational features; and (3) the payment of fees to fund GHG-reducing programs (i.e., the purchase of "carbon credits") as explained below.

The allowable locations of the GHG reduction measures include the following (listed in order of City preference): (1) the project site; (2) off-site within the City of Oakland; (3) off-site within the San Francisco Bay Area Air Basin; then (4) off-site within the State of California.

As with preferred locations for the implementation of all GHG reductions measures, the preference for carbon credit purchases include those that can be achieved as follows (listed in order of City preference): (1) within the City of Oakland; (2) within the San Francisco Bay Area Air Basin; then (3) within the State of California. The cost of carbon credit purchases shall be based on current market value at the time purchased and shall be based on the project's net difference operational emissions estimated in the GHG Reduction Plan for the project as compared to the Checklist baseline.

For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits.

b. GHG Reduction Plan Implementation During Construction

Requirement: The project applicant shall implement the GHG Reduction Plan during construction of the project. For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be implemented during construction. For physical GHG reduction measures to be incorporated into off-site projects, the project applicant shall obtain all necessary permits/approvals and the measures shall be included on drawings and submitted to the City Planning Director or his/her designee for review and approval. These

off-site improvements shall be installed prior to completion of the subject project (or prior to completion of the project phase for phased projects). For GHG reduction measures involving the purchase of carbon credits, evidence of the payment/purchase shall be submitted to the City for review and approval prior to completion of the project (or prior to completion of the project phase, for phased projects).

c. GHG Reduction Plan Implementation After Construction

Requirement: The project applicant shall implement the GHG Reduction Plan after construction of the project (or at the completion of the project phase for phased projects). For operational GHG reduction measures to be incorporated into the project or off-site projects, the measures shall be implemented on an indefinite and ongoing basis.

The project applicant shall satisfy the following requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. The GHG Reduction Plan requires regular periodic evaluation over the life of the project (generally estimated to be at least 40 years) to determine how the Plan is achieving required GHG emissions reductions over time, as well as the efficacy of the specific additional GHG reduction measures identified in the Plan.

- *Annual Report*. Implementation of the GHG reduction measures and related requirements shall be ensured through compliance with Conditions of Approval adopted for the project. Generally, starting two years after the City issues the first Certificate of Occupancy for the project, the project applicant shall prepare each year of the useful life of the project an Annual GHG Emissions Reduction Report ("Annual Report"), for review and approval by the City Planning Director or his/her designee. The Annual Report shall be submitted to an independent reviewer of the City's choosing, to be paid for by the project applicant.

  The Annual Report shall summarize the project's implementation of GHG reduction measures over the preceding year, intended upcoming changes, compliance with the conditions of the Plan, and include a brief summary of the previous year's Annual Report results (starting the second year). The Annual Report shall include a comparison of annual project emissions to the Checklist baseline emissions reported in the GHG Plan.

  The GHG Reduction Plan shall be considered fully attained when project emissions are less than the Checklist baseline, as confirmed by the City through an established monitoring program. Monitoring and reporting activities will continue at the City's discretion, as discussed below.

- *Corrective Procedure*. If the third Annual Report, or any report thereafter, indicates that, in spite of the implementation of the GHG Reduction Plan, the project is not achieving the GHG reduction goal, the project applicant shall prepare a report for City review and approval, which proposes additional or revised GHG measures to better achieve the GHG emissions reduction goals, including without limitation, a discussion on the feasibility and effectiveness of the menu of other additional measures ("Corrective GHG Action Plan"). The project applicant shall then implement the approved Corrective GHG Action Plan.

  If, one year after the Corrective GHG Action Plan is implemented, the required GHG emissions reduction target is still not being achieved, or if the project applicant fails to submit a report at the times described above, or if the reports do not meet City requirements outlined above, the City may, in addition to its other remedies, (a) assess the project applicant a financial penalty based upon actual percentage reduction in GHG emissions as compared to the percent reduction in GHG emissions established in the GHG Reduction Plan; or (b) refer the matter to the City Planning Commission for

scheduling of a compliance hearing to determine whether the project's approvals should be revoked, altered or additional conditions of approval imposed.

The penalty as described in (a) above shall be determined by the City Planning Director or his/her designee and be commensurate with the percentage GHG emissions reduction not achieved compared to the applicable numeric significance thresholds described in the GHG Reduction Plan.

In determining whether a financial penalty or other remedy is appropriate, the City shall not impose a penalty if the project applicant has made a good faith effort to comply with the GHG Reduction Plan.

The City would only have the ability to impose a monetary penalty after a reasonable cure period and in accordance with the enforcement process outlined in Planning Code Chapter 17.152. If a financial penalty is imposed, such penalty sums shall be used by the City solely toward the implementation of the Equitable Climate Action Plan.

- *Timeline Discretion and Summary*. The City shall have the discretion to reasonably modify the timing of reporting, with reasonable notice and opportunity to comment by the applicant, to coincide with other related monitoring and reporting required for the project.

4.7.3 Environmental Analysis

4.7.3.1 Significance Criteria

For the purposes of this EIR, a GHG emissions impact would be significant if adoption of the Proposed Project would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs.

CEQA Guidelines Section 152064.4 gives lead agencies the discretion to determine whether to assess GHG emissions quantitatively or qualitatively. The *CEQA Guidelines* do not establish a bright-line quantitative threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies, or suggested by other experts, such as the CAPCOA, so long as any threshold chosen is supported by substantial evidence (refer to *CEQA Guidelines* Section 15064.7(c)). As discussed above, the City published its ECAP in July 2020. The Oakland ECAP meets the criteria established by the California State Office of Planning and Research in 2010 for a qualified Climate Action Plan under CEQA, by which project-level analysis can be streamlined by demonstrating compliance with a GHG reduction plan.

According to CEQA Guidelines Section 15064.4(b):

> *[I]n determining the significance of a project's greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution*

> *may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions.*

The significance of impacts shall consider the project's impact as compared to the existing environmental setting, whether the project exceeds a threshold of significance, and compliance with relevant GHG-related plans.[10] According to *CEQA Guidelines* Section 15064.4(b)(3):

> *[T]he extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions (refer to, for example, Section 15183.5(b)). Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions.*

4.7.3.2 Approach to Analysis

This is a program-level EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Impacts relative to GHG emissions are evaluated using the criteria listed above and based on information included in the City of Oakland General Plan, Map Atlas, and the documents listed in Section 4.2.7, *References – Greenhouse Gases*.

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future development under the Proposed Project, this EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas and analyzes the impacts of housing development through the projection period ending in 2030.

GHG emissions and global climate change represent cumulative impacts of human activities and development projects locally, regionally, statewide, nationally, and worldwide. GHG emissions from all of these sources cumulatively contribute to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature; instead, the combination of GHG emissions from past, present, and future projects around the world have contributed and will continue to contribute to global climate change and its associated environmental impacts.

The following analysis of the Proposed Project's impact on climate change focuses on the Proposed Project's contribution to cumulatively significant GHG emissions. Given that analysis of GHG emissions is cumulative in context, this section constitutes both the individual project-specific impact and the cumulative assessment.

GHG Emissions

The City, as the lead agency, has discretion to choose thresholds of significance, including thresholds adopted or recommended by other agencies or recommended by experts, such as those

[10] 14 CCR 15064.4(b).

recommended by BAAQMD, provided the lead agency's decision to use such thresholds is supported by substantial evidence (OPR, 2018). As discussed earlier, on December 16, 2020, the City adopted the current SCA, which also represent the City's GHG thresholds of significance. These include SCA 41, implement all the measures in the ECAP Consistency Checklist; and SCA 42, develop a GHG Reduction Plan for projects which do not commit to all of the GHG emissions reductions strategies described on the ECAP Consistency Checklist.

In April 2022, BAAQMD adopted the following new significance thresholds that address the State's SB 32 GHG reduction goals and carbon neutrality goal for 2045, as stipulated in Executive Order B-55-18. BAAQMD also published a Justification Report that provides the substantial evidence that lead agencies will need to support their use of these thresholds (BAAQMD, 2022).

The recommended plan-level GHG thresholds proposed by BAAQMD are as follows:

A. Meet State's goals to achieve emissions 40 percent below 1990 levels by 2030, and carbon neutrality by 2045; OR

B. Be consistent with a local GHG Reduction Strategy that meets the criteria under CEQA Guidelines section 15183.5(b).

The City's SCAs constitute threshold option B because the 2030 ECAP is a local GHG Reduction Strategy that meets the criteria under CEQA Guidelines section 15183.5(b).

The following thresholds of significance are used in the analysis presented below:

1. **Plan: Consistency with the 2030 ECAP.** The threshold of significance used to determine plan-level impacts is that the Proposed Project must be consistent with the 2030 ECAP. The 2030 ECAP meets the criteria under CEQA Guidelines section 15183.5(b) and consistency with the 2030 ECAP is a valid threshold of significance through 2030. This is true even considering AB 1279 (which requires the State to achieve net zero GHG emissions and reduce statewide emissions to 85 percent below 1990 levels by 2045) because the statewide 2030 GHG target of 40 percent below 1990 levels pursuant to SB 32 is still State law (AB 1279 did not change the State's 2030 GHG emissions target), and because the 2030 ECAP's target of 56 percent below 2005 citywide GHG emissions levels is based on the statewide 2030 target. As allowed by *CEQA Guidelines* section 15062(b)(3), "consistency with the State's long-term climate goals" is a valid threshold of significance for projects and climate action plans.

2. **Project: Consistency with the 2030 ECAP via the ECAP Checklist and SCA 41, or by implementing SCA 42.** In addition, future development under the Proposed Project must demonstrate consistency with the 2030 ECAP by completing the ECAP Checklist and implementing SCA 41. Future development under the Proposed Project may implement SCA 42 as an alternative to SCA 41. The 2030 ECAP meets the criteria under CEQA Guidelines section 15183.5(b) and consistency with the 2030 ECAP is a valid threshold of significance through 2030.

Consistency with Plans

Further, the analysis also evaluates consistency with *CEQA Guidelines* Section 15064.4(b)(2) by considering whether the Proposed Project would conflict with plans, policies, or regulations adopted

at the State, regional and local levels, for the purpose of reducing GHG emissions, including but not limited to, the CARB 2017 Scoping Plan and SB 32, the CARB 2022 Scoping Plan, AB 1279, Plan Bay Area 2040, the 2030 ECAP, and the CALGreen Code and City's Green Building Codes.

Consistency with the CARB Scoping Plan and the State's legal GHG emissions reduction targets is an appropriate metric by which to determine the significance of the Proposed Project's GHG emissions. CEQA Guidelines Section 15064.4(b)(3) states that a lead agency "may consider a project's consistency with the State's long-term climate goals or strategies" when determining the significance of a project's impacts." Additionally, in *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 62 Cal.4th 204, the California Supreme Court sanctioned the use of such a threshold: The court stated that assessing a project's GHG impacts based on a "consistency with a GHG emission reduction plan" threshold of significance is legally permissible under CEQA.

4.7.3.3 Proposed 2045 General Plan Policies, Land Use and Zoning

Safety Element

There are no policies or actions directly pertaining to GHG emissions proposed as part of the Safety Element Update in the Proposed Project. However, the following policies address sea level rise (SLR) and wildfire, which are two of the impacts related to an increase in GHG emissions. Policy SAF-8.13, below, is also relevant for GHG emissions analysis.

Policies:

SAF-2.2: Vegetation and Urban Forest Management. Manage vegetation and the urban forest to reduce combustible load, erosion, and other risks exacerbated by climate change.

- Adopt and fully implement a Vegetation Management Plan for high-fire risk areas. Continue to update and enforce the Oakland Fire Code to require building owners in high-risk areas to maintain defensible space and implement fire prevention measures. As part of the Vegetation Management Plan, build partnerships with and consult indigenous groups on sacred burning and other traditional fire suppression techniques.
- Implement the Urban Forest Master Plan, a comprehensive, area-wide urban canopy and vegetation plan that identifies locations where trees can be added and maintained, such as parks, streets, and rights-of-way. As a follow-up action, proactively address soil sequestration of carbon and water in frontline communities most affected by wildfire and other climate risks. *See Environmental Justice Element policy EJ-6.16 for other urban forest objectives.*

SAF-2.3: Development in the Very High Fire Hazard Severity Zone (VHFHSZ). Prioritize development in areas with existing adequate road networks, evacuation routes, and water infrastructure. Require any new development in the Very High Fire Hazard Severity Zone to prepare a Fire Protection Plan that minimizes risks by:

- Assessing site-specific characteristics such as topography, slope, vegetation type, wind patterns etc.
- Siting and designing development to avoid hazardous locations (e.g. through fire breaks) to the extent feasible.

- Incorporating fuel modification and brush clearance techniques in accordance with applicable fire safety requirements and carried out in a manner which reduces impacts to environmentally sensitive habitat to the maximum feasible extent.
- Using fire-resistant building materials and design features, such as visible signage, consistent with the adopted Municipal Code and Fire and Building Code standards.
- Using fire-retardant, native plant species in landscaping.
- Complying with established standards and specifications for fuel modification, defensible space, access, and water facilities.
- Banning generators and fuel storage (e.g. for generators) in VHFHSZ.
- Requiring street improvements to comply with minimum fire road access standards.
- Disallowing new subdivisions in areas with less than two evacuation routes (as shown in Figure SAF-1d), unless a development were to be able to provide additional connections to ameliorate this condition.

SAF-4.3: New Development and Sea Level Rise. Develop sea-level rise standards/horizon that will guide adaption and resiliency planning as part of the updated Sea Level Rise Roadmap, including recommendations and regulations for a suite of shoreline protection measures (including ecologically-friendly adaptation options), protective setbacks, and other adaptation strategies, to be incorporated into future development projects.

SAF-4.4: Sea Level Rise Vulnerability Assessment. Require applicants proposing to develop in a future inundation area (as depicted in a SLR scenario to be determined) to conduct a Sea Level Rise vulnerability assessment for the project, prepare a Sea Level Rise Adaptation Plan for implementation as part of the project designs, and submit the assessment, adaptation plan, and conceptual design to the City for re-view and approval.

SAF-4.6: Sea Level Rise Regional Strategy. As part of the Sea Level Rise Roadmap update, continue to work with regional entities to address rising water levels in the San Francisco Bay and coordinate with the City's other climate adaptation efforts.

SAF-8.13: Heat Pumps. Equip community-serving facilities with heat pumps instead of energy-intensive air conditioning units. Prioritize community-serving facilities in neighborhoods with a high urban heat island index and higher social vulnerability.

Actions:

SAF-A.7: Undertake a program to reduce fire load in VHFHSZ, such as through removal of non-native, highly combustible trees such as eucalyptus in fire susceptible areas. Consider methods—such as establishment of a progressive special vegetation management zone fees—to provide ongoing revenue for additional efforts for vegetation management.

SAF-A.18: Study compounding impact of sea level rise on groundwater threats in areas with hazardous facilities Comply with performance standards pursuant to the Alameda countywide National Pollutant Discharge Elimination System municipal stormwater permit.

SAF-A.20: By 2025, conduct a regional and citywide community engagement effort to determine planning thresholds and appropriate sea level rise mitigation strategies.

Environmental Justice Element

The following policies and actions pertaining to Greenhouse Gas Emissions are proposed as a part of the Environmental Justice Element in the Proposed Project.

Policies:

EJ-1.2: Truck Emissions and Pollution Exposure. Minimize air pollution and exposure of sensitive uses to truck pollution, particularly in EJ Communities and other areas most burdened by air pollution, while recognizing Oakland's role as the premier shipping port for goods in Northern California.

EJ-1.7: Truck-Related Impacts. For new warehouses and truck-related businesses, reduce impacts from truck loading and delivery including noise/vibration, odors, air pollution, and greenhouse gas emissions.

EJ-1.10: Reduce Emissions from Port Operation. Support Port of Oakland's efforts reduce emissions as part of operation and compliance with CARB regulations. This could include:

- Support of zero-emission drayage truck operations through appropriate local ordinance amendments, including allowable weight limits for single-axle, zero-emission trucks on local streets, and developing an investment plan for needed upgrades.
- Provision of data or staff time to study of the effects on truck flow and congestion due to increasing visits from larger container ships, the feasibility of an off-terminal container yard that utilizes zero-emission trucks to move containers to and from the marine terminals, and the potential efficiency gains from increasing the number of trucks hauling loaded containers on each leg of a roundtrip to the Port.

EJ-1.11: Building Electrification. Continue to enforce compliance with Oakland's Building Electrification Ordinance, which requires new to be natural gas-free and support the transition of existing buildings to natural gas alternatives in order to improve safety and air quality and reduce health risks. This could include:

- Ensuring that all new developments reduce on-site natural gas combustion through electrification of heating and cooking technologies.

EJ-1.13: Emissions from Construction Activities. Require projects to implement construction air pollution and greenhouse gas emissions controls and applicable mitigation strategies for all construction sites to the maximum extent feasible. Refer to Best Construction Practices recommended by BAAQMD.

EJ-1.16: Community Air Protection. On an ongoing basis, support BAAQMD, community members, businesses, and other stakeholders in developing and implementing Community Air Monitoring Plans, Community Emissions Reduction Plans, and other air pollution control initiatives pursuant to AB 617. Supportive City actions may include:

- Participation on steering committees and technical advisory committees.
- Co-investments that leverage additional funding for actions in EJ Communities.
- Utilization of community-collected air quality data in policy development and evaluation.

- Contracts with community partners and other air pollution monitoring organizations to obtain more granular pollution data.

EJ-4.6: Environmental Quality. In private and non-profit housing projects in EJ Communities, promote and seek ways to incentivize the inclusion of features and amenities that support and enhance the health of occupants and the environment, including:

- On-site health and human services;
- Energy-efficient appliances;
- Green infrastructure, such as green roofs or appropriate tree planting;
- Car sharing;
- Community gardens or sponsored rides to farmers markets; and
- Transit and bus passes for lower income workers to reduce emissions.

EJ-7.15: Urban Forest. Implement the Urban Forest Master Plan, a comprehensive, area-wide urban canopy and vegetation plan that identifies locations that trees can be added and maintained, such as parks, streets, Caltrans' rights-of-way and develop a plan to protect existing trees that provide shade, reduce urban heat island impacts, and reduce exposure to air pollution emissions in communities most affected by air pollution. This includes partnering with local nonprofit groups, encouraging trees on private property, and working with the community on tree maintenance and (as needed) removal. Prioritize tree canopy in EJ Communities with the least amount of canopy, as shown in Figure EJ-25.

Actions:

EJ-A.4: In partnership with representative groups from EJ Communities, develop a Carbon Sequestration Incubator in Oakland to incubate and develop green jobs in urban agriculture, urban forestry, aquatic and riparian restoration, engineering technology, and/or other forms of carbon removal. Assess market opportunities, policy drivers, potential locations, and existing businesses and nonprofits that may benefit from collaborating in such a space.

EJ-A.11: Coordinate with public agencies in the Bay Area region to catalyze the development and deployment of zero emission medium- and heavy-duty fleets and support development of shared charging hubs and resources.

4.7.4 Impacts of the Project

Impact GHG-1: Adoption of the Proposed Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. (Criterion 1) (*Less than Significant with Mitigation*)

GHG emissions from future development under the Proposed Project would result in both direct and indirect emissions from construction and operational activities. Direct GHG emissions generated during construction would include emissions from fuel combustion (e.g., gasoline and diesel) in construction equipment and vehicles. Upon completion of construction, development projects would generate direct GHG emissions from area sources (such as landscaping equipment) and on-road motor vehicle trips. No direct GHG emissions would be generated from energy use in buildings for space and water heating because the City of Oakland Ordinance No.13632 requires all

new construction to be all-electric buildings with no natural gas infrastructure. Indirect operational GHG emissions would be generated from the increase in electricity use associated with building energy use along with water and wastewater treatment and conveyance.

Proposed Project Consistency with the 2030 ECAP and Associated Targets

As explained in Section 4.7.2, *Regulatory Setting*, the City of Oakland has adopted citywide GHG emissions targets for 2020 and 2030 of 36 below 2005 levels and 56 percent below 2005 levels, respectively. The City's adopted 2030 ECAP is designed to enable the City to achieve its 2030 emissions target through the implementation of 40 Actions projected to result in a 60 percent reduction in GHG emissions by 2030, relative to Oakland's 2005 emission levels (City of Oakland, 2020b). In addition, through City Council Resolution No. 88268, the City has adopted a goal to achieve community-wide carbon neutrality no later than 2045 (City of Oakland, 2020c).

In December 2020 the City adopted a checklist for determining project consistency with the ECAP (ECAP Consistency Checklist or Checklist), pursuant to project review under CEQA Sections 15064.4(b)(3) and 15183.5(b). However, the Checklist is a project-level document; not a plan-level document; and therefore, cannot be used directly for the Proposed Project. Further, the Checklist is not needed to determine consistency of the Proposed Project with the ECAP as such consistency is demonstrated in **Table 4.7-2**, which provides summary of relevant ECAP Actions and assesses whether the Proposed Project is consistent with those Actions. As shown in the table, the Proposed Project would be consistent with all 17 relevant Actions.

In addition, all future development under the Proposed Project would be required to demonstrate consistency with the 2030 ECAP by complying with SCA 41 (ECAP consistency) as part of the basic application and approval process for all future projects and/or SCA 42 (GHG reduction plan); see the analysis under the heading *Consistency of Subsequent Development Projects with the 2030 ECAP* below for more detail. The Proposed Project therefore would be consistent with the 2030 ECAP and City Council Resolution 88268.

In addition, proposed policies EJ-1.2, EJ-1.7 and EJ-1.10 and action EJ-A.11 encourage the reduction of truck emissions and deployment of zero emission medium- and heavy-duty fleets across the City and specifically in Port of Oakland operations. Action EJ-A.4 would develop a Carbon Sequestration Incubator that could alleviate impacts from existing emissions. Policy EJ-1.11, would enforce the city's all-electric new development requirement; Policy EJ-1.13 would further strengthen the City's air quality and greenhouse gas reduction requirements for new projects; Policy EJ-1.16, Community Air Protection would encourage development of Community Emissions Reduction Plans, Policy EJ-4, Environmental Quality, would promote transit and bus passes for lower income workers to reduce car emissions; and Policy EJ-7.16, Urban Forest would provide options for subsequent development projects to expand carbon sequestration capacity and thereby reduce emissions. Policies from the proposed Safety Element SAF-2.2, SAF-2.3, SAF-4.3, SAF-4.4, SAF 4-6, and SAF-8.3 along with actions SAF-A.7, SAF-A.18, and SAF-A.20 address reducing impacts from wildfire and sea level rise which result from increased GHG emissions.

The Proposed Project therefore would be consistent with the 2030 ECAP and City Council Resolution 88268.

TABLE 4.7-2
PROJECT CONSISTENCY WITH THE 2030 ECAP

Action	Description	Consistency Analysis
Transportation and Land Use		
TLU-1	**Align all Planning Policies and Regulations with ECAP Goals and Priorities**. Specifically, appropriate planning policies should study the following strategies and should incorporate such policies that are found not to have adverse environmental or equity impacts: • Remove parking minimums and establish parking maximums where feasible, ensuring public safety and accessibility • Require transit passes bundled with all new major developments • Revise zoning such that the majority of residents are within 1/2-mile of the most essential destinations of everyday life • Provide density bonuses and other incentives for developments near transit that provide less than half of the maximum allowable parking • Update the Transit Oriented Development (TOD) Guidelines to further prioritize development of housing near transit, including housing for low, very low, and extremely low-income levels • Require structured parking be designed for future adaptation to other uses • Institute graduated density zoning • Remove barriers to and incentivize development of affordable housing near transit • Incorporate policies addressing sea level rise, heat mitigation, and other climate risks into zoning standards and all long-range planning documents. Revise these policies every five years based on current science and risk projections Identify and remove barriers to strategies that support carbon reduction, adaptation, resilience, and equity goals, including community solar and energy storage	**Consistent** – This action calls for future updates to the General Plan, Specific Plans, Zoning Ordinance, Subdivision Regulations, Parks Master Plan, and appropriate planning policies or regulations to be consistent with the GHG reduction, adaptation, resilience, and equity goals in the ECAP. The Proposed Project would be consistent with TLU-1 in that it supports its relevant objectives. The Proposed Project would facilitate housing development in mixed use, transit-oriented development patterns primarily in existing neighborhoods. These land use patterns would reduce GHG emissions. Goal 5 of the Housing Action Plan (HAP) contains policies (Policy 5.2) and actions that would reduce greenhouse gas emissions through promotion of sustainable design and decarbonization/electrification; encouraging higher-density, infill, and mixed-use development near transit; securing funding from the State's Affordable Housing and Sustainable Communities (AHSC) Program; and encouraging climate-resilient housing. Proposed Planning Code, Zoning Map, and General Plan amendments directly align with the HAP. For example, proposed upzoning, including the Affordable Housing Overlay, would implement proposed missing middle amendments and related amendments to encourage a diversity of housing types such as flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and accessory dwelling units in currently single-family-dominated neighborhoods, and along corridors and transit-proximate areas. Policies in the Environmental Justice and Safety Element align directly with these actions to build equitable resilience to climate change.
TLU-4	**Abundant, Affordable, and Accessible Public Transit.** The City will work with public transit agencies to replace autos with public transit as a primary transportation mode for trips beyond walking distance, ensuring convenient, safe, and affordable public transit access within Oakland and to neighboring cities for all Oaklanders.	**Consistent** – Although TLU-4 is concerned with the City's coordination with transit agencies, the Proposed Project would support transit ridership by allowing additional building heights and densities in specific locations of the City, including along existing transit corridors and in areas near high-capacity transit, including areas near BART and Bus Rapid Transit (BRT) Stations.
TLU-5	**Create a Zero Emission Vehicle (ZEV) Action Plan.** Completion of the ZEV Action Plan by 2021 will increase adoption of electric vehicles and e-mobility while addressing equity concerns and prioritizing investment in frontline communities.	**Consistent** – The Proposed Project would support the goal of TLU-5 to increase adoption of electric vehicles by providing EV charging infrastructure and stations. All subsequent development would be required to comply with the Plug-In Electric Vehicle (PEV) Charging Infrastructure requirements of Chapter 15.04 of the Oakland Municipal Code. All residential buildings are required to provide at least 2 full-circuit chargers in all parking lots less than 20 spaces, and in 10 percent of parking spaces in lots over 20 spaces (City of Oakland, 2017). In addition, inaccessible conduits for future expansion of PEV spaces must be installed at the remaining 90 percent of the total parking at multi-family residential buildings. The new requirements are designed to accelerate the installation of vehicle chargers to address demand.

TABLE 4.7-2 (CONTINUED)
PROJECT CONSISTENCY WITH THE 2030 ECAP

Action	Description	Consistency Analysis
Transportation and Land Use (cont.)		
TLU-7	**Rethink Curb Space**. The City will prioritize use of curb space throughout the city by function. In order of priority, the City will allocate curb space for mobility needs for public transit and active transportation, such as walking and biking; access for people and commerce (loading zones and short-term parking); activation; and storage for long-term parking. The City's adopted Bike and Pedestrian Plans will be used to determine mobility needs. Where on-street parking is provided, the City will revise pricing, availability, and location of parking to encourage (in order of priority) active transportation, public transit, and clean vehicles, without increasing cost-burden to low-income residents and other sensitive populations such as seniors. The City will also require parking costs to be unbundled from residential and commercial leases.	**Consistent** – As outlined in more detail in Section 4.15, *Transportation and Circulation*, the Proposed Project would be consistent with the City's policies, plans, and programs addressing the safety or performance of the circulation system, including transit, roadways, bicycle lanes, and pedestrian sidewalks and paths, including: • The City's Complete Streets Policy, which calls for the City to plan, design, construct, operate, and maintain the street network to accommodate safe, convenient, comfortable travel for all modes, including pedestrians, bicyclists, transit users, motorists, trucks and emergency vehicles. • The LUTE, which calls for promoting alternative means of transportation such as transit, biking, and walking, providing facilities that support alternative modes, and implementing street improvements. • The Pedestrian Master Plan, which envisions a pedestrian system built on safety, equity, responsiveness, and vitality. • The Let's Bike Oakland Plan, which envisions a comprehensive network of bicycle facilities addressing bicycle safety and access through street design and maintenance programs; bicycle access to transit; and secure and convenient bicycle parking. • The City's Transit First Policy, supporting public transit and other alternatives to the single occupant vehicle incorporating various methods of expediting transit services on designated street and encouraging greater transit use. See also the response to TLU-1.
TLU-8	**Expand and Strengthen Transportation Demand Management Requirements.** The City will increase TDM performance requirements for new developments where feasible to support the mode shifts necessary to achieve a low carbon transportation system. The City will expand the TDM program to include requirements for existing employers, and fund ongoing monitoring and enforcement of TDM requirements.	**Consistent** –All future development under the Proposed Project generating 50 or more net new a.m. or p.m. peak hour vehicle trips would be required to prepare a Transportation and Parking Demand Management Program in accordance with SCA 78.
TLU-9	**Ensure Equitable and Clean New Mobility.** Ensure that new mobility platforms and technologies equitably support City carbon reduction goals, including integrated planning for vehicles, public transit, and active transportation networks and amenities.	**Consistent** – See responses to TLU-1 and TLU-7.
Building Energy Use		
B-1	**Eliminate Natural Gas in New Buildings.** By 2023, the City will prohibit new buildings and major renovations from connecting to natural gas infrastructure.	**Consistent** – The City's recently adopted natural gas ban (Ordinance 13632) for new residential and commercial buildings applies to the Proposed Project. All subsequent development under the Proposed Project would be required to use a permanent supply of electricity as the source of energy for all space heating, water heating (including pools and spas), cooking appliances, and clothes drying appliances. ECAP Consistency Checklist item #9 also mandates this. Further, all subsequent development must comply with any then in effect City's building code building electrification requirement that eliminate the use of natural gas.

TABLE 4.7-2 (CONTINUED)
PROJECT CONSISTENCY WITH THE 2030 ECAP

Action	Description	Consistency Analysis
Building Energy Use (cont.)		
B-3	**Prevent Refrigerant Pollution**. By 2023, the City will develop a refrigerant management program that: • Establishes a phaseout timeline for high-GWP refrigerants in existing buildings • Integrates with existing local and regional energy efficiency and building electrification programs as appropriate • Ensures enforcement of performance measures • Identifies financial assistance for low-income residents and businesses; and • Aligns with refrigerant management strategies adopted by the State of California	**Consistent** – This action calls for future program development by the City that would affect private development. All subsequent development under the Proposed Project would be required to comply with any then in effect City's building code requirement that restricts or eliminates the use of high-GWP refrigerants in new buildings.
B-4	**Reduce Lifecycle Emissions from Building Materials**. By 2023, adopt a concrete code for new construction that limits embodied carbon emissions. In subsequent building code updates, implement improved embodied carbon performance standards including additional materials and material-efficient building practices, with exemptions for cost barriers as needed to prevent these changes from directly increasing housing or rent costs.	**Consistent** – This action calls for future policy development by the City that would affect private development. All subsequent development under the Proposed Project would be required to comply with City codes and performance standards regarding construction materials and building practices.
Material Consumption and Waste		
MCW-1	**Eliminate Disposal of Compostable Organic Materials to Landfills.** The City will fully fund and implement the requirements of California SB1383 (Short-Lived Climate Pollutants: Organic Waste Methane Emissions Reduction), reduce surplus food waste, and eliminate disposal of compostable organic materials to landfills. The City will ensure robust engagement with businesses and institutions, including schools, and continued residential outreach to reduce wasted food and effectively keep compostable material out of the landfill-bound waste stream.	**Consistent** – Future development under the Proposed Project would be required to comply with AB 1826, which requires businesses and multi-family complexes to arrange for organics collection services, and it must comply with the Alameda County's Mandatory Recycling Ordinance, which goes beyond the current thresholds set by AB1826. The County Ordinance requires all businesses to participate, not just those generating AB 1826's minimum threshold of 2 cubic yards per week. The ordinance also states that businesses and institutions that generate significant quantities of organics (food scraps and/or compostable paper), such as restaurants and grocery stores, provide containers and service of sufficient number, size and frequency for organics, and place food scraps and compostable paper in separate organics cart/bin for organics collection.
MCW-3	**Eliminate Single-Use Plastics and Prioritize Reuse in Food Preparation, Distribution, and Sale.** By 2023, the City will work with StopWaste and regional partners to pass and ordinance to reduce the prevalence of single-use plastic in Oakland and to ensure that reusable food service ware is the default in dining, including requiring reusable food service ware for all dine-in establishments.	**Consistent** – This action calls for future policy development by the City that will affect private businesses. Future development under the Proposed Project would be required to comply with current and future bans including straws and other single use plastics.
MCW-6	**Establish a Deconstruction Requirement**. The City will establish a deconstruction requirement to reduce demolition waste from construction and renovation and facilitate material reuse. The City will regulate hauling and processing of construction and demolition debris to ensure that salvageable materials are identified and removed for reuse instead of being recycled or disposed to landfill.	**Consistent** – This action calls for future policy development by the City that will affect projects generating construction and demolition debris. Future development under the Proposed Project would be required to comply with the City's current municipal codes regarding waste reduction and recycling, including the City of Oakland's Construction and Demolition Ordinance, which requires recycling 100% of all asphalt & concrete materials, and 65% of all other materials.

TABLE 4.7-2 (CONTINUED)
PROJECT CONSISTENCY WITH THE 2030 ECAP

Action	Description	Consistency Analysis
Adaptation		
A-2	**Enhance Community Energy Resilience.** Work with EBCE to develop a program and timeline for increasing resilience to power losses, including Public Safety Power Shutoffs (PSPS), and climate-driven extreme weather events for low-income, medically dependent, and elderly populations through installation of renewable energy and onsite energy storage with islanding capabilities, following appropriate project-level environmental review. Include energy efficiency building upgrades in any program, leveraging local and regional incentives.	**Consistent –** Future development under the Proposed Project must be consistent with the City of Oakland Green Building Ordinance and the 2022 Energy Code. The 2022 Energy Code requires photovoltaic (PV) systems on all new single-family residential homes and PV systems plus battery storage systems for newly constructed multifamily and selected nonresidential buildings.
A-6	**Expand and Protect Green Infrastructure and Biodiversity.** The City will fund and implement a green infrastructure program for the installation and maintenance of projects and existing civic resources such as the parks system and public spaces, to improve stormwater management, support biodiversity, reduce air pollution exposure, and increase access to natural spaces, including trees. The City will prioritize investment in frontline communities, and particularly in residential neighborhoods dominated by concrete and asphalt with limited green space and elevated air pollution, in Priority Conservation Areas, and in areas where green infrastructure, including trees and other types of vegetated buffers, can effectively address stormwater management issues and reduce air pollution exposure among sensitive populations.	**Consistent** – The Proposed Project is consistent with the goals of this measures in that it will replace a greater number of trees than will be removed, in compliance with the City's Tree Preservation Ordinance (Chapter 12.36 of the Oakland Municipal Code) and Planning Code. See also response to TLU-1.
Carbon Removal		
CR-1	**Develop Local Carbon Investment Program.** By 2023, the City will establish a program for both voluntary and compliance GHG mitigation fees to be invested locally. Prioritize projects in frontline communities, such as tree planting and urban greening, including in parks; building electrification; creek restoration; and neighborhood EV car share.	**Consistent** – This action calls for future program development by the City that is consistent with the provision in SCA 42 that prioritizes carbon reduction projects at the project site or within the neighborhood surrounding the Project site.
CR-2	**Expand and Protect Tree Canopy Coverage.** By 2022, the City create a fifty-year Urban Forest Master Plan that prioritizes strategies to address disparities among neighborhoods in tree canopy coverage, and ensures that carbon sequestration is a major factor in tree planting targets, selection of tree species, and tree management practices.	**Consistent** – This action calls for a 50-year plan to be developed by the City. SCA 42 includes off-site measures as part of menu of Plan options, which could include increasing carbon sequestration by funding or implementing a program that results in significant new tree planting and maintenance.

SOURCES: City of Oakland 2030 Energy and Climate Action Plan (City of Oakland, 2020b); City Ordinance No. 13040 (Green Building Ordinance, City of Oakland, 2010); City of Oakland Green Building Requirements (City of Oakland, 2020d)

Future Development Projects Consistency with the 2030 ECAP

Although the *Buildout Program* would involve additional development, the proposed land use and zoning changes mirror, densify, and/or create more mixed-use opportunities within existing neighborhood land use patterns. Higher densities, especially in mixed-use designations and along key transit corridors, increase capacity for residential development near community-serving commercial, retail, and office uses as well as schools, parks, and recreational facilities. Therefore, future development under the Proposed Project would be substantially consistent with the City's over-all goals for land use and urban form and would take advantage of allowable density and/or floor area ratio (FAR) standards in the City's General Plan.

Future housing development under the Proposed Project would be located in mixed use, transit-oriented development patterns primarily in existing neighborhoods. The Proposed Project would not reduce allowed density nor encourage development that would not take advantage of allowed density. Rather, the Proposed Project would increase allowable density and encourage development to take advantage of that added density through a variety of incentives and a streamlined entitlement process. Proposed zoning changes would also encourage a diversity of housing types such as flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and accessory dwelling units in currently single-family-dominated neighborhoods, and along corridors and transit-proximate areas. The high-density nature of the future development would likely add residents in a way that is more efficient and would produce fewer GHG emissions than would be required in an outlying area.

Goal 5 of the HAP contains policies (Policy 5.2) and actions (5.2.2, 5.2.3, 5.2.4, 5.2.7, and 5.2.8) that would reduce greenhouse gas emissions through promotion of sustainable design and decarbonization/electrification; encouraging higher-density, infill, and mixed-use development near transit; securing funding from the State's Affordable Housing and Sustainable Communities (AHSC) Program; and encouraging climate-resilient housing. Proposed Planning Code, Zoning Map, and General Plan amendments directly align with the HAP. For example, proposed upzoning, including the Affordable Housing Overlay, would implement proposed missing middle amendments and related amendments to encourage a diversity of housing types such as flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and accessory dwelling units in currently single-family-dominated neighborhoods, and along corridors and transit-proximate areas.

In addition, all future development under the Proposed Project must demonstrate consistency with the 2030 ECAP. Such projects must do this by completing the ECAP Consistency Checklist and implementing SCA 41 (ECAP consistency). SCA 41 is required of all future development under the Proposed Project as part of each project's basic application. Future development under the Proposed Project which is unable to comply with SCA 41 must comply with SCA 42 (GHG reduction plan) or otherwise would be considered a discretionary project that would be subject to independent CEQA review. Therefore, future development projects under the Proposed Project are required to be consistent with the 2030 ECAP either by committing to all of the GHG emissions reductions strategies described on the ECAP Consistency Checklist or quantitatively demonstrating equivalent GHG reductions by preparing a GHG Reduction Plan pursuant to SCA 42. For example, subsequent development projects would comply with the Transportation Demand Management program requirements or alternatives (Consistency Checklist item #4 and #5), the Plug-In Electric

Vehicle (PEV) Charging Infrastructure requirements (Chapter 15.04 of the Oakland Municipal Code) (Consistency Checklist item #6), prioritize sidewalk and curb space consistent with the City's adopted Bike and Pedestrian Plans (Consistency Checklist item #8), not create any new natural gas connections/hook-ups (Consistency Checklist item #9), and comply with the Construction Demolition Ordinance (Chapter 15.34 of the Oakland Municipal Code) (Consistency Checklist item #12). The Proposed Project would therefore cumulatively result in residential units that are less GHG-emissions-intensive than those allowed for under existing conditions.

Some subsequent development projects may not be able to comply with SCA 41 by committing to all the GHG emissions reductions strategies on the ECAP Consistency Checklist for feasibility or other reasons. For example, some subsequent development projects may not include transit passes for employees and/or residents or be able to incorporate one or more of the optional Transportation Demand Management measures that reduce dependency on single-occupancy vehicles (Consistency Checklist item #4 and #5). These projects would either be considered discretionary subject to CEQA review or would need to demonstrate equivalent GHG reductions by preparing a GHG Reduction Plan pursuant to SCA 42. As required by SCA 42, such a GHG Reduction Plan would be required to demonstrate that the project would reduce GHG emissions by at least the amount that would have been achieved by committing to all of the emissions reduction strategies identified in the ECAP Consistency Checklist pursuant to SCA 41. If the project is unable to comply with SCA 42 by preparing a valid GHG Reduction Plan, the project cannot tier from this Program EIR and would be required to prepare its own EIR.

In addition, proposed Policies EJ-1.2, EJ-1.7 and EJ-1.10 and action EJ-A.11 encourage the reduction of truck emissions and deployment of zero emission medium- and heavy-duty fleets across the City and specifically in Port of Oakland operations. Action EJ-A.4 would develop a Carbon Sequestration Incubator that could alleviate impacts from existing emissions. Policy EJ-1.11, would enforce the city's all-electric new development requirement; Policy EJ-1.13 would further strengthen the City's air quality and greenhouse gas reduction requirements for new projects; Policy EJ-1.16, Community Air Protection would encourage development of Community Emissions Reduction Plans, Policy EJ-4, Environmental Quality, would promote transit and bus passes for lower income workers to reduce car emissions; and Policy EJ-7.16, Urban Forest would provide options for subsequent development projects to expand carbon sequestration capacity and thereby reduce emissions. Policies from the proposed Safety Element SAF-2.2, SAF-2.3, SAF-4.3, SAF-4.4, SAF 4-6, and SAF-8.3 along with actions SAF-A.7, SAF-A.18, and SAF-A.20 address reducing impacts from wildfire and sea level rise which result from increased GHG emissions.

Given the programmatic nature of the Proposed Project and the lack of available detail for individual future developments, it is not possible to know at this time whether all subsequent development would meet the requirements of SCA 41 and/or SCA 42. However, future development under the Proposed Project that cannot meet the requirements of the ECAP Consistency Checklist pursuant to SCA 41 or demonstrate equivalent GHG reductions by preparing a GHG Reduction Plan pursuant to SCA 42 would be subject to subsequent environmental review. As discussed above, such projects cannot tier from this Program EIR.

In addition, the following SCAs will help reduce the impact: SCA 41 (Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist), SCA 42 (Greenhouse Gas (GHG) Reduction Plan), SCA 21 (Criteria Air Pollutant Controls – Construction Related), SCA 22 (Diesel Particulate Matter Controls – Construction Related), SCA 23 (Exposure to Air Pollution (Toxic Air Contaminants)), SCA 24 (Stationary Sources of Air Pollution (Toxic Air Contaminants)), and SCA 78 (Transportation and Parking Demand Management). In addition, **Mitigation Measure AIR-1 (Text Changes to SCA 21, Criteria Air Pollutant Controls – Construction Related)** in Section 4.2, *Air Quality*, would help to reduce this impact.

> **Mitigation Measure AIR-1: Text Changes to SCA 21, Criteria Air Pollutant Controls – Construction Related.** (See Section 4.2, *Air Quality*)

Summary

The Proposed Project is consistent with the 2030 ECAP and associated targets. With implementation of **Mitigation Measure AIR-1: Text Changes to SCA 21, Changes to SCA 21, Criteria Air Pollutant Controls – Construction Related**, all future development under the Proposed Project would be required to be consistent with the 2030 ECAP or demonstrate that, for each ECAP Consistency Checklist strategy that the project cannot implement, an equivalent GHG emission reduction is achieved. Therefore, the impact would be less than significant with mitigation incorporated.

Impact GHG-2: Adoption of the Proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs. (Criterion b) (*Less than Significant with Mitigation*)

Consistency with the 2017 Scoping Plan and SB 32

As directed by Executive Order B-30-15, CARB's 2017 Scoping Plan describes how the State plans to achieve the 2030 GHG emission reduction goal of 40 percent below 1990 levels by 2030, as mandated by SB 32. The 2017 Scoping Plan's strategy for meeting the State's 2030 GHG target incorporates the full range of legislative actions and State developed plans that have relevance to the year 2030, including the LCFS, SB 350, the 2016 Mobile Source Strategy, the Sustainable Freight Action Plan, SB 1383, and the State's Cap-and Trade Program (AB 398).

The Proposed Project would be consistent with key State plans and regulatory requirements referenced in the 2017 Scoping Plan designed to reduce statewide emissions. According to the 2017 Scoping Plan, reductions needed to achieve the 2030 target are expected to be achieved by increasing the RPS to 50 percent of the State's electricity by 2030, greatly increasing the fuel economy of vehicles and the number of zero-emission or hybrid vehicles, reducing the rate of growth in VMT, supporting high speed rail and other alternative transportation options, and increasing the use of high efficiency appliances, water heaters, and HVAC systems. The Proposed Project would support and would not impede implementation of these potential reduction strategies identified by CARB, and it would benefit from statewide and utility-provider efforts towards

increasing the portion of electricity provided from renewable resources.[11] The Proposed Project would also benefit from statewide efforts toward increasing the fuel economy standards of vehicles and reducing the carbon content of fuels. Future development under the Proposed Project would utilize energy efficiency appliances and equipment, as required by Title 24, and provide EV charging stations, as required, to support the future use of electric and hybrid-electric vehicles. In addition, as discussed under Impact GHG-1 above and below in more detail, future development under the Proposed Project must demonstrate consistency with the 2030 ECAP by completing the ECAP Consistency Checklist and implementing SCA 41 (ECAP consistency) or by complying with SCA 42 (GHG reduction plan) as an alternative to SCA 41. For these reasons, adoption of the Proposed Project would support the City's post-2020 emissions trajectory, which is expected to follow a declining trend consistent with the objectives of the 2017 Scoping Plan.

To demonstrate how a local jurisdiction can achieve its long-term GHG goals at the community plan level, the 2017 Scoping Plan recommends developing a geographically specific GHG reduction plan (i.e., climate action plan) consistent with the requirements of CEQA Section 15183.5(b), that demonstrates how future projects will be consistent with the State's 2030 GHG reduction target mandated by SB 32. As explained in Section 4.7.2, *Regulatory Setting*, the City of Oakland has adopted a City-specific GHG emissions target for 2030 of 56 percent below 2005 levels to be consistent with the State's GHG reduction target established by SB 32. The target is based on the City's emissions profile across the land use and transportation sectors. In June 2020, the City adopted its 2030 ECAP, which is a comprehensive plan to achieve the target. Along with the 2030 ECAP, the City adopted the ECAP Consistency Checklist as a streamlining tool for project review under CEQA to determine project consistency with the 2030 ECAP. In December 2020, the City adopted SCA 41, Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist, which requires subsequent development projects to incorporate physical ECAP consistency measures into the project design; and SCA 42, Greenhouse Gas (GHG) Reduction Plan, which requires subsequent development projects that cannot complete the ECAP Consistency Checklist in full to reduce GHG emissions to at least the amount that would be achieved by committing to all of the emissions reductions strategies identified on the ECAP Consistency Checklist. Further, in December 2020, the City adopted consistency with the 2030 ECAP as its project-level threshold of significance for GHG emissions.

Future development under the Proposed Project would be more efficient on average than existing development in the City and far more efficient than what the Scoping Plan assumes for new development throughout the State. In addition, the Proposed Project would be consistent with the 2017 Scoping Plan's guidance on mitigation measures: "To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from VMT, and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits locally. For example, on-site design features to be considered at the planning stage include land use and

[11] As discussed previously, with the passage of SB 100, California's RPS has been increased over what is prescribed by the 2017 Scoping Plan, requiring retail sellers and local publicly-owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by the end of 2024, 52 percent by the end of 2027, and 60 percent by the end of 2030; and requires that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by the end of 2045. Further, SB 1020 requires renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent of all retail electricity sales by 2040.

community design options that reduce VMT, promote transit oriented development, promote street design policies that prioritize transit, biking, and walking, and increase low carbon mobility choices, including improved access to viable and affordable public transportation, and active transportation opportunities" (CARB, 2017).[12] The ECAP Consistency Checklist requires many VMT-reducing actions, such as a formal TDM program or a suite of TDM measures.

The 2017 Scoping Plan incorporates a broad array of regulations, policies, and State plans designed to reduce GHG emissions. GHG reduction actions could be implemented by local governments and that are applicable to the construction and operation of future development under the Proposed Project are listed in **Table 4.7-3.** Actions, plans, and programs that are not under the control or influence of local jurisdictions, such as the Cap-and-Trade program, are not included in the table.

TABLE 4.7-3
CONSISTENCY WITH APPLICABLE GHG REDUCTION ACTIONS IN 2017 SCOPING PLAN

Sector / Source	Category / Description	Consistency Analysis
Energy and Water		
California Renewables Portfolio Standard (RPS) and SB 100	SB 100 requires that the proportion of electricity from renewable sources be 60 percent renewable power by 2030 and 100 percent renewable power by 2045.	**Consistent.** Electricity supplied to future development under the Proposed Project would be provided by Pacific Gas and Electric (PG&E) and East Bay Clean Energy (EBCE). PG&E and EBCE are required to comply with SB 100 and the RPS.
California Renewables Portfolio Standard and SB 350	SB 350 requires that the proportion of electricity from renewable sources be 50 percent renewable power by 2030 (superseded by SB 100). It also requires the State to double the energy efficiency savings in existing final end uses of electricity and natural gas by retail customers through energy efficiency and conservation.	**Consistent.** Electricity to future development under the Proposed Project would be provided through PG&E and EBCE. PG&E and EBCE are required to comply with both the RPS and SB 350 and will meet these standards.
California Building Efficiency Standards (CCR, Title 24, Part 6)	Energy Efficiency Standards for Residential and Nonresidential Buildings	**Consistent.** Buildings constructed under the Proposed Project would be designed to comply with the most recent version of Title 24 Building Energy Efficiency Standards at the time of individual project review.
California Green Building Standards Code (CCR, Title 24, Part 11 - CALGreen)	California's Green Building Standards (CALGreen) Code includes energy and water efficiency requirements, as well as waste management and other design regulations that apply to residential and nonresidential buildings.	**Consistent.** Buildings constructed under the Proposed Project would comply with mandatory CALGreen measures. In addition, all subsequent development would be required to comply with the Plug-In Electric Vehicle (PEV) Charging Infrastructure requirements of Chapter 15.04 of the Oakland Municipal Code. All residential buildings are required to provide at least 2 full-circuit chargers in all parking lots less than 20 spaces, and in 10 percent of parking spaces in lots over 20 spaces (City of Oakland, 2017). In addition, inaccessible conduits for future expansion of PEV spaces must be installed at the remaining 90 percent of the total parking at multi-family residential buildings. The new requirements are designed to accelerate the installation of vehicle chargers to address demand.

[12] At page 101 of *California's 2017 Climate Change Scoping Plan*.

TABLE 4.7-3 (CONTINUED)
CONSISTENCY WITH APPLICABLE GHG REDUCTION ACTIONS IN 2017 SCOPING PLAN

Sector / Source	Category / Description	Consistency Analysis
Energy and Water (cont.)		
Senate Bill X7-7	The Water Conservation Act of 2009 sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. Each urban retail water supplier shall develop water use targets to meet this goal.	**Consistent.** Water to under the Proposed Project would be supplied by the City's Public Works Department, which is required to comply with SB X7-7 standards (see Section 4.17).
Advanced Clean Cars Program (ACC) and Mobile Source Strategy (MSS)	In 2012, CARB adopted the ACC program to reduce criteria pollutants and GHG emissions for model year vehicles 2015 through 2025. ACC requires the reduction of criteria pollutants and GHG emissions from light- and medium-duty vehicles. ACC also includes the ZEV regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years. The Mobile Source Strategy (2016) calls for 1.5 million ZEVs (including plug-in hybrid electric, battery-electric, and hydrogen fuel cell vehicles) on the road by 2025, and 4.2 million ZEVs by 2030.	**Consistent.** These standards would apply to all vehicles used by future residents of development under the Proposed Project, and to construction workers traveling to and from the construction sites as required by CALGreen. In addition, all subsequent development would be required to comply with the PEV Charging Infrastructure requirements of Chapter 15.04 of the Oakland Municipal Code (see above). The new requirements are designed to accelerate the installation of vehicle chargers to address demand.
Mobile Sources		
SB 375	SB 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. Under SB 375, CARB is required, in consultation with the State's Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. CARB's current targets call for the Bay Area to reduce per-capita vehicular GHG emissions 10 percent by 2020 and 19 percent by 2035 from a 2005 baseline.	**Consistent.** Future development under the Proposed Project would be consistent with MTC and ABAG Plan Bay Area 2040 goals and objectives under SB 375 to implement "smart growth." The Proposed Project facilitates development in infill locations with access to public transportation which would reduce reliance on automobiles, thereby reducing VMT and associated GHG emissions. The VMT generated per capita under 2030 Project conditions area is projected to be less than 85 percent of the Bay Area regional average. The 2020 Bay Area region wide average is estimated to be 19.8 miles per resident. Based on the transportation analysis for the Proposed Project, subsequent development would result in 12.2 miles per resident (see Section 4.15, *Transportation and Circulation*). This would be substantially less than 16.9 miles per resident, which is 85 percent of the Bay Area regional average.
Solid Waste		
California Integrated Waste Management Act (IWMA) of 1989 and AB 341	IWMA requires all California cities to divert 50-percent of all solid waste from landfill disposal through source reduction, recycling, and composting activities. AB 341 directs CalRecycle to develop and adopt regulations for mandatory commercial recycling and sets a statewide goal for 75 percent disposal reduction by the year 2020.	**Consistent.** Waste Management of Alameda County, Inc. (WM) provides solid waste and residential recycling services to the City and is responsible for recycling and solid waste management in the City. WM's services yield waste diversion results consistent with citywide recycling targets. These services would be available to all future development under the Proposed Project.

As shown above, the Proposed Project would be consistent with all applicable actions identified in the 2017 Scoping Plan to reduce energy use, conserve water, reduce waste generation, promote EV use, and reduce vehicle travel consistent with statewide strategies and regulations. In addition, as detailed under Impact GHG-1, future development under the Proposed Project must demonstrate consistency with the 2030 ECAP by completing the ECAP Consistency Checklist and implementing SCA 41 (ECAP consistency) or by complying with SCA 42 (GHG reduction plan) as an alternative to SCA 41. This represents the Proposed Project's fair share contribution to BAAQMD's GHG reductions required to meet the statewide GHG reduction goal for 2030 pursuant to SB 32 and the 2017 Scoping Plan.

Consistency with the 2022 Scoping Plan

The CARB 2022 Scoping Plan For Achieving Carbon Neutrality, was approved in December 2022 and expands on prior Scoping Plans and recent legislations, such as AB 1279, by outlining a technologically feasible, cost-effective, and equity-focused path to achieve the State's climate target of reducing anthropogenic GHG emissions to 85 percent below 1990 levels and achieving carbon neutrality by 2045 or earlier (CARB 2022b). To achieve carbon neutrality by 2045, the 2022 Scoping Plan contains GHG reductions, technology, and clean energy mandated by statutes, reduction of short-lived climate pollutants, and mechanical carbon dioxide capture and sequestration actions.

In 2022 Scoping Plan Appendix D, *Local Actions*, CARB identifies several key project attributes that reduce operational GHG emissions while simultaneously advancing fair housing (see 2022 Scoping Plan Appendix D Table 3). According to CARB, "Residential and mixed-use projects that have all of the key project attributes in Table 3 should accommodate growth in a manner consistent with State GHG reduction and equity prioritization goals" (CARB 2022c). Further, residential and mixed-use development projects which incorporate these attributes would have a less-than-significant impact under CEQA:

> *These project attributes are intended as a guide to help local jurisdictions qualitatively identify those residential and mixed-use projects that are **clearly** consistent with the State's climate goals, since these attributes address the largest sources of operational emissions for residential projects. In general, residential and mixed-use development projects that incorporate **all** of these key project attributes are aligned with the State's priority GHG reduction strategies for local climate action as shown in Table 1 and with the State's climate and housing goals. As such, they are considered to be consistent with the Scoping Plan or other plans, policies, or regulations adopted for the purposes of reducing GHGs; therefore, the GHG emissions associated with such projects may result in a less-than-significant GHG impact under CEQA.*

The Proposed Project's consistency with each of CARB's key project attributes is presented in **Table 4.7-4** below.

TABLE 4.7-4
CONSISTENCY WITH THE 2022 SCOPING PLAN'S KEY RESIDENTIAL AND MIXED-USE PROJECT ATTRIBUTES THAT REDUCE GHGS

Key Project Attribute	Consistency Analysis
Provides EV charging infrastructure that, at minimum, meets the most ambitious voluntary standard in the California Green Building Standards Code at the time of project approval.	**Consistent.** All subsequent development would be required to comply with the Plug-In Electric Vehicle (PEV) Charging Infrastructure requirements of Chapter 15.04 of the Oakland Municipal Code. All residential buildings are required to provide at least 2 full-circuit chargers in all parking lots less than 20 spaces, and in 10 percent of parking spaces in lots over 20 spaces (City of Oakland, 2017). In addition, inaccessible conduits for future expansion of PEV spaces must be installed at the remaining 90 percent of the total parking at multi-family residential buildings. The new requirements are designed to accelerate the installation of vehicle chargers to address demand.
Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer).	**Consistent.** The Proposed Project would facilitate housing development in mixed use, transit-oriented development patterns primarily in existing neighborhoods. These land use patterns would reduce GHG emissions. Goal 5 of the HAP contains policies (Policy 5.2) and actions that would reduce greenhouse gas emissions through promotion of sustainable design and decarbonization/electrification; encouraging higher-density, infill, and mixed-use development near transit; securing funding from the State's Affordable Housing and Sustainable Communities (AHSC) Program; and encouraging climate-resilient housing. Proposed zoning changes, including the Affordable Housing Overlay, would implement proposed missing middle amendments and related amendments to encourage a diversity of housing types such as flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and accessory dwelling units in currently single-family-dominated neighborhoods, and along corridors and transit-proximate areas. Policies in the Environmental Justice and Safety Element align directly with these actions to build equitable resilience to climate change.
Does not result in the loss or conversion of natural and working lands.	**Consistent**. The Proposed Project would not result in the loss or conversion of natural or working lands. The majority of proposed Planning Code changes would convert residential parcels into a different class of residential zoning with a few industrial parcels converting to zones permitting residential use. The Proposed Project includes the rezoning of one 4.7-acre parcel fronting Barcelona Street currently designated "Hillside Residential" with a portion designated "Resource Conservation." This parcel would be rezoned to Hillside Residential and Mixed Housing Type Residential. However, the proposed change is consistent with entitled development and aligns with taken by the City Council Resolution 87031 to issue a Request for Proposals for affordable housing development on this site (known as the "Barcelona" parcel). Therefore, the conversion of this land is already approved and not the result of the Proposed Project.
Consists of transit-supportive densities (minimum of 20 residential dwelling units per acre), **or** Is in proximity to existing transit stops (within a half mile), **or** Satisfies more detailed and stringent criteria specified in the region's SCS.	**Consistent.** The Proposed Project locates housing in mixed use, transit-oriented development patterns primarily in existing neighborhoods. These land use patterns reduce GHG emissions. The Proposed Project would be consistent with the Plan Bay Area 2050 goals and performance targets for transportation system effectiveness. Specifically, future development allowable under the Proposed Project would increase residential density near existing and future transit hubs, thereby reducing the demand for travel by single occupancy vehicles and reducing vehicle miles traveled per capita (see Section 4.15, *Transportation and Circulation*). Future development under the Proposed Project would be consistent with MTC and ABAG Plan Bay Area 2040 goals and objectives under SB 375 to implement "smart growth." The Proposed Project facilitates development in infill locations with access to public transportation which would reduce reliance on automobiles, thereby reducing VMT and associated GHG emissions. The VMT generated per capita under 2030 Project conditions area is projected to be less than 85 percent of the Bay Area regional average. The 2020 Bay Area region wide average is estimated to be 19.8 miles per resident. Based on the transportation analysis for the Proposed Project, subsequent development would result in 12.2 miles per resident (see Section 4.15, *Transportation and Circulation*). This would be substantially less than 16.9 miles per resident, which is 85 percent of the Bay Area regional average. The Proposed Project would meet the VMT reduction requirements under the City-adopted significance thresholds, which are consistent with SB 743. The Proposed Project would not conflict with Plan Bay Area 2040, the 2030 ECAP, or SB 743.

TABLE 4.7-4 (CONTINUED)
CONSISTENCY WITH THE 2022 SCOPING PLAN'S KEY RESIDENTIAL AND MIXED-USE PROJECT ATTRIBUTES THAT REDUCE GHGS

Key Project Attribute	Consistency Analysis
Reduces parking requirements by: Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); **or** Providing residential parking supply at a ratio of less than one parking space per dwelling unit; **or** For multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit	**Inconsistent.** The City has not fully eliminated parking minimums and unbundled parking is not required throughout the City. Although the required parking ratio is not less than one space per unit throughout the City, it is less than one space per unit in other parts of the City. Some projects require zero parking and with approved TDM plans, and some projects have fewer than 0.75 or 0.5 space per unit. Therefore, the City probably meets this requirement today and the allocation of housing units to areas with the lowest parking requirements will only help reduce the overall ratio. In addition, the ECAP Checklist requires all future housing development projects under the Proposed Project located in "Transit Accessible Areas" to provide either less than half the maximum allowable parking, the minimum allowable parking, or to take advantage of available parking reductions. Nonetheless, it cannot be known at this time that all development under the Proposed Project would be consistent with this attribute.
At least 20 percent of units included are affordable to lower-income residents	**Inconsistent**. Several components of the Proposed Project would facilitate developments in which 20 percent or more of the units are affordable to lower-income households. State law requires by-right approvals for projects with 20 percent or more affordable units on housing sites from the previous Housing Element (5th Cycle RHNA) that did not develop over the 2015-2023 period. The Proposed Project would expand this provision to all projects within the Housing Site Overlay Zone, which would apply to all housing sites identified in the Housing Sites Inventory (Table C-26 in the 2023-2031 Housing Element Update, Appendix C). The Pipeline Projects account for 12,339 units of the Proposed Project *Buildout Program* (see Table 3-5) and are predicted to be 21.5 percent affordable. The Affordable Housing Overlay Zone is estimated to produce approximately 1,000 affordable units. However, not all future development under the Proposed Project would include affordable units and it cannot be said with certainty that at least 20 percent of the overall housing production would be affordable to lower-income households.
Results in no net loss of existing affordable units	**Consistent**. The HAP of the Housing Element includes policies to Preserve and Improve Existing Affordable Housing Stock. The Proposed Project would not include the removal or result in the net loss of any existing affordable units. The proposed HEI includes adoption of Planning Code, Zoning Map, and General Plan amendments to implement several actions in the HAP including actions intended to reduce and eliminate constraints and incentivize the construction of affordable housing and actions to adopt an affordable housing overlay zone that would provide for ministerial approval and other incentives to qualifying affordable housing developments.
Uses all-electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking	**Consistent.** The City's newly adopted natural gas ban (Ordinance 13632) for new residential and commercial buildings applies to the Proposed Project. All subsequent development under the Proposed Project would be required to use a permanent supply of electricity as the source of energy for all space heating, water heating (including pools and spas), cooking appliances, and clothes drying appliances. ECAP Consistency Checklist item #9 also mandates this. Further, all subsequent development must comply with any then in effect City's building code building electrification requirement that eliminate the use of natural gas.

As shown in **Table 4.7-4**, the Proposed Project would be consistent with all the key project attributes contained in CARB's 2022 Scoping Plan except for two: 1) reducing parking requirements; and 2) at least 20 percent affordable units. However, CARB states that projects can still be consistent with the 2022 Scoping Plan and the state's climate goals even if some of these project attributes are not included: "Lead agencies may determine, with adequate additional supporting evidence, that projects that incorporate some, but not all, of the key project attributes are consistent with the State's climate goals." (CARB 2022c). As such, the Proposed Project may be consistent with State goals despite these specific inconsistency findings.

Regarding reducing parking requirements, some future housing development under the Proposed Project would be required to have zero parking and approved TDM plans, and some future housing development would have fewer than 0.75 or 0.5 space per unit. However, some future housing development may have one space per unit (i.e. housing development within the VHFHSZ). Cumulatively, for all future housing development under the Proposed Project, there would be less than one parking space per dwelling unit. Further, the ECAP Checklist requires all future housing development projects under the Proposed Project located in "Transit Accessible Areas" to meet specific maximum parking requirements. As such, the Proposed Project is substantially consistent with this project attribute and would not conflict with the 2022 Scoping Plan's goals for parking and VMT reduction.

Regarding affordable housing units, the Proposed Project would result in a substantial number of affordable housing units. The Affordable Housing Overlay substantially furthers the goal of achieving 20 percent total affordable housing units, as noted in the table above. According to CARB, accelerating housing production is essential to reducing VMT and associated mobile source emissions and housing development in transportation-rich areas is a necessary part of the State's climate strategy (CARB 2022c):

> *Accelerating housing production to meet the extraordinary need for more homes can help reduce vehicle miles traveled (VMT) and GHG emissions and advance health and equity objectives when new housing is developed in types and locations that align with these goals, and particularly when accompanied by complementary policies and investments to create sustainable communities and prevent displacement of existing residents… Increasing housing opportunities in transportation-efficient locations is a necessary paradigm shift and is part of the State's GHG emission reduction strategy… Policies to facilitate both market rate and subsidized affordable housing production in infill neighborhoods should, over time, stabilize housing costs, minimize displacement, and create new housing opportunities in transportation-efficient locations… the State has long been clear that urban infill projects, particularly in high-resource and low-VMT areas, would be generally supportive of the State's climate and regional air quality goals…*

As discussed under Impact GHG-1 above, the proposed land use and zoning changes under the Proposed Project mirror, densify, or create more mixed-use opportunities within the existing neighborhood land use pattern. Future housing development under the Proposed Project would be in mixed use, transit-oriented development patterns primarily in existing neighborhoods. The Proposed Project would increase allowable density and encourage development to take advantage of that added density through a variety of incentives and a streamlined entitlement process. Proposed zoning changes would encourage a diversity of housing types such as flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and accessory dwelling units in currently single-family-dominated neighborhoods, and along corridors and transit-proximate areas. The high-density nature of the future development would likely add residents in a way that is more efficient and would produce fewer GHG emissions than would be required in an outlying area. As such, the Proposed Project is substantially consistent with CARB's housing objectives and would not conflict with the 2022 Scoping Plan's goals for affordable housing and associated VMT reductions.

Therefore, the Proposed Project would be substantially consistent with the key project attributes identified in the 2022 Scoping Plan to align with the State's climate goals, accommodate growth in a manner consistent with State GHG reduction and equity prioritization goals, and thereby demonstrate consistency with the 2022 Scoping Plan. In addition, as detailed under Impact GHG-1, future development under the Proposed Project must demonstrate consistency with the 2030 ECAP. Such projects must do this by completing the ECAP Consistency Checklist and implementing SCA 41 (ECAP consistency) or by complying with SCA 42 (GHG reduction plan) as an alternative to SCA 41.

As described above and in Chapter 3, *Project Description*, the Proposed Project facilitates infill housing production in areas that are transportation-efficient, resource-rich, accessible, and inclusive. This type of development helps reduce VMT and GHG emissions, advance health and equity objectives, supports the creation of sustainable communities, prevents displacement of existing residents, alleviates pressure to develop on the urban periphery, and preserves natural and working lands and areas often at risk of wildfire.

Consistency with AB 1279

Assembly Bill 1279, which was signed into law in September 2022, requires the State to achieve two things by 2045 or sooner: 1) net zero GHG emissions; and 2) a reduction in statewide anthropogenic GHG emissions of 85 percent below 1990 levels. As described above, implementation of the 2017 Scoping Plan would decrease emissions through the RPS, more fuel-efficient vehicles, VMT reduction, high speed rail and other alternative transportation options, and more efficient appliances, water heaters, and HVAC systems. As discussed in Impact GHG-1 above, the Proposed Project would be consistent with the 2030 ECAP.

Although the Proposed Project would not meet the AB 1279 target of 85 percent below 1990 levels of anthropogenic GHG emissions or net zero GHG emissions by 2045, net zero emissions is not a significance threshold for the purposes of this Draft EIR because the horizon year of the Proposed Project is 2030 and not 2045. Thus, the significance threshold for Impact GHG-2 is consistency with the 2017 Scoping Plan and SB 32, and consistency with the 2022 Scoping Plan's key attributes for residential and mixed-use development projects. In fact, the 2022 Scoping Plan explicitly acknowledges and states that the inability of a project or plan to achieve carbon neutrality or net zero GHG emissions does not imply that a project contributes to a significant impact under CEQA (CARB, 2022c):

> *Jurisdictions considering a net-zero target should carefully consider the implications it may have on emissions in neighboring communities and beyond. Jurisdictions should also avoid creating targets that are impossible to meet as a basis to determine significance. For example, a net-zero target may imply that the GHG emissions of any project that are not reduced or offset to zero would be considered potentially significant. This may lead to undue burdens and frustrate project approval processes, which may be particularly problematic for residential development in climate-smart, infill areas. In addition, some jurisdictions have more land capacity to remove and store carbon, while others host GHG-emitting facilities that serve necessary functions and will take time to transition to new technology (e.g., municipal wastewater treatment plants, landfills, energy generation facilities). In those cases, jurisdictions that work together on a regional framework to rapidly decarbonize together may have better success in*

> *maximizing both emission reductions and other co-benefits. Ultimately, a net-zero target that makes it more difficult to achieve statewide goals by prohibiting or complicating projects that are needed to support the State's climate goals, like infill development or solar arrays, is not consistent with the State's goals.*
>
> *Although achieving net-zero GHG emissions may be an appropriate overall objective, it should be noted this approach may not be feasible or appropriate for every project.*

As illustrated above in Table 4.7-3, the future development under the Proposed Project would align with the both the 2017 Scoping Plan and the 2022 Scoping Plan and would not impede achieving the SB 32 target or making progress toward achieving the 2045 reductions included in AB 1279. The Proposed Project would make progress towards net zero emissions; however, its inability to achieve net zero emissions by 2045 does not conflict with the 2022 Scoping Plan, and thus does not render the impact significant under CEQA.

Consistency with Plan Bay Area 2040

Pursuant to California Senate Bill 375, ABAG and the MTC adopted *Plan Bay Area 2040* to establish targets and strategies intended to meet the region's needs for housing at all income levels, while reducing GHGs associated with private passenger and light duty truck traffic. *Plan Bay Area 2040's* core strategy is encouraging growth in existing communities along the existing transportation network, focusing new development in PDAs and TPAs within urbanized centers where there is more public transit and other mobility options available to reduce use of personal vehicles. In addition to significant transit and roadway performance investments to encourage focused growth, *Plan Bay Area 2040* directs funding to neighborhood active transportation and complete streets projects, climate initiatives, lifeline transportation and access initiatives, pedestrian and bicycle safety programs, and PDA planning.

Consistent with *Plan Bay Area 2040*, the Proposed Project would encourage housing development in mixed use, transit-oriented development patterns primarily in existing neighborhoods. Proposed policies and Planning Code amendments would encourage higher-density, infill, and mixed-use development near transit; and diverse housing types such as flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and accessory dwelling units in currently single-family-dominated neighborhoods, and along corridors and transit-proximate areas.

Consistency with the 2030 ECAP and Adopted Targets

The Proposed Project's consistency with the 2030 ECAP is discussed in Impact GHG-1 above. As shown in Table 4.7-2, the Proposed Project would be consistent with the 2030 ECAP and City Council Resolution 88268.

Consistency with SB 743 and the City's Transportation Impact Review Guidelines (TIRG)

The Project would not exceed the thresholds of significance for VMT as recommended by OPR in its 2018 guidance and by the City of Oakland's TIRG. In Section 4.15, *Transportation and Circulation*, the analysis of VMT found that the Project would have a less-than-significant impact on VMT because the Project would meet the following thresholds of significance, which are consistent with OPR's 2018 Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR, 2018) and the City of Oakland's CEQA Thresholds of Significance as adopted in the

TIRG. As described in Section 4.15, *Transportation and Circulation*, VMT generated by the increase in housing due to the implementation of the Project would be more than 15 percent below the regional averages. The Project would meet the VMT reduction requirements under the City-adopted significance thresholds, which are consistent with SB 743 and would result in a less-than-significant impact.

CALGreen Code and City of Oakland Green Building Code

Future development under the Proposed Project would be required to comply with the most recent update to the CALGreen Code. All subsequent development projects would also be required to comply with the City's Reach Codes that aim to achieve energy savings and GHG reductions beyond the State's minimum requirements. In addition, projects would be required to comply with the Plug-In Electric Vehicle (PEV) Charging Infrastructure requirements of Chapter 15.04 of the Oakland Municipal Code.

> **Mitigation Measure AIR-1: Text Changes to SCA 21, Criteria Air Pollutant Controls – Construction Related.** (See Section 4.2, *Air Quality*)

Summary

As described above, the Proposed Project would not conflict with the GHG reduction targets established by SB 32 and AB 1279, or the reduction measures identified in CARB's 2017 Scoping Plan or 2022 Scoping Plan. The Proposed Project is consistent with the 2030 ECAP and associated targets and all future development under the Proposed Project would be required to be consistent with the 2030 ECAP. In addition, the Proposed Project would not conflict with Plan Bay Area 2040 or SB 743 and the City's Transportation Impact Review Guidelines and would be subject to measures in the CALGreen Code and the City's Reach Codes.

The following policies and SCAs will also help reduce the impact: SCA 41 (Project Compliance with the Equitable Climate Action Plan (ECAP) Consistency Checklist), SCA 42 (Greenhouse Gas (GHG) Reduction Plan), SCA 21 (Criteria Air Pollutant Controls – Construction Related), SCA 22 (Diesel Particulate Matter Controls – Construction Related), SCA 23 (Exposure to Air Pollution (Toxic Air Contaminants)), and SCA 24 (Stationary Sources of Air Pollution (Toxic Air Contaminants)). In addition, Mitigation Measure AIR-1 (Text Changes to SCA 21, Criteria Air Pollutant Controls – Construction Related.) in Section 4.2, *Air Quality*, would help to reduce this impact. Further, proposed Policies EJ-1.2, EJ-1.7, EJ-1.10, EJ-1.11, EJ-1.13, EJ-1.16, EJ-4.6, EJ-7.16, and proposed Actions EJ-A.4 and EJ-A.11; which address tactics to reduce emissions, as well as Policies SAF-2.2, SAF-2.3, SAF-2.7, SAF-4.3, SAF-4.4, SAF-4.6, SAF-8.13, and Actions SAF-A.7, SAF-A.18, and SAF-A.20; which address tactics to increase resilience from wildfire and seal level rise, would further align the proposed *Phase I Oakland 2045 General Plan Update* with these plan, policy, and regulations. The impact would be less than significant with mitigation incorporated.

4.7.5 References – Greenhouse Gases

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4.8 Hazards and Hazardous Materials

This section describes conditions and potential environmental effects of the Proposed Project pertaining to hazards and hazardous materials. The section discusses relevant existing environmental conditions of the Plan Area and regulations pertinent to this section, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts to the physical environment that could result from implementation of the Proposed Project and its associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that would reduce potential impacts to this environmental topic are identified; both existing and proposed updated/new General Plan policies and SCAs are considered.

This section incorporates relevant information from the General Plan Update Map Atlas (see Appendix A) prepared in support of the Proposed Project. In response to the NOP (Notice of Preparation) of this Draft EIR, the City received scoping comments related to hazardous materials from the Department of Toxic Substances Control (DTSC). The DTSC comments were provided as a standard letter with general comments that future development under the Proposed Project may encounter hazardous materials or hazardous waste from historic or future activities; soil along roadways may have aerially deposited lead from the addition of lead in gasoline until 1992; former mine sites if any should be investigated; demolition of structures should test for hazardous building materials such as asbestos or lead-based paint; imported fill should be tested to verify it is free of contamination; and agricultural lands should be tested for pesticides.

4.8.1 Environmental Setting

4.8.1.1 Hazards and Hazardous Materials Terminology

Definitions of terms used in the characterization of baseline conditions, regulatory framework, and impact analysis for hazards and hazardous materials are provided below.

Hazardous Material: The term “hazardous material” can have varying definitions depending on the regulatory programs. For the purposes of this Draft EIR, the term refers to both hazardous materials and hazardous wastes. The California Health and Safety Code Section 25501(n) defines hazardous material as any material that because of its quantity, concentrations, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

Hazardous Waste: A “hazardous waste” is a waste that because of its quantity; concentration; or physical, chemical, or infectious characteristic; causes or significantly contributes to an increase in mortality or illness or poses substantial or potential threats to public health or the environment (42 U.S.C. 6903(5)). Hazardous wastes are further defined under the Resource Conservation and

Recovery Act (RCRA) as substances exhibiting the characteristics of ignitability, reactivity, corrosivity, or toxicity. Chemical-specific concentrations used to define whether a material is a hazardous, designated, or nonhazardous waste include Total Threshold Limit Concentrations (TTLCs), Soluble Threshold Limit Concentrations (STLCs), and Toxic Characteristic Leaching Procedure (TCLPs), listed in California Code of Regulations (CCR) Title 22, Chapter 11, Article 3, Section 66261, and used as waste acceptance criteria for landfills. Waste materials with chemical concentrations above TTLCs, STLCs, and TCLPs must be sent to Class I disposal facilities (i.e., hazardous waste facilities), may be sent to Class II disposal facilities depending on the waste material (i.e., designated waste facilities), and may not be sent to Class III disposal facilities (non-hazardous waste facilities).

Screening Levels for Hazardous Materials in Soil, Soil Gas, or Groundwater: The U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) and San Francisco Bay Area Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) are guidelines used to evaluate the potential risk associated with chemicals found in soil or groundwater where a release of hazardous materials has occurred. Although developed and maintained by the San Francisco Bay Area RWQCB, ESLs are used by regulatory agencies throughout the State. Screening levels have been established for both residential and commercial/industrial land uses, and for construction workers. Residential screening levels are the most restrictive. Soil with chemical concentrations below these ESLs generally would not require remediation and would be suitable for unrestricted uses. Commercial/industrial screening levels are generally less restrictive than residential screening levels because they are based on potential worker exposure to hazardous materials in the soil (and these are generally less than residential exposures). Screening levels for construction workers are also less restrictive than for commercial/industrial workers because construction workers are only exposed to the chemical of concern for the duration of construction, while industrial workers are assumed to be exposed over a working lifetime. Chemical concentrations below these screening levels generally would not require remediation and would be suitable for commercial and industrial uses. In addition, there are other more specific but similar screening levels used for more narrowly focused human health or ecological risk assessment considerations.

4.8.1.2 Environmental Setting

The following sections provide setting information pertaining to hazards and hazardous materials, including soils and groundwater contamination, hazardous building materials, schools, airports, emergency response and evacuation plans, and wildfires in support of the impacts analyses in Section 4.8.4, *Impacts of the Project*.

Hazardous Materials Sites

Past industrial or commercial operations on a site can result in spills or leaks of hazardous materials and/or petroleum products to the environment, resulting in soil and groundwater contamination. California Government Code Section 65962.5, commonly known as the Cortese List, is a planning document used by the State of California and its various local agencies and developers to comply with the CEQA requirements in providing information about the location of hazardous materials release sites. The Cortese List is a combination of lists, which can be

accessed by the following two databases. The Department of Toxic Substances Control (DTSC) EnviroStor online database keeps records of facilities that are authorized to treat, store, dispose, or transfer hazardous waste and includes the following site types: Federal Superfund sites (National Priority List); State response, including military facilities and State Superfund; voluntary cleanup; and school sites that are being evaluated by the DTSC for possible hazardous materials contamination. The EnviroStor database also contains current and historical information relating to permitted and corrective action facilities. The State Water Resources Control Board (SWRCB) GeoTracker online database contains regulatory data about leaking underground storage tanks (LUST), Department of Defense sites, spills-leaks-investigations-cleanups, and landfill sites. The GeoTracker database also contains information about public drinking water wells. These databases together show all sites on Cortese List and track hazardous materials release sites under their jurisdiction. In addition, local agencies with jurisdiction over cleanup sites are also required to post information for the sites under their jurisdiction to the GeoTracker or EnviroStor websites.

A review of the EnviroStor and GeoTracker databases reveals that there are approximately 1,686 documented hazardous materials sites on the Cortese List currently identified within the City of Oakland as shown on **Figure 4.8-1**) (DTSC, 2022; SWRCB, 2022). The figure shows sites within the City of Oakland, although hazardous materials sites beyond the City boundaries may have the potential to affect areas within the Plan Area if the contaminants associated with those sites migrate to within the City. The identified sites met at least one of the following criteria:

- Sites with known unauthorized releases of hazardous chemicals or petroleum under regulatory oversight.
- Sites with subsurface impacts and residual chemicals in the City.
- Sites outside of the City but where contamination had the potential to migrate and impact soil and/or groundwater in the Plan Area.
- Regulatory status (i.e., active, inactive, or closed).

The reporting and statuses of hazardous materials sites change as identification, investigation, monitoring and clean-up of hazardous sites progress, and these databases are updated periodically. Typically, sites are closed once it has been demonstrated that existing site uses combined with the levels of identified residual contamination present no significant risk to human health or the environment. While many of these sites have completed remediation and are considered closed, there are numerous sites that may still pose a threat to the public and the environment if contamination is encountered during new development. Further studies and additional remediation may be required for specific sites that show evidence for contamination. Sites listed as inactive sites aren't necessarily closed or may not have even been investigated yet. With those unknowns, there is the potential to encounter contamination that could affect a given project. Sites listed as closed may still pose a risk because: (1) there are still residual levels of contamination left at the site, (2) there may be undiscovered hot spots, and (3) regulatory standards change over time, usually getting lower, and the residual levels left at some sites

(especially those closed long ago) may exceed current levels. To take a conservative approach, all sites open, inactive, or closed were included in the search of the regulatory agency websites.

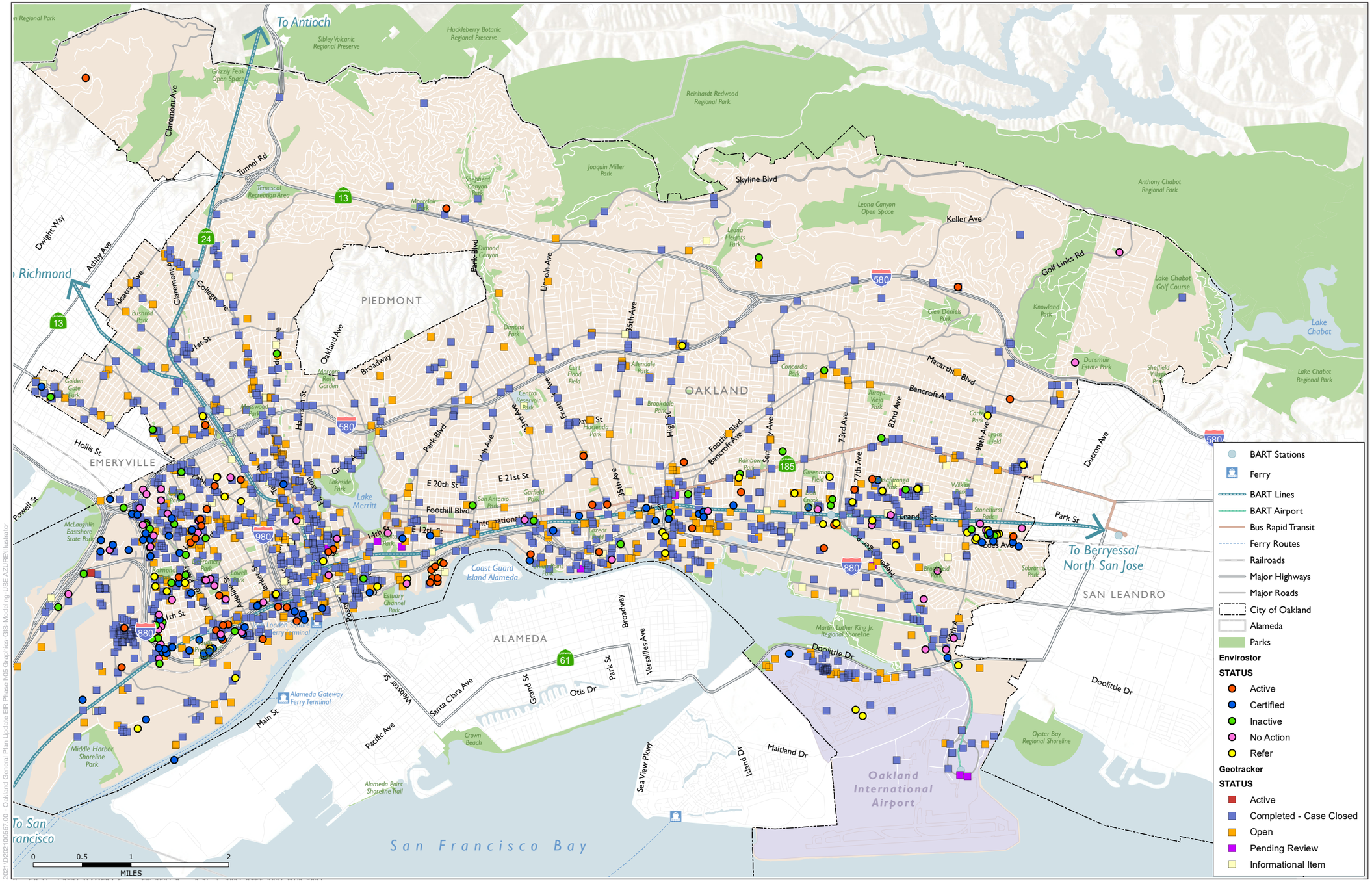
Once it is demonstrated that there is no significant risk to human health or the environment, the regulatory agency in charge (i.e., DTSC and/or SWRCB) will issue an official case closure or no further action letter and the site is then considered closed. It is important to note that a closed site may contain residual amounts of contamination, but the amounts are sufficiently low that they are not considered to pose a threat to human health or the environment for the designated land use (i.e., residential, commercial, industrial, or open space).

Based on the evaluation of the above criteria, the 1,686 documented hazardous materials sites were qualitatively ranked from 5 (very high hazard) to 1 (very low hazard). A brief description of these rankings is provided below in **Table 4.8-1**. Of the 1,686 identified sites, 361 are assigned a 5 ranking (very high hazard), 60 are assigned a 4 ranking (high hazard), 14 are assigned a 3 ranking (moderate hazard), 152 are assigned a 2 ranking (low hazard), and 1,099 are assigned a 1 ranking (very low hazard). The 435 sites that are ranked 3, 4, and 5 are shown on **Figure 4.8-2**.

TABLE 4.8-1
HAZARDOUS MATERIALS SITE RANKING

Rank	Hazard	Description	Consequences
5	Very High	Potentially acute threat to human health or environment.	Immediate action needed to mitigate existing threat.
4	High	Potentially significant risk to human health or environment	Investigation or remediation needed for existing risk or new development will be subject to remedial measures.
3	Moderate	Potential threat/risk to human health or environment	Possible investigation needed for existing development. Residual contamination in soil and/or groundwater may necessitate re-opening of case based on human health (vapor intrusion pathway) or groundwater impacts and revised closure standards.
2	Low	Less than significant threat/risk to human health or environment.	Special management/notification in case of subsurface work. New development may necessitate verification of closure standards and possible vapor intrusion study.
1	Very Low	De minimis condition	No action or special management needed other than possible notification.

CalEnviroScreen is a mapping tool created to identify California communities that are vulnerable to environmental impacts due to environmental, health, and socioeconomic factors (OEHHA 2022). CalEnviroScreen produces scores for each census tract based on these factors, which are compared to other census tracts in the State. An area with a high score is one that experiences a much higher pollution burden than one with a low score. Based on these scores, census tracts are ranked based on their demographic vulnerability and existing pollution burden.

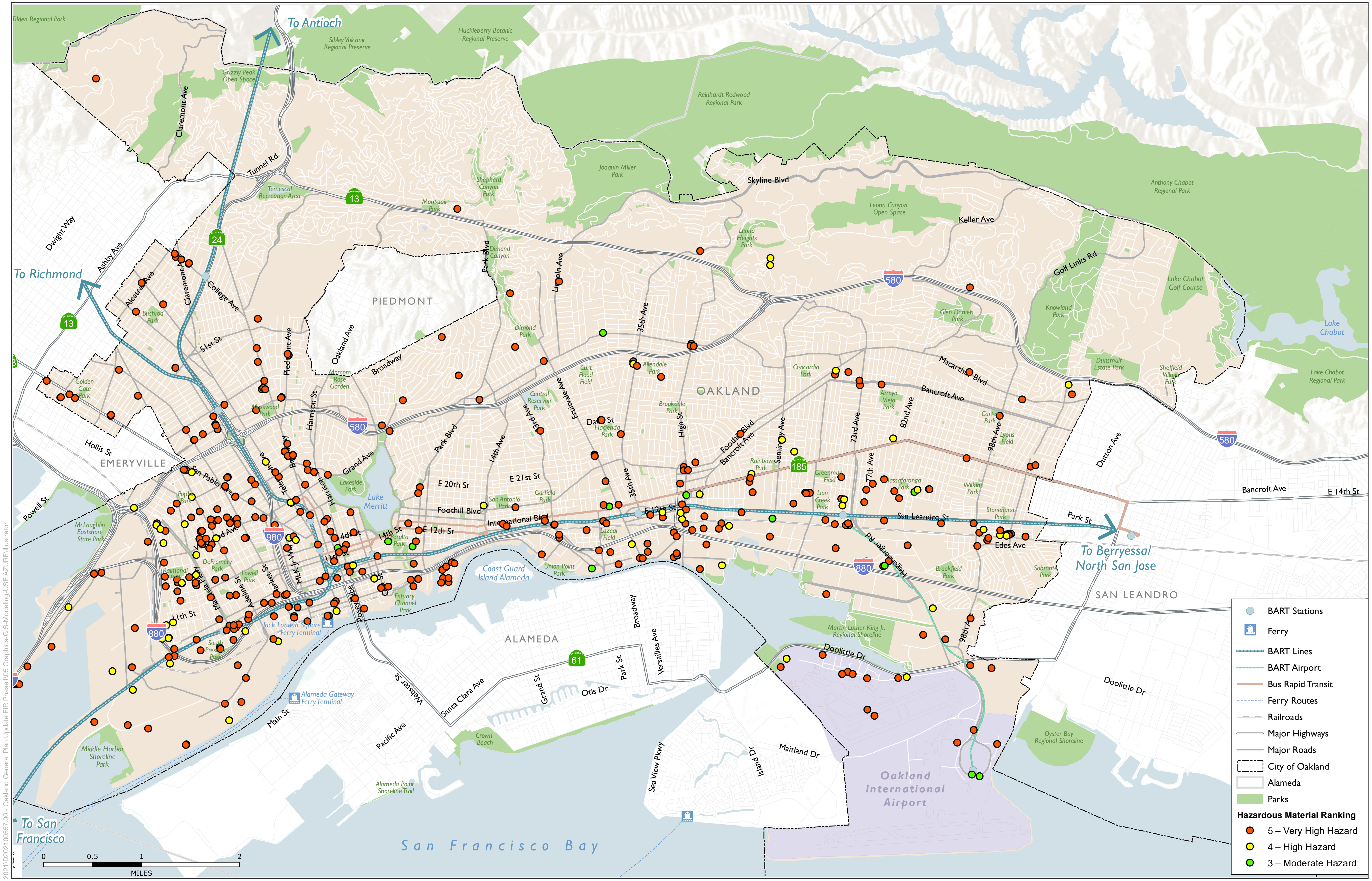


SOURCE: Dyett & Bhatia, 2022

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Figure 4.8-1
Hazardous Materials

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SOURCE: Dyett & Bhatia, 2022

Figure 4.8-2
Hazardous Material Ranking

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Figure 4.8-3 shows CalEnviroScreen data for DTSC Cleanup Sites within the Plan Area.[1] The data depicted in Figure 4.8-3 represents DTSC EnviroStor records of active hazardous materials sites (represented on the figure as yellow points). The list of the different types of sites that EnviroStor considers when creating these data are listed below:

- Evaluation
- Historical
- Military Evaluation
- Corrective Action
- School Cleanup
- Voluntary Cleanup
- Tiered Permit
- State Response
- Superfund

As depicted in Figure 4.8-3, each census tract is assigned a Cleanup Site Percentile (a score) based on the amount and types of Cleanup Sites present; each score is assigned a corresponding color (shade of red), the darkest red representing the highest score (and highest hazard). A discussed above, a high score indicates that a census tract is more vulnerable than one with a lower score. In the case of Cleanup Sites, a high score indicates a census tract is more vulnerable to exposure to hazardous materials that can affect human health and the environment.

Proximity to Schools

Section 4.13.1.3, *Public Schools*, describes schools within the Plan Area limits. The Oakland Unified School District (OUSD) operates 77 schools, including 51 elementary schools, 11 middle schools, and 15 high schools distributed throughout the Plan Area (see Figure 4.13-2). The figure does not reflect the recent (February 2022) school closures announced by the OUSD. Additionally, there are a number of private schools and charter schools located throughout the Plan Area.

Proximity to Airports

The Oakland International Airport located at 1 Airport Drive, is the only airport within the Plan Area limits. The Airport Land Use Compatibility Plan (ALUCP) for Oakland International Airport includes figures depicting the noise and safety contours for the airport. The figures indicate that the areas in the immediate vicinity of the airport are within the airport noise and safety zones (Alameda County ALUC, 2010).

Emergency Response or Evacuation Plans

The State of California and local governments throughout the Bay Area, including Alameda County, have made investments in the planning and resources necessary to respond to natural and human-caused emergencies and disasters. Cal OES and its local government partners developed the Bay Area Regional Emergency Coordination Plan with support from the Department of Homeland Security to provide a framework for collaboration and coordination during regional events. The Regional Emergency Coordination Plan ("RECP") has been prepared in accordance with national and State emergency management systems and plans. The RECP provides an all-hazards

[1] CalEnviroScreen 4.0 only takes into consideration hazardous materials sites that are listed in the EnviroStor database. This program does not take into account active SWRCB regulated sites.

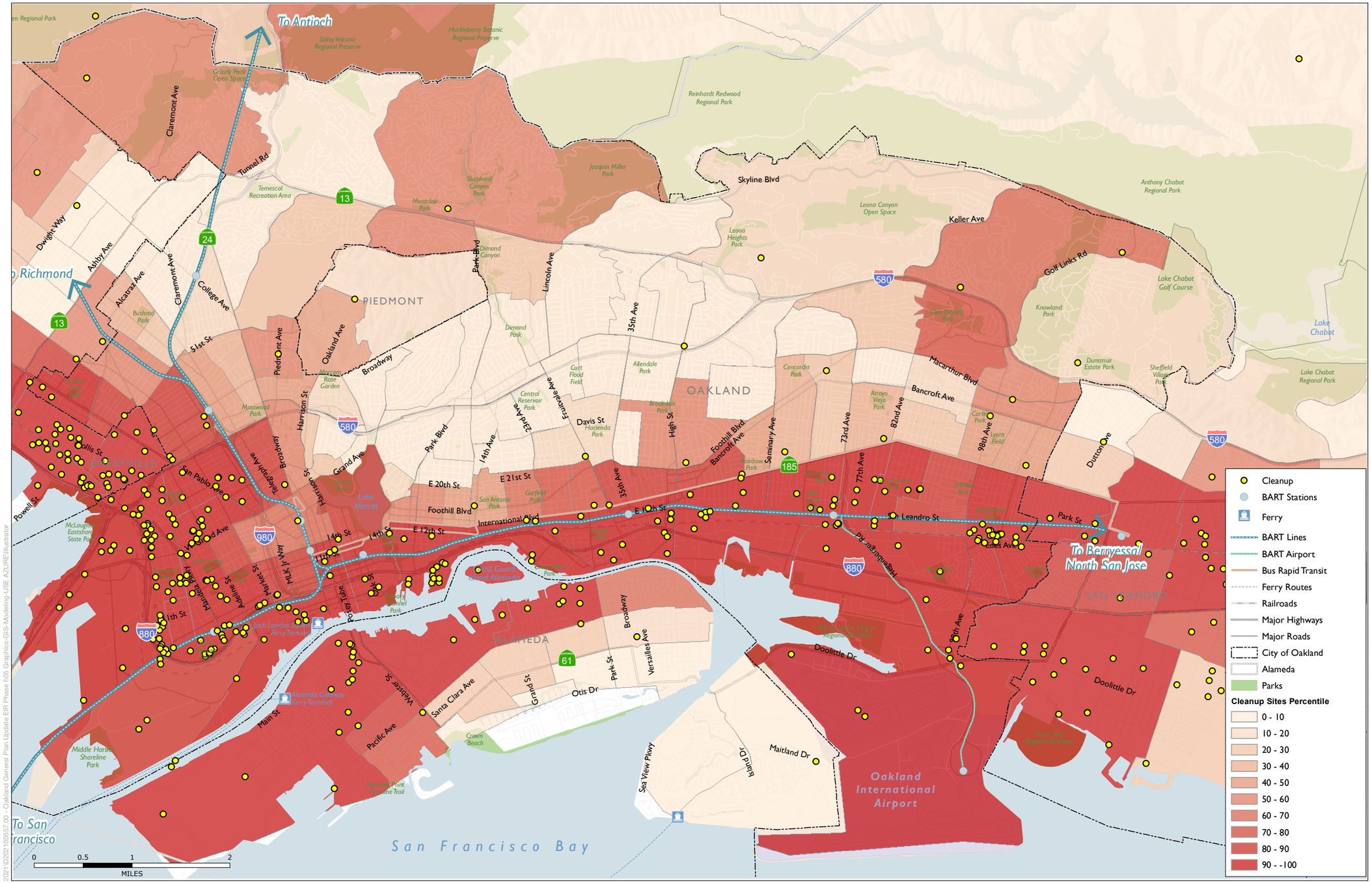
framework for collaboration among responsible entities and coordination during emergencies in the San Francisco Bay Area. The RECP defines procedures for regional coordination, collaboration, decision-making, and resource sharing among emergency response agencies in the Bay Area.

The RECP does not replace existing emergency response systems. Rather, it builds on the Standardized Emergency Management System ("SEMS") and the California State Emergency Plan to provide methods for cooperation among Operational Areas and Cal OES, Coastal Region. The RECP provides linkages to ensure that existing Bay Area emergency response systems work together during the response to an event. In addition, the RECP complies with the requirements of the National Incident Management System and is consistent with the National Preparedness Goal.

As discussed in Section 4.18, *Wildfire*, hazard areas (including very high fire risk areas and 100-year flood zones), their overlap with residential development, and current evacuation routes are shown in Figure 4.18-3. Areas susceptible to inundation from dam failures and tsunamis are shown on Figures 4.9-4 and 4.9-5, respectively, in Section 4.9, *Hydrology and Water Quality*. City infrastructure surveys have shown that many streets within the City of Oakland are not built to current Municipal Code Standards and have narrow streets with dead ends that only allow for one route of escape. Many streets in the Oakland Hills are in steep areas without off-street parking; therefore, residents park on the street, making the streets even narrower and less accessible for emergency responders. Considering these factors, conditions related to emergency response and evacuation are currently not adequate to serve the population living in certain areas of the City.

Wildland Fires

The California Department of Forestry and Fire Protection (CAL FIRE) Forest Resource Assessment Program (FRAP) published maps that delineate Very High Fire Hazard Severity Zones (VHFHSZs) in State Responsibility Areas (SRAs; CAL FIRE, 2022) and Local Responsibility Areas (LRAs; CAL FIRE, 2008). Based on mapping by CAL FIRE, Figure 4.18-1 in Section 4.18, *Wildfire*, shows the areas of LRA, SRA, and the various mapped FHSZs in and adjacent to the City. The City of Oakland is divided into flatlands and hills, and to the east of the hill areas is open space and forested area that is outside of City limits, and therefore within the SRA. As shown in Figure 4.18-1, the eastern portion of the City in the Oakland Hills is an LRA designated as a VHFHSZ and is adjacent to SRAs also designated as VHFHSZ. This designation is based on the fuel load, weather, and terrain factors that influence fire likelihood and fire behavior on a recurring regular basis. Of note, CAL FIRE does not make recommendations for High or Moderate FHSZs in LRAs; therefore, the abrupt border of the Very High FHSZ within Oakland should not be interpreted to mean that fire hazard is not present outside of that mapped zone. The potential for wildfires and fire hazard severity zones is discussed in more detail in Section 4.18, *Wildfire*.



SOURCE: Dyett & Bhatia, 2022

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Figure 4.8-3
CalEnviroScreen based on DTSC Cleanup Sites

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4.8.2 Regulatory Setting

4.8.2.1 Federal

The primary federal agencies with responsibility for hazardous materials management include the USEPA, U.S. Department of Labor Occupational Safety and Health Administration (Fed/OSHA), and the U.S. Department of Transportation (USDOT). Federal laws, regulations, and responsible agencies are summarized in **Table 4.8-2**.

State and local agencies often have either parallel or more stringent rules than federal agencies. In most cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of the law and its enforcement are discussed under either the state or local agency section.

TABLE 4.8-2
FEDERAL LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT

Classification	Law or Responsible Federal Agency	Description
Hazardous Materials Management	Community Right-to-Know Act of 1986 (also known as Title III of the Superfund Amendments and Reauthorization Act ["SARA"])	Imposes requirements to ensure that hazardous materials are properly handled, used, stored, and disposed of and to prevent or mitigate injury to human health or the environment in the event that such materials are accidentally released.
Hazardous Waste Handling	Resource Conservation and Recovery Act of 1976 ("RCRA")	Under RCRA, the USEPA regulates the generation, transportation, treatment, storage, and disposal of hazardous waste from "cradle to grave."
	Hazardous and Solid Waste Act	Amended RCRA in 1984, affirming and extending the "cradle to grave" system of regulating hazardous wastes. The amendments specifically prohibit the use of certain techniques for the disposal of some hazardous wastes.
Hazardous Materials Transportation	USDOT	USDOT has the regulatory responsibility for the safe transportation of hazardous materials. The USDOT regulations govern all means of transportation except packages shipped by mail (49 CFR).
	U.S. Postal Service (USPS)	USPS regulations govern the transportation of hazardous materials shipped by mail.
Occupational Safety	Occupational Safety and Health Act of 1970	Fed/OSHA sets standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries (29 CFR 1910).
Structural and Building Components (Lead-based paint, polychlorinated biphenyls, and asbestos-containing materials)	Toxic Substances Control Act	Regulates the use and management of polychlorinated biphenyls in electrical equipment, and sets forth detailed safeguards to be followed during the disposal of such items.
	USEPA	The USEPA monitors and regulates hazardous materials used in structural and building components and their effects on human health.
Federal Regulation 49 CFR Part 77, Objects Affecting Navigable Airspace	Federal Aviation Administration (FAA)	Proximity to Oakland International Airport would trigger the application of Federal Aviation Regulation Part 77, Objects Affecting Navigable Airspace, referred to as FAR Part 77, which sets forth criteria and requirements for proposed structures to be filed with the FAA for airspace safety review. The FAA review determines whether the proposed structure would constitute an obstruction or hazard to aircraft.

4.8.2.2 State

The primary State agencies with responsibility for hazardous materials management in the region include the DTSC and the RWQCB within the California Environmental Protection Agency (Cal EPA), California Occupational Safety and Health Administration (Cal/OSHA), California Department of Health Services, California Highway Patrol (CHP), and the California Department of Transportation (Caltrans). State laws, regulations, and responsible agencies are summarized in **Table 4.8-3**.

TABLE 4.8-3
STATE LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT

Classification	Law or Responsible State Agency	Description
Hazardous Materials Management	Unified Hazardous Waste and Hazardous Materials Management Regulatory Program ("Unified Program"); CUPA (Health and Safety Code Sections 25404 et seq.)	In January 1996, Cal EPA adopted regulations, which implemented a Unified Program at the local level. The agency responsible for implementation of the Unified Program is called the Certified Unified Program Agency (CUPA), which for the City of Oakland, is the Alameda County Department of Environmental Health ("ACDEH"), discussed further below.
	California Fire Code, Title 24, Chapter 9 of the California Code of Regulations	The California Fire Code regulates the storage and handling of hazardous materials, including the requirement for secondary containment, separation of incompatible materials, and preparation of spill response procedures.
Hazardous Waste Handling	California Hazardous Materials Release Response Plan and Inventory Law of 1985; CUPA	The California Hazardous Materials Release Response Plan and Inventory Law of 1985 (Business Plan Act) requires that businesses that store hazardous materials onsite prepare a Hazardous Materials Business Plan ("HMBP") and submit it to the local CUPA, which in this case is the ACDEH.
	California Hazardous Waste Control Act; DTSC	Under the California Hazardous Waste Control Act, California Health and Safety Code, Division 20, Chapter 6.5, Article 2, Section 25100, et seq., DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste in California. The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; dictate the management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills. DTSC is also the administering agency for the California Hazardous Substance Account Act. California Health and Safety Code, Division 20, Chapter 6.8, Sections 25300 et seq., also known as the State Superfund law, providing for the investigation and remediation of hazardous substances pursuant to State law.
Hazardous Materials Transportation	Titles 13, 22, and 26 of the California Code of Regulations	Regulates the transportation of hazardous waste originating in and passing through the State, including requirements for shipping, containers, and labeling.
	CHP and Caltrans	These two State agencies are primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies.
Occupational Safety	Cal/OSHA	Cal/OSHA has primary responsibility for developing and enforcing workplace safety regulations in California. Because California has a federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in Title 29 of the Code of Federal Regulations (CFR). Cal/OSHA standards are generally more stringent than federal regulations.
	Cal/OSHA regulations (Title 8 CCR)	Concerning the use of hazardous materials in the workplace require employee safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation.

TABLE 4.8-3 (CONTINUED)
STATE LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT

Classification	Law or Responsible State Agency	Description
Construction Storm Water General Permit (Construction General Permit; Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ)	RWQCB	Dischargers whose project disturbs one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one of more acres, are required to obtain coverage under the *NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit; Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). Construction activity subject to this permit includes clearing, grading, grubbing, and other disturbances to the ground such as excavation and stockpiling, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of a facility. The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan ("SWPPP") that includes specific Best Management Practices ("BMPs") designed to prevent sediment and pollutants from contacting stormwater from moving offsite into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management and good housekeeping, and are intended to protect surface water quality by preventing the offsite migration of eroded soil and construction-related pollutants from the construction area.
Municipal Separate Storm Sewer System ("MS4") Permits	State Water Resources Control Board ("SWRCB")	The Municipal Storm Water Program regulates storm water discharges from municipal separate storm sewer systems (MS4s) throughout California. An MS4 is a conveyance or system of conveyances that is: owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.; designed or used to collect or convey stormwater (e.g., storm drains, pipes, ditches); is not a combined sewer; and is not part of a sewage treatment plant, or publicly owned treatment works. Pursuant to the Federal Water Pollution Control Act ("Clean Water Act") section 402(p), storm water permits are required for discharges from an MS4 serving a population of 100,000 or more. The Municipal Storm Water Program manages the Phase I Permit Program (serving municipalities over 100,000 people), the Phase II Permit Program (for municipalities less than 100,000), and the Statewide Storm Water Permit for the State of California Department of Transportation. The State Water Resources Control Board (State Water Board) and Regional Water Quality Control Boards (collectively, the Water Boards) implement and enforce the Municipal Storm Water Program. The MS4 permits of the Port of Oakland and the City of Oakland are discussed further in Section 4.9, *Hydrology and Water Quality*.
Industrial Storm Water General Permit Order No. 2014-0057-DWQ	RWQCB	Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ ("IGP"). The IGP regulates discharges associated with certain defined categories of industrial activities including manufacturing facilities; hazardous waste treatment, storage, or disposal facilities; landfills, land application sites, and open dumps; cement manufacturing; fertilizer manufacturing; petroleum refining; phosphate manufacturing; recycling facilities; steam electric power generating facilities; transportation facilities; and sewage or wastewater treatment works. The IGP requires the implementation of best management practices, a site-specific SWPPP, and monitoring plan. The IGP also includes criteria for demonstrating no exposure of industrial activities or materials to storm water, and no discharges to waters of the United States.
Underground Infrastructure	California Code of Regulations Section 4216-4216.9	Section 4216-4216.9 "Protection of Underground Infrastructure" requires an excavator to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least two days prior to excavation of any subsurface installations. Any utility provider seeking to begin a project that could damage underground infrastructure can call Underground Service Alert, the regional notification center for southern California. Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities are then notified and are required to mark the specific location of their facilities within the work area prior to the start of project activities in the area.

TABLE 4.8-3 (CONTINUED)
STATE LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT

Classification	Law or Responsible State Agency	Description
Emergency Response	California Office of Emergency Services (OES) and local government partners	The State of California and local governments throughout the Bay Area, including Alameda County, have made investments in the planning and resources necessary to respond to natural and human-caused emergencies and disasters. Cal OES and its local government partners developed the Bay Area Regional Emergency Coordination Plan with support from the Department of Homeland Security to provide a framework for collaboration and coordination during regional events. The Regional Emergency Coordination Plan ("RECP") has been prepared in accordance with national and State emergency management systems and plans. The RECP provides an all-hazards framework for collaboration among responsible entities and coordination during emergencies in the San Francisco Bay Area. The RECP defines procedures for regional coordination, collaboration, decision-making, and resource sharing among emergency response agencies in the Bay Area. The RECP does not replace existing emergency response systems. Rather, it builds on the Standardized Emergency Management System ("SEMS") and the California State Emergency Plan to provide methods for cooperation among Operational Areas and Cal OES, Coastal Region. The RECP provides linkages to ensure that existing Bay Area emergency response systems work together during the response to an event. In addition, the RECP complies with the requirements of the National Incident Management System, and is consistent with the National Preparedness Goal.

4.8.2.3 Hazardous Building Materials Regulations

From the above-listed regulations, the use and removal of hazardous building materials is subject to the following regulations specific to the demolition and renovation of structures.

Asbestos-Containing Materials (ACM) Regulations

State-level agencies, in conjunction with the USEPA and OSHA, regulate removal, abatement, and transport procedures for asbestos-containing materials. Releases of asbestos from industrial, demolition, or construction activities are prohibited by these regulations and medical evaluation and monitoring is required for employees performing activities that could expose them to asbestos. Additionally, the regulations include warnings that must be heeded and practices that must be followed to reduce the risk for asbestos emissions and exposure. Finally, the Bay Area Air quality Management District (BAAQMD) must be notified prior to the onset of demolition or construction activities with the potential to release asbestos. The following regulations apply to the removal and disposal of ACM: Code of Federal Regulations (CFR) Title 40, Part 61, Subpart M (Asbestos National Emission Standards for Hazardous Air Pollutants [NESHAP]); California Code of Regulations (CCR) Title 8, Sections 1529 and 5208; and BAAQMD Regulation 11, Rule 2. BAAQMD Rule 2 provides detailed requirements for the definition of materials that qualify as ACM, qualifications for ACM contractors, and procedures for testing, containment, removal, and disposal.

Lead-Based Paint (LBP)

Cal/OSHA's Lead in Construction Standard is contained in Title 8, Section 1532.1 of the CCRs. The regulations address all of the following areas: permissible exposure limits (PELs); exposure

assessment; compliance methods; respiratory protection; protective clothing and equipment; housekeeping; medical surveillance; medical removal protection; employee information, training, and certification; signage; record keeping; monitoring; and agency notification. The following regulations apply to the removal and disposal of LBP: Title IV, Toxic Substances Control Act, Sections 402, 403, and 404; Title 8 CCR Section 1532.1; and BAAQMD Regulation 11, Rule 1. In addition, the California Department of Public Health (CDPH) requires that LBP removal actions prepare and submit CDPH Form 8551: Abatement of Lead Hazards Notification and CDPH Form 8552: Lead Hazard Evaluation Report to the CDPH.

Polychlorinated Biphenyls

PCBs are mixtures of 200-plus individual chlorinated compounds (known as congeners). PCBs were used in many applications like coolants and lubricants in transformers, capacitors, and other electrical equipment because they don't burn easily and are good insulators. The manufacture of PCBs ended in the U.S. in the late 1970s because they can cause harmful effects to human health and the environment. PCBs can be found in sources such as electrical transformers, fluorescent light ballasts and electrical devices with PCB capacitors, hydraulic oils, and building materials. PCBs are toxic, highly persistent in the environment, and bioaccumulate. There are no known natural sources of PCBs.

The US EPA prohibited the use of PCBs in the majority of new electrical equipment and fluorescent light ballasts starting in 1979, and initiated a phase-out for much of the existing PCB-containing equipment. The inclusion of PCBs in electrical equipment and the handling of those PCBs are regulated by the provisions of the Toxic Substances Control Act, 15 U.S.C. Section 2601 et seq. (TSCA). Relevant regulations include labeling and periodic inspection requirements for certain types of PCB-containing equipment and outline highly specific safety procedures for their disposal. The State of California likewise regulates PCB-laden electrical equipment and materials contaminated above a certain threshold as hazardous waste; these regulations require that such materials be treated, transported, and disposed accordingly. At lower concentrations for non-liquids, the RWQCB may exercise discretion over the classification of such wastes. The following regulations apply to the removal and disposal of PCBs: Resource Conservation and Recovery Act: 4 CFR 761; Toxic Substances Control Act: U.S. Code Title 15, Section 2695; and 22 CCR Section 66261.24.

Mercury

Mercury may be present in mercury switches and compact fluorescent light bulbs (CFLs) and other tubes. A mercury switch is an electrical switch that opens and closes a circuit when a small amount of the liquid metal mercury connects metal electrodes to close the circuit. There are several different basic designs (tilt, displacement, radial, etc.) but they all share the common design strength of non-eroding switch contacts. The most common is the mercury tilt switch, which is in one state (open or closed) when tilted one direction with respect to horizontal, and the other state when tilted the other direction. This is what older style thermostats used to turn a heater or air conditioner on or off. The mercury displacement switch uses a 'plunger' that dips into a pool of mercury, raising the level in the container to contact at least one electrode. This design

is used in relays in industrial applications that need to switch high current loads frequently. These relays use electromagnetic coils to pull steel sleeves inside hermetically sealed containers.

Since mercury is a toxic heavy metal, devices containing mercury switches must be treated as hazardous waste for disposal. Because of current regulations, most modern applications have eliminated mercury in switches. In the United States, the Environmental Protection Agency (EPA) regulates the disposition and release of mercury. Individual states and localities may enact further regulations on the use or disposition of mercury. The following regulations apply to the removal and disposal of mercury switches: 22 CCR Sections 66262.11, 66273 et seq., and 67426.1 through 67428.1.

Mercury in electrical equipment and lighting fixtures, along with other specified waste, must be disposed of in accordance with the DTSC Uniform Waste Rule. Common examples of Universal Wastes include televisions, computers, computer monitors, batteries, and fluorescent lamps. Universal wastes are hazardous upon disposal but pose a lower risk to people and the environment than other hazardous wastes. State and federal regulations identify which unwanted products are universal wastes and provide simple rules for handling and recycling of them. These regulations are found in the CCR, Title 22, Division 4.5, Chapter 23. Universal wastes, including those that contain mercury, must either be sent directly to an authorized recycling facility or to a universal waste consolidator for shipment to an authorized recycling facility. If the wastes are not to be recycled, then the waste must be managed as hazardous waste rather than as universal waste. This includes notifying DTSC, using a manifest and a registered hazardous waste hauler, complying with shorter accumulation times, and shipping only to an authorized hazardous waste disposal facility.

4.8.2.4 Local Plans, Ordinances and Policies

City of Oakland 2021- 2026 Hazard Mitigation Plan

The City developed the *2021 – 2026 Local Hazard Mitigation Plan* to establish and promote a comprehensive mitigation strategy and efforts to protect the whole community and environment from identified natural and human-made hazards (City of Oakland, 2021a). The Plan assesses the risk from natural and human-made hazards and describes mitigation strategies to reduce those risks. The identified hazards of concern included dam failure, drought, earthquake, flood, landslide, sea-level rise, severe weather, tsunami/seiche, and wildfire. For each topic, the existing conditions are risks are described, relevant regulations are identified, and the mitigation strategy developed to address those topics. The Plan complies with federal and State hazard mitigation planning requirements to establish eligibility for funding under Federal Emergency Management Agency (FEMA) grant programs, which reviewed and approved the Plan.

Oakland Emergency Operations Plan

The City of Oakland has an Emergency Operations Plan that would be implemented in the event of a disaster or emergency (City of Oakland, 2021b). The plan describes fundamental systems, strategies, policies, assumptions, responsibilities, and operational priorities that the City will follow to guide and support emergency management efforts, and describes discipline-specific emergency goals, objectives, capabilities, and responsibilities. The Wildfire Annex (City of

Oakland, 2021c) describes the unique conditions, situation, and response and recovery actions that City departments will undertake during a wildland fire incident.

City of Oakland General Plan

The current *Safety Element* of the Oakland General Plan describes various existing policies and actions regarding hazards and hazardous materials, adopted for the purpose of avoiding or mitigating an environmental effect, and that apply to the Proposed Project. However, in concert with this Proposed Project, the Safety Element is being updated. The updated policies are provided below in Section 4.8.3, *Proposed 2045 General Plan Policies, Hazardous Materials.*

Oakland Municipal Code

Under Oakland Municipal Code, Title 8, *Health and Safety*, Section 12.010, *State Hazardous Materials Law*, the City of Oakland assumes the authority and responsibility for the implementation of Chapter 6.95 of the California Health and Safety Code (Health and Safety Code Section 25500 et seq.), as to the handling of the hazardous materials in the City. Pursuant to Section 25502 of Chapter 6.95, the City shall have exclusive jurisdiction within its boundaries for the purposes of carrying out Chapter 6.95.

Oakland Municipal Code, Title 8, *Health and Safety*, Section 42, *Certified Unified Program Agency (CUPA)*, previously described the City as the local CUPA. However, that role has been transferred to the Alameda County Department of Environmental Health, as previously noted in Table 4.8-3.

4.8.2.5 City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) that are relevant to reducing impacts related to hazards and hazardous materials are listed below. All SCAs would be adopted as enforceable conditions of approval and required, as applicable, to be implemented during construction and operation of future development under the Proposed Project to help ensure less-than-significant impacts related to hazards and hazardous materials. The SCAs are incorporated and required as part of the Proposed Project, so they are not listed as mitigation measures.

- **SCA 43: Hazardous Materials Related to Construction**

  Requirement: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following:

  a. Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction;

  b. Avoid overtopping construction equipment fuel gas tanks;

  c. During routine maintenance of construction equipment, properly contain and remove grease and oils;

  d. Properly dispose of discarded containers of fuels and other chemicals;

e. Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and

f. If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.

- **SCA 44: Hazardous Building Materials and Site Contamination**

a. Hazardous Building Materials Assessment

Requirement: The project applicant shall submit a comprehensive assessment report to the Bureau of Building, signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials (ACMs), lead-based paint (LBP), polychlorinated biphenyls (PCBs), and any other building materials or stored materials classified as hazardous materials by State or federal law. If LBP, ACMs, PCBs, or any other building materials or stored materials classified as hazardous materials are present, the project applicant shall submit specifications prepared and signed by a qualified environmental professional, for the stabilization and/or removal of the identified hazardous materials in accordance with all applicable laws and regulations. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.

b. Environmental Site Assessment Required

Requirement: The project applicant hall submit a Phase I Environmental Site Assessment report, and Phase II Environmental Site Assessment report if warranted by the Phase I report, for the project site for review and approval by the City. The report(s) shall be prepared by a qualified environmental assessment professional and include recommendations for remedial action, as appropriate, for hazardous materials. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.

c. Health and Safety Plan Required

Requirement: The project applicant shall submit a Health and Safety Plan for the review and approval by the City in order to protect project construction workers from risks associated with hazardous materials. The project applicant shall implement the approved Plan.

d. Best Management Practices (BMPs) Required for Contaminated Site

Requirement: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential soil and groundwater hazards. These shall include the following:

i. Soil generated by construction activities shall be stockpiled on-site in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling and handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state, and federal requirements.

ii. Groundwater pumped from the subsurface shall be contained on-site in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building.

- **SCA 45: Hazardous Materials Business Plan**

  Requirement: The project applicant shall submit a Hazardous Materials Business Plan for review and approval by the City, and shall implement the approved Plan. The approved Plan shall be kept on file with the City and the project applicant shall update the Plan as applicable. The purpose of the Hazardous Materials Business Plan is to ensure that employees are adequately trained to handle hazardous materials and provides information to the Fire Department should emergency response be required. Hazardous materials shall be handled in accordance with all applicable local, state, and federal requirements. The Hazardous Materials Business Plan shall include the following:

  a. The types of hazardous materials or chemicals stored and/or used on-site, such as petroleum fuel products, lubricants, solvents, and cleaning fluids.

  b. The location of such hazardous materials.

  c. An emergency response plan including employee training information.

  d. A plan that describes the manner in which these materials are handled, transported, and disposed.

- **SCA 46: Fire Safety Phasing Plan**

  Requirement: The project applicant shall submit a Fire Safety Phasing Plan for City review and approval, and shall implement the approved Plan. The Fire Safety Phasing Plan shall include all of the fire safety features and emergency vehicle access incorporated into each phase of the project and the schedule for implementation of the features.

  When Required: Prior to approval of construction-related permit

  Initial and Revision Approval: Oakland Fire Department

  Monitoring/Inspection: Bureau of Building

- **SCA 47: Designated Very High Fire Severity Zone – Vegetation Management**

  a. Vegetation Management Plan Required

  Requirement: The project applicant shall submit a Vegetation Management Plan for City review and approval, and shall implement the approved Plan prior to, during, and after construction of the project. The Vegetation Management Plan may be combined with the Landscape Plan otherwise required by the Conditions of Approval. The Vegetation Management Plan shall include, at a minimum, the following measures:

i. Removal of all tree branches and vegetation that overhang the horizontal building roof line and chimney areas within 10 feet vertically;

ii. Removal of leaves and needles from roofs and rain gutters;

iii. Planting and placement of fire-resistant plants around the house and phasing out flammable vegetation, however, ornamental vegetation shall not be planted within 5 feet of the foundation of the residential structure;

iv. Trimming back vegetation around windows; Removal of flammable vegetation on hillside slopes greater than 20%; Defensible space requirements shall clear all hillsides of non-ornamental vegetation within 30 feet of the residential structure on slopes of 5% or less, within 50 feet on slopes on 5 to 20% and within 100 feet or to the property line on slopes greater than 20%.

v. All trees shall be pruned up at least ¼ the height of the tree from the ground at the base of the trunk;

vi. Clearing out ground-level brush and derris; and all non-ornamental plants, seasonal weeds, and grasses, brush, leaf litter and debris within 30 feet of the residential, structure shall be cut, raked, and removed from the parcel.

vii. Stacking woodpiles away from structures at least 20 feet from residential structures.

viii. If a biological report, prepared by a qualified biologist and reviewed by the Bureau of Planning, identifies threatened or endangered species on the parcel, the Vegetation Management Plan shall include islands of habitat refuge for the species noted on a site plan and appropriate fencing for the species shall be installed. Clearing of vegetation within these islands of refuge shall occur solely for the purpose of fire suppression within a designated Very High Fire Severity Zone and only upon the Fire Code Official approving specific methods and timeframes for clearing that take into account the specific flora and fauna species.

b. Fire Safety Prior to Construction

Requirement: The project plans shall specify that prior to construction, the project applicant shall ensure that the project contractor cuts, rakes and removes all combustible ground level vegetation project to a height of 6” or less from the construction, access and staging areas to reduce the threat of fire ignition per Sections 304.1.1 and 304.1.2 of the California Fire Code.

c. Fire Safety During Construction

Requirement: The project applicant shall require the construction contractor to implement spark arrestors on all construction vehicles and equipment to minimize accidental ignition of dry construction debris and surrounding dry vegetation. Per section 906 of the California Fire Code, during construction, the contractor shall have at minimum three (3) type 2A10BC fire extinguishers present on the job site, with current SFM service tags attached and these extinguishers shall be deployed in the immediate presence of workers for use in the event of an ignition.

d. Smoking Prohibition

Requirement: The project applicant shall require the construction contractor to implement a no smoking policy on the site and surrounding area during construction per Section 310.8 of the California Fire Code.

- **SCA 75: Construction Activity in the Public Right-of-Way**

  a. Obstruction Permit Required

  Requirement: The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public-right-of-way, including City streets, sidewalks, bicycle facilities, and bus stops.

  b. Traffic Control Plan Required

  Requirement: In the event of obstructions to vehicle or bicycle travel lanes, bus stops, or sidewalks, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian accommodations (or detours, if accommodations are not feasible), including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The Traffic Control Plan shall be in conformance with the City's Supplemental Design Guidance for Accommodating Pedestrians, Bicyclists, and Bus Facilities in Construction Zones. The project applicant shall implement the approved plan during construction.

4.8.3 Environmental Analysis

4.8.3.1 Significance Criteria

The City of Oakland has established thresholds of significance for CEQA impacts, which incorporate those in Appendix G of the *CEQA Guidelines* (City of Oakland, 2020). The Proposed Project would have a significant adverse impact related to hazards and hazardous materials if it would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
3. Create a significant hazard to the public through the storage or use of acutely hazardous materials near sensitive receptors;
4. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
5. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 (i.e., the "Cortese List") and, as a result, would create a significant hazard to the public or the environment;
6. Result in less than two emergency access routes for streets exceeding 600 feet in length unless otherwise determined to be acceptable by the Fire Chief, or his/her designee, in specific instances due to climatic, geographic, topographic, or other conditions;
7. Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and would result in a significant safety hazard for people residing or working in the project area;

8. Be located within the vicinity of a private airstrip, and would result in a significant safety hazard for people residing or working in the project area;

9. Fundamentally impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

10. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

4.8.3.2 Approach to Analysis / Methodology

This is a program-level Draft EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Impacts relative to hazards and hazardous materials are evaluated using the criteria listed above and based on information included in the City of Oakland General Plan, Map Atlas (see Appendix A), and the documents listed in Section 4.8.6, *References – Hazards and Hazardous Materials*.

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future development under the Proposed Project, this Draft EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas (see **Appendix A**) and analyzes the impacts of housing development through the projection period ending in 2030.

The methodology for analysis of hazards and hazardous materials impacts includes an assessment of both construction and operational impacts. Hazardous materials impacts related to air quality are evaluated in Section 4.2, *Air Quality,* and are not considered further in this section. Dust suppression is also addressed along with other potential air pollutants in Section 4.2, *Air Quality*.

Future development under the Proposed Project would be regulated by the various laws, regulations, and policies summarized in Section 4.8.2, *Regulatory Setting*. Compliance by the future development projects with applicable federal, State, and local laws and regulations is assumed in this analysis, and local and State agencies would be expected to continue to enforce applicable requirements to the extent that they do so now. Note that compliance with many of the laws and regulations is a condition of permit approval.

4.8.3.3 Proposed 2045 General Plan Policies, Land Use, and Zoning

Safety Element

The following policies pertaining to hazards and hazardous materials are proposed as a part of the Safety Element Update in the Proposed Project.

Policies:

SAF-2.1: Structural Fires. Continue, enhance, or implement programs that seek to reduce the risk of structural fires. Prioritize programs in frontline communities at highest seismic and fire risk.

SAF-2.2: Vegetation and Urban Forest Management. Manage vegetation and the urban forest to reduce combustible load, erosion, and other risks exacerbated by climate change.

- Adopt and fully implement a Vegetation Management Plan for high-fire risk areas. Continue to update and enforce the Oakland Fire Code to require building owners in high-risk areas to maintain defensible space and implement fire prevention measures. As part of the Vegetation Management Plan, build partnerships with and consult indigenous groups on sacred burning and other traditional fire suppression techniques.

- Implement the Urban Forest Master Plan, a comprehensive, area-wide urban canopy and vegetation plan that identifies locations where trees can be added and maintained, such as parks, streets, and rights-of-way. As a follow-up action, proactively address soil sequestration of carbon and water in frontline communities most affected by wildfire and other climate risks. *See Environmental Justice Element policy EJ-6.16 for other urban forest objectives.*

SAF-2.3: Development in the Very High Fire Hazard Severity Zone (VHFHSZ). Prioritize development in areas with existing adequate road networks, evacuation routes, and water infrastructure. Require any new development in the Very High Fire Hazard Severity Zone to prepare a Fire Protection Plan that minimizes risks by:

- Assessing site-specific characteristics such as topography, slope, vegetation type, wind patterns etc.

- Siting and designing development to avoid hazardous locations (e.g. through fire breaks) to the extent feasible.

- Incorporating fuel modification and brush clearance techniques in accordance with applicable fire safety requirements and carried out in a manner which reduces impacts to environmentally sensitive habitat to the maximum feasible extent.

- Using fire-resistant building materials and design features, consistent with the adopted Municipal Code and Fire and Building Code standards.

- Using fire-retardant, native plant species in landscaping.

- Complying with established standards and specifications for fuel modification, defensible space, access, and water facilities.

- Banning generators and fuel storage (e.g., for generators) in VHFHSZ.

- Requiring street improvements to comply with minimum fire road access standards.

- Disallowing new subdivisions in areas with less than two evacuation routes (as shown in Figure SAF-1d), unless a development were to be able to provide additional connections to ameliorate this condition.

SAF-5.1: Risks from Hazardous Materials Facilities. Review proposed facilities that would produce or store hazardous materials, gas, natural gas, or other fuels to identify, and require feasible mitigation for, any significant risks. The review shall consider, at a minimum, the following:

- presence of seismic or geologic hazards;
- presence of other hazardous materials;
- proximity to residential development and areas in which substantial concentrations of people exist, particularly environmental justice communities already overburdened by pollution, including toxic releases from facilities, cleanup sites, groundwater threats, and other sources; and
- nature and level of risk and hazard associated with the proposed project.

SAF-5.2: Hazardous Materials. Minimize the potential risks to human and environmental health and safety associated with the past and present use, handling, storage and disposal of hazardous materials.

SAF-5.3: Site Contamination. Through enforcement of standard conditions of approval, ensure buildings and sites are or have been investigated for the presence of hazardous materials and/or waste contamination before development or if there is reason to believe an existing building or site may contain hazardous materials that pose a threat to possible users. Continue to require remediation and construction techniques for adequate protection of construction workers, future occupants, adjacent residents, and the environment are adequately protected from hazards associated with contamination.

SAF-5.4: Hazardous Materials Accidents. Seek to prevent industrial and transportation accidents involving hazardous materials, and enhance the city's capacity to respond to such incidents. Continue to enforce regulations limiting truck travel through certain areas of the city to designated routes, and consider updating OMC 10.52.010 to establishing time-based restrictions on truck travel on certain routes to reduce the risk and potential impact of accidents during peak traffic hours.

SAF-6.1: ALUCP Updates. Periodically review and coordinate with the Oakland Airport Land Use Commission on updates and modifications to ALUCPs conducted for airport facilities within Alameda County.

SAF-6.2: Land Use Compatibility. Require land uses surrounding the Oakland International Airport to be compatible with the operation of the airport and restrict development of potentially hazardous obstructions or other hazards to flight. Discourage uses that may impact airport operations or do not meet Federal or State aviation standards.

SAF-8.1: Emergency Response. Maintain and enhance the City's capacity for emergency response, fire prevention, and firefighting.

SAF-8.2: Emergency Services Review. Continue to engage the Police and Fire departments in the development review process to ensure that projects are designed and operated in a manner that minimizes the potential for public safety and fire hazards and maximizes the potential for responsive police and fire services.

SAF-8.3: Hazard and Management Plans. Maintain and update as necessary the Oakland Emergency Operations Plan and Annex of Emergency Support Functions, and

Integrated Preparedness Plans, which describes how the City will prepare for, prevent, respond to, recover from and mitigate the effects of all types of hazard and threats.

SAF-8.5: Cohesive Evacuation Routes Network. Ensure the evacuation routes network is interconnected with adequate capacity and reflects ability to evacuate for multiple threats.

- Maintain adequate capacity along evacuation routes through methods such as limiting street parking, where capacity may be needed.
- Maintain a higher level of tree and vegetation maintenance along evacuation routes and remove flammable trees adjacent to these routes.

SAF-8.7: Local Hazard Mitigation Plan. To comply with federal and state law, follow and annually update the Oakland Local Hazard Mitigation Plan. Use the LHMP to guide mitigating actions to protect the whole community and environment from natural and humanmade hazards.

SAF-8.15: Traffic Signaling. Prioritize the connection to traffic signals along evacuation routes to the City's Traffic Management Center to allow for real-time modifications to signal timing that can speed evacuation in the event of an emergency.

SAF-8.16: Priority Route Coordination. Partner with Caltrans and neighboring jurisdictions on measures to protect critical evacuation routes and work with local agencies to develop contingency plans that address disconnected routes and explore roadway improvements that can provide better emergency access under emergency evacuation scenarios. Work with emergency response teams and transit providers to identify and support Oakland residents without access to transportation in the event of an emergency.

Actions:

SAF-A.8: Adopt and amend as needed updated versions of the California building and fire codes and local housing code so that optimal fire-protection standards are used in construction and renovation projects. Projects in Very High Fire Hazard Severity zones and the Wildland Urban Interface are required to include higher fire-rated construction.

SAF-A.9: Continue to review development proposals to ensure that they incorporate required and appropriate fire-mitigation measures, including adequate provisions for occupant evacuation, and access by fire-fighting personnel and equipment.

SAF-A.10: Compile a list of high-rise and high-occupancy buildings which are deemed due to their age or construction materials to be particularly susceptible to fire hazards, and determine an expeditious timeline for the fire safety inspection of all such structures. Prioritize areas based on racial equity and vulnerability criteria, including lower income households, mobility-impaired residents, families with small children, and older adults.

SAF-A.11: Continue to conduct periodic fire-safety inspections of commercial, multi-family, and institutional buildings. Prioritize inspections among areas at high risk and high vulnerability, including lower-income households, areas with greater percentages of mobility-impaired residents, families with small children, and older adults.

SAF-A.21: As part of the LUTE, the City of Oakland will include policy recommendations from the West Oakland Truck Management Plan. These include: 1) traffic calming measures to keep truck traffic off residential streets; 2) improved signage regarding existing truck routes; 3) preferred routes to use when destinations are not located on truck routes; and 3) modifications to truck routes and prohibited streets.

SAF-A.22: Continue to coordinate with ACDEH, the unified-program agency responsible for issuance of permits for and inspection of certain industrial facilities, monitoring the filing of disclosure forms and risk-management plans, hazardous-materials assessment reports and remediation plans, and closure plans by such facilities.

SAF-A.23: Continue to rely on, and update, the city's hazardous materials area plan to respond to emergencies related to hazardous materials.

SAF-A.24: Continue to offer basic emergency-response education and training to local businesses.

SAF-A.25: Continue to participate in the Alameda County Waste Management Authority and, as a participant, continue to implement policies under the county's hazardous-waste management plan to properly dispose of hazardous wastes.

SAF-A.26: Through the Urban Land Redevelopment program, and along with other participating agencies, continue to assist developers in the environmental clean-up of contaminated properties.

SAF-A.27: Outreach and engage with the Alameda County Department of Environmental Health, California Department of Toxic Substances Control, and the Regional Water Resources Control Board to ensure the public has access to a database with detailed site information on all brownfields and contaminated sites in the city and the existing restrictions placed on those sites.

SAF-A.28: Incorporate land use compatibility considerations in LUTE as part of Phase 2.

SAF-A.30: Maintain adequate capacity along evacuation routes as shown in SAF-11, e.g., by limiting street parking where capacity may be needed.

SAF-A.31: Maintain a higher level of tree and vegetation maintenance along evacuation routes and remove flammable trees and others that could fall and block access adjacent to these routes.

SAF-A.32: As part of the LUTE update, project future emergency service needs for planned land uses and evaluate capital improvement and staffing plans accordingly.

SAF-A.33: Periodically assess the need for new or relocated fire stations, facilities, programs, and technologies.

SAF-A.34: Strive to meet a goal of responding to fires and other emergencies within seven minutes of notification 90 percent of the time.

SAF-A.35: Continue to participate in multi-jurisdictional programs and task forces, such as the Hills Emergency Forum and Diablo FireSafe Council, that work to reduce the threat of wildfires.

Environmental Justice Element

The following policies and action pertaining to hazards and hazardous materials are proposed as a part of the Environmental Justice Element Update in the Proposed Project.

Policies:

EJ-1.3: Industrial Uses Near Sensitive Land Uses. Ensure that heavy industrial uses are adequately buffered from residential areas, schools and other sensitive land uses. In new developments, require adequate mitigation of air contaminant exposure and vegetative barriers near large stationary and mobile sources of air pollution.

EJ-1.5: Regulate Polluting Uses. Develop more stringent permitting standards and limit the number of variances approved for new, high-intensity, industrial or commercial land uses near sensitive uses in Environmental Justice Communities.

Actions:

EJ-A.10: Adopt requirements that new commercial and employment uses that generate truck traffic are located along existing truck routes to the extent feasible and work with project proponents to develop preferred truck routing that avoids sensitive land uses, such as schools, hospitals, elder and childcare facilities, and residences wherever feasible.

4.8.3.4 Topics Considered and Determined to Have No Impact

All hazards and hazardous materials topics are analyzed below.

4.8.4 Impacts of the Proposed Project

Impact HAZ-1: Adoption of the Proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials. (Criteria 1 and 2) (*Less than Significant*)

Construction Impacts

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. During the construction of future development under the Proposed Project, construction equipment and materials would include fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures, which are all commonly used in construction. The routine use or an accidental spill of hazardous materials could result in inadvertent releases, which could adversely affect construction workers, the public, and the environment.

Construction activities would be required to comply with numerous hazardous materials regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment, including stormwater and downstream receiving water bodies. In addition, proposed 2045 General Plan Policies SAF-5.2, Hazardous Materials; SAF-5.3, Site Contamination; and SAF-5.4, Hazardous

Materials Accidents, require hazardous materials management to prevent spills and plan for immediate response to spills in the event they occur. As part of the LUTE, Action SAF-A.21 would include policy recommendations from the West Oakland Truck Management Plan. These include: 1) traffic calming measures to keep truck traffic off residential streets; 2) improved signage regarding existing truck routes; 3) preferred routes to use when destinations are not located on truck routes; and 3) modifications to truck routes and prohibited streets. SAF-A.22, SAF-A.23, and SAF-A.25 encourage continued coordination with relevant agencies to plan for, respond to, and minimize potential from hazardous materials incidents. These regulations and policies are reinforced by SCA 43, Hazardous Materials Related to Construction, which establishes BMPs for handling hazardous materials during construction. SCA 45, Hazardous Materials Business Plan (HMBP), requires project applicants or their contractors to prepare and implement a HMBP to ensure hazardous materials used for construction would be used and stored properly to contain a potential release. SCA 44, Hazardous Building Materials and Site Contamination, requires the safe handling and disposal of hazard materials from existing buildings and contaminated sites. In addition, the California Fire Code would also require measures for the safe storage and handling of hazardous materials.

As discussed in Section 4.9, *Hydrology and Water Quality*, construction contractors would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) for construction activities according to the National Pollutant Discharge Elimination System (NPDES) General Construction Permit requirements. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction; describe spill prevention measures, equipment inspections, equipment, and fuel storage; protocols for responding immediately to spills; and describe BMPs for controlling site runoff. In addition, the transportation of hazardous materials would be regulated by the USDOT, Caltrans, and the CHP. Together, federal and State agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release. Finally, in the event of a spill that releases hazardous materials at a construction site, a coordinated response would occur at the federal, State, and local levels, including the County or local fire departments, which would be the local hazardous materials response team. In the event of a hazardous materials spill, the fire and law enforcement departments would be simultaneously notified and sent to the scene to respond and assess the situation.

Adherence to proposed policies SCAs, and the numerous laws and regulations discussed above that govern the transportation, use, handling, and disposal of hazardous materials would limit the potential for creation of hazardous conditions due to the use or accidental release of hazardous materials and would render this impact less than significant.

Operational Impacts

Once constructed, occupants of future development under the Proposed Project would use and store small quantities of chemicals typical in residences such as household cleaning solutions, paints, and thinners. Few of the chemicals would be considered hazardous materials (e.g., bleach) and the anticipated volumes would be small (i.e., less than 5 gallons). Given that the quantities would be small, the impact of routine use or an accidental spill of hazardous materials would be less than significant.

Mitigation: None required.

Summary

With adherence to proposed policies, SCAs, and regulatory compliance, future development under the Proposed Project would result in a less than significant impact related to the routine transport, use, disposal, or accidental release of hazardous materials.

Impact HAZ-2: Adoption of the Proposed Project would not release hazardous materials; emit hazardous emissions; or handle acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (Criteria 3 and 4) (*Less than Significant*)

Construction Impacts

As discussed in Section 4.8.2, *Environmental Setting, Proximity to Schools*, there are 71 schools located within the Plan Area. The accidental release or spill of hazardous materials near schools could expose school children and staff to hazardous materials.

As discussed above in Impact HAZ-1, there are numerous regulations covering the transport, use, storage, and disposal of hazardous materials during construction activities. In addition, proposed Policies SAF-5.2 Hazardous Materials, SAF-5.3 Site Contamination, and SAF-5.4 Hazardous Materials Accidents, require hazardous materials management to prevent spills and plan for immediate response to spills in the event they occur. Additionally, proposed EJ-1.3, Industrial Uses near Sensitive Uses, would ensure that heavy industrial uses will be adequately buffered from residential areas, schools and other sensitive land uses, protecting schools from potential exposure to hazardous materials from industrial uses. Similarly, EJ-1.5, Regulating Polluting uses, would help develop more stringent permitting standards and limit the number of variances approved for new, high-intensity, industrial or commercial land uses near sensitive uses, such as schools, in EJ Communities. Additionally, proposed Action EJ-A.10 would require that new commercial and employment uses that generate truck traffic are located along existing truck routes to the extent feasible avoids sensitive land uses, such as schools, hospitals, elder and childcare facilities, and residences wherever feasible, limiting the possibility that hazardous materials are handled or transported along truck routes in proximity to nearby schools.

These regulations and policies would be reinforced by SCA 43, Hazardous Materials Related to Construction, which establishes BMPs for handling hazardous materials during construction; SCA 45, Hazardous Materials Business Plan (HMBP), which requires project applicants or their contractors to prepare and implement a HMBP to ensure hazardous materials used for construction would be used and stored properly to contain a potential release; and SCA 44, Hazardous Building Materials and Site Contamination, requires the safe handling and disposal of hazard materials from existing buildings and contaminated sites. In addition, the California Fire Code would also require measures for the safe storage and handling of hazardous materials. requiring the proper storage and containment of hazardous materials, would ensure that the nearby school would not be exposed to hazardous materials. In addition, any construction project that would encroach on public streets would require project applicants to apply to the City of Oakland Public Works Department for an encroachment and/excavation permit—a process reinforced through SCA 75, Construction Activity

in the Public Right-of-Way. These permits require project applicants to prepare and implement a Traffic Control Plan to manage the movement of vehicles, including those transporting hazardous materials on roads adjacent to or near schools. With adherence to the proposed policies, SCAs, and regulatory requirements; construction of future development under the Proposed Project would not result in a significant impact relative to hazardous materials, substances, or waste in proximity to schools and the impact would be less than significant.

Operational Impacts

As discussed in Impact HAZ-1, once constructed, occupants of future development under the Proposed Project would use and store small quantities of chemicals typical in residences, such as household cleaning solutions, paints, and thinners. Few of the chemicals would be considered hazardous materials (e.g., bleach) and the anticipated volumes would be small (i.e., less than 5 gallons). Given that few of the routinely used chemicals would be considered hazardous and that the quantities would be small, the impact of routine use or an accidental spill of hazardous materials near a school would be less than significant.

Mitigation: None required.

Summary

With adherence to proposed policies, SCAs, and regulatory compliance, future development under the Proposed Project would result in a less than significant impact related to the routine transport, use, disposal, or accidental release of hazardous materials.

Impact HAZ-3: Adoption of the Proposed Project would not create an impact as a result of being located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, could create a significant hazard to the public or the environment. (Criterion 5) (*Less than Significant*)

Construction Impacts

As discussed in Section 4.8.2, *Environmental Setting, Hazardous Materials Sites*, and shown in Figures 4.8-1 through 4.8-3, many existing and hazardous materials release sites are located within or adjacent to the Plan Area's limits, meaning they are listed on the Cortese List (i.e., Government Code Section 65962.5 5) due to the release of hazardous materials. Construction on active or closed hazardous materials sites could expose construction workers, the public, or the environment to hazardous materials.

Construction activities associated future development under the Proposed Project would include soil excavation and could include groundwater extraction to dewater excavations and facilitate construction. Soil excavation and groundwater extraction from an area with existing contamination could expose construction workers, the public, and the environment to hazardous materials and result in a significant impact if contaminated materials are improperly handled.

In accordance with SCA 44, Hazardous Building Materials and Site Contamination, project applicants would be required to prepare a comprehensive assessment documenting the presence or absence of hazardous building materials. This SCA also requires a Phase I Environmental Site

Assessment and, if warranted by the Phase I, a Phase II Environmental Site Assessment report assessing the need for remedial action due to site contamination. This SCA also requires project applicants to prepare a Health and Safety Plan to protect construction workers. Once these plans are approved, the project applicant is required to implement the recommendations within these plans during construction. As described above, SCA 43 would require construction activities to comply with numerous hazardous materials regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment. In addition, proposed Policy SAF-5.3, Site Contamination, ensures buildings and sites are or have been investigated for the presence of hazardous materials and/or waste before development and/or purchase of the existing building or site, or if there is reason to believe the existing building or site may contain hazardous materials that pose a threat to possible users. Policy SAF-5.3 requires remediation and construction techniques for adequate protection of construction workers, future occupants, adjacent residents, and the environment are adequately protected from hazards associated with contamination. Proposed Actions SAF-A.22, SAF-A.23, and SAF-A.25 support ongoing efforts to document, inspect, and evaluate of potential risks from hazardous materials site, ensuring that any potential contamination is closely monitored and promptly responded. The cleanup of contaminated sites would be under the oversight of a regulatory agency, such as the DTSC or RWQCB, which would review all investigation and cleanup actions. Upon completion of cleanup activities, the regulatory agency would issue a no further action letter once regulatory action levels have been achieved (see Section 4.8.1, *Environmental Setting, Hazards and Hazardous Materials Terminology*, for a discussion of regulatory action levels).

Operational Impacts

As described above, hazardous materials sites would be cleaned up and remediated prior to construction, and there would be no operational impacts related to existing hazardous materials sites.

Mitigation: None required.

Summary

With adherence to proposed policies and actions, SCAs, and regulatory compliance, future development under the Proposed Project would result in a less than significant impact related to the development on contaminated sites.

Impact HAZ-4: Adoption of the Proposed Project would not result in a safety hazard or excessive noise for people residing or working in the Plan Area related to a public airport or public use airport. (Criteria 7 and 8) (*Less than Significant*)

Impacts related to airport noise are analyzed in Section 4.11, *Noise*.

As described in Section 4.8.2, *Environmental Setting, Proximity to Airports*, the Oakland International Airport is the only airport within the Plan Area. As described in Section 4.8.3, *Regulatory Setting, Federal, 49 CFR Part 77*, restrictions on the height of buildings, antennas,

trees, and other objects near Oakland International Airport are regulated by the FAA (see Table 4.8-2). The 49 CFR Part 77 regulations are used by the FAA and the Alameda County ALUC to identify potential obstructions and hazards to aviation traffic. Future development under the Proposed Project would be required to comply with the height restrictions described in the ALUCP. In the event that a project would extend into the 49 FAR 77 surface, the project applicant would be required to apply for a variance with the FAA and the Alameda County ALUC. The Proposed Policy SAF-6.1, ALUCP Updates, requires a periodical review of the Oakland Airport Land Use Commission regarding updates and modifications to ALUCPs conducted for airport facilities within Alameda County, ensuring that any changes are examined for potential safety hazards or excessive noise. Additionally, SAF-6.2, Land Use Compatibility; requires that land uses surrounding the Oakland International Airport are compatible with the operation of the airport and restrict development of potentially hazardous obstructions, hazards to flight, or other public safety hazards. With compliance with these existing regulations on building heights, the impact relative to airports would be less than significant.

Mitigation: None required.

Summary

With adherence to the existing ALUCP, future development under the Proposed Project would result in a less than significant impact related to proximity to airports.

Impact HAZ-5: Adoption of the Proposed Project would not result in less than two emergency access routes for streets exceeding 600 feet in length unless otherwise determined to be acceptable by the Fire Chief, or his/her designee, in specific instances due to climatic, geographic, topographic, or other conditions. (Criterion 6) (*Less than Significant*)

Construction and Operational Impacts

As discussed in Chapter 3, Project Description, the *Buildout Program* estimates adoption of the Proposed Project could add up to 41,458 housing units accommodating growth of up to approximately 39,377 households and 100,411 residents. While no specific development proposals are directly associated with the Proposed Project, theoretical development would result in an increase in population and thus an increased use of existing neighborhood and regional streets.

However, the Proposed Project does not include changes to the existing streets, construction of new streets, or the addition of or changes to the number of or configuration of emergency access routes. Although the Proposed Project Planning Code amendments would convert some parcels to allow residential use, the 2021 International Fire Code does not have different emergency access road requirements between industrial, commercial, or residential land uses (International Code Council, 2021). Therefore, the proposed Project would not change the existing conditions relative to emergency access routes and the impact would be less than significant.

Impact HAZ-6: Adoption of the Proposed Project could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Criterion 9) (*Significant and Unavoidable*)

As discussed in Section 4.8.2.4, Local Plans, Ordinances, and Policies, the City of Oakland has an Emergency Operations Plan that would be implemented in the event of a disaster or emergency. The plan and its annexes describe fundamental systems, strategies, policies, assumptions, responsibilities, and operational priorities that the City will follow to guide and support emergency management efforts, and describes discipline-specific emergency goals, objectives, capabilities, and responsibilities.

Construction Impacts

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. During the construction of future development under the Proposed Project, individual construction sites would be accessed by construction workers and for delivery of construction equipment and materials. While most construction activities would occur within individual construction sites, construction activities could encroach on public streets and could require temporary road closures or restrictions for the delivery of materials and/or utility improvements that extend into streets. These road closures or restrictions could interfere with emergency response or evacuation.

As discussed above in Impact HAZ-2, any work that would encroach on public streets would require project applicants to apply to the Oakland Public Works Department for an Encroachment and/Excavation Permit. These permits would require project applicants to prepare and implement a Traffic Control Plan to manage the movement of vehicles, as required by the Encroachment Permit and reinforced by SCA 75, Construction Activity in the Public Right-of-Way. The Traffic Control Plan would manage construction traffic such that emergency vehicles that need to travel by the sites would not be affected. With the implementation of the required Traffic Control Plan, the impact relative to adopted emergency response plan or emergency evacuation plan would be less than significant.

Operational Impacts

As discussed in Section 4.18, *Wildfire*, although the *Buildout Program* includes over 41,000 new housing units, it is unlikely that a substantial number of these units would be located within the VHFHSZs, because these areas are within the S-9 Fire Safety Protection Combining Zone, which prohibits the addition of Category Two Secondary Units and the Affordable Housing Overlay provisions that would otherwise be able to increase density in these areas. The exception to this is in a location south of Keller Avenue and east of I-580, where numerous housing units are under approved and construction.

However, additional traffic volumes could be expected with the construction of more housing anywhere in fire-threatened areas of the City. An Evacuation Congestion Analysis was prepared for the *Buildout Program* utilizing the Alameda County Transportation Commission Countywide Travel Demand Model that includes Plan Bay Area 2040 land use assumptions (see Sections 4.12,

Population and Housing, Section 4.15, *Transportation and Circulation*, and Appendix D). To assess constraints on roadway capacity, the Evacuation Congestion Analysis modeled the expected weekday PM peak-hour roadway congestion under 2030 build-out conditions and under three tsunami, dam failure, 100-year/500-year flooding, and three wildfire scenarios discussed further below. The model determined that wildfire-related evacuation traffic would have a significant impact on area roadways. Table 4.18-1 in Section 4.18, *Wildfire*, summarizes the main roadways that would be congested or over-capacity under each scenario. Impact WLD-1 concluded that the increased housing density in VHFHSZs could impair emergency evacuation during a wildfire because it causes congestion and exacerbates over-capacity problems that preclude timely and safe evacuation.

In addition, the Evacuation Congestion Analysis also evaluated roadway congestion and over-capacity conditions under tsunami, dam failure, and 100-year/500-year flood scenarios. For tsunamis, the potential flooding is assumed to affect shoreline portions of the City of Oakland and the City of Alameda as shown on Figure 4.9-5, *Tsunami Inundation Zones*. Evacuation is expected to be primarily directed east of the affected area, with evacuation traffic traveling east, north, and south. The flooding would affect the entire shoreline including City of Oakland and Alameda and it is assumed that the City of Alameda's residents will also evacuate using the City of Oakland's roadways. The model indicates substantial and immediate over capacity conditions throughout the City. The majority of evacuation trips travel out in all directions to the north, south and east of the City in this scenario, worsening the congestion over the entire roadway network. The destinations for this evacuation scenario are located within the City as well as outside, in the City of San Leandro and the City of Berkeley.

For dam failure, the potential flooding areas from dam failures at Lake Temescal, Central, Dunsmuir Reservoir, New Upper San Leandro, and Chabot are shown on Figure 4.9-4, *Dam Breach Inundation Area*. Evacuation is expected to be primarily directed outward from the affected area. For a dam failure at Lake Chabot, the model indicates substantial and immediate over capacity conditions throughout the City. This is because a greater number of evacuation trips travel out and away from the inundated area, worsening the congestion over the entire roadway network.

For inundation from 100-year or 500-year floods, the potential flooding areas are shown on Figure 4.9-3, *Flood Zones*. Under this scenario, flooding from heavy precipitation is assumed to affect the southern portions of the City. Evacuation is expected to be primarily directed east of the City and the flooding would result in most of the City evacuating. The model indicates substantial and immediate over capacity conditions throughout the City. This is because majority of evacuation trips travel out in all directions to the north, south and east of the City in this scenario, worsening the congestion over the entire roadway network. The destinations for this evacuation scenario are located within the City as well as outside, in the City of San Leandro and the City of Berkeley.

The City would be required to periodically update its emergency response and evacuation plan(s) as required under AB 747 and the City's Safety Element. However, the policies described above for the updated Safety Element would not clearly and adequately mitigate potential evacuation interference caused by congestion and over-capacity issues that would result from increased

density. No additional mitigation has been identified that can feasibly reduce this impact to less than significant. Therefore, the impact relative to emergency access and evacuation would be significant and unavoidable.

Mitigation: None feasible.

Summary

Adoption of the Proposed Project, with adherence to SCAs, periodic updates to the City's evacuation and emergency response plans as required by AB 747, and compliance with the City's Safety Element, would result in a significant and unavoidable impact related to emergency response plans or emergency evacuation plans.

Impact HAZ-7: Adoption of the Proposed Project would not expose people or structures to significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. (Criterion 10) (*Less than Significant*)

The impacts relative to evacuation are analyzed above in Impact HAZ-6 and not repeated here.

Construction Impacts

The eastern extent of the Plan Area is within a VHFHSZ; there would be no impact outside of this area. Construction activities for future developments under the Proposed Project that are within a VHFHSZ could increase the risk of wildfire by introducing new sources of ignition (i.e., construction vehicles and equipment) into those areas. To address the risk of wildfire, proposed Policy SAF-2.3, *Development in the Very High Fire Hazard Severity Zone* (VHFHSZ), requires assessing site-specific characteristics; avoiding hazardous fire-prone locations; incorporating fuel modification and brush clearance techniques; using fire-resistant building materials and design features; using fire-retardant, native plant species in landscaping; and complying with established standards and specifications for fuel modification, defensible space, access, and water facilities; banning fuel storage (e.g. for equipment generators) in VHFHSZ; and requiring street improvements to comply with minimum fire road access standards. These regulations and policies would be reinforced by SCA 46, Fire Safety Phasing Plan, which requires the preparation of a Fire Safety Phasing Plan that would include fire safety features incorporated into each phase of the proposed projects. Additionally, SCA 47, Designated Very High Fire Severity Zone – Vegetation Management, requires the preparation of a Vegetation Management Plan (contents of this plan are discussed in Section 4.8.2, *Regulatory Setting*), as well as specific fire safety measures and the requirement for spark arrestors on mechanized equipment to be followed prior to and during construction activities (also discussed in detail above). Adherence to proposed policies and SCAs would limit the potential for construction activities to result in wildfires and would render this impact less than significant.

Operational Impacts

Once constructed, future development under the Proposed Project will have been constructed to reduce the potential for wildfires. In particular, SCA 47, Designated Very High Fire Severity

Zone – Vegetation Management, requires vegetation management during operations. The required compliance with SCA 47 would limit the potential for wildfires from completed projects and would render this impact less than significant.

Mitigation: None required.

Summary

With adherence to proposed policies and SCAs, future development under the Proposed Project would result in a less than significant impact related to the wildfires.

4.8.5 Cumulative Impacts

This section presents an analysis of the cumulative effects of future development under the Proposed Project in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to hazards and hazardous materials could occur if the incremental impacts of future development under the Proposed Project combined with the incremental impacts of cumulative development would be significant and if the Proposed Project's contribution would be considerable.

Impact HAZ-8: Adoption of the Proposed Project, combined with cumulative development, would not result in significant cumulative impacts related to hazards and hazardous materials. (*Less than Significant*)

Geographic and Temporal Context

Impacts related to hazardous materials are generally site-specific and depend on the nature and extent of the hazardous materials release, and existing and future soil and groundwater conditions. For example, hazardous materials incidents tend to be limited to a smaller and more localized area surrounding the immediate spill location and extent of the release and could only be cumulative if two or more hazardous materials releases spatially overlapped. For this reason, the geographic area affected varies based on the environmental resource under consideration. In addition, impacts related to hazardous materials are generally time-specific. Hazardous materials events could only be cumulative if two or more hazardous materials releases occurred at the same time, as well as overlapping at the same location.

Cumulative Impacts – Construction

The construction activities for cumulative development would be subject to the same regulatory requirements discussed above for the Proposed Project, including spill response. The responsible party associated construction projects that have spills of hazardous materials would be required to remediate their respective sites to the same established regulatory standards. This would be the case regardless of the number, frequency, or size of the release(s). The residual less-than-significant effects that would remain after mitigation would not combine with the potential residual effects of cumulative projects to cause a potential significant cumulative impact because residual impacts would be highly site-specific and would be below regulatory standards.

Accordingly, no significant cumulative impact with respect to the use of hazardous materials would result. For the above reasons, future development under the Proposed Project would not cause or contribute to a cumulatively considerable impact with respect to the use of hazardous materials, and impacts would be less than significant. Similarly, although construction for two or more projects that occur at the same time and use the same roads could cause interference with emergency access, each construction project would be subject to the same City of Oakland Encroachment and/or Excavation Permit requirements.

Cumulative Impact – Operations

Once constructed, the residences would use and store small quantities of chemicals typical in residences. Few of the chemicals would be considered hazardous materials (e.g., bleach) and the anticipated volumes would be small (i.e., less than 5 gallons). Given that the quantities would be small, future development under the Proposed Project would not cause or contribute to a cumulatively significant impact with respect to the use of hazardous materials.

For the cumulative projects that include the use of reportable quantities of hazardous materials, the cumulative project components involving the handling, storage, and disposal of hazardous materials would be required to prepare and implement an HMBP and comply with applicable regulations. Transportation and disposal of wastes would also be subject to regulations for the safe handling, transportation, and disposal of chemicals and wastes. Therefore, compliance with existing regulations regarding hazardous materials transport would reduce the risk of environmental or human exposure to such materials.

Cumulative projects located within the Oakland International Airport 49 FAR Part 77 surface area would also be required to comply with the height restrictions identified in the CLUP. Generally, the Proposed Project would not alter the overall land use patterns or land use designations to such an extent that would conflict with County or city emergency response and/or evacuation plans. It is assumed that cumulative projects would also be designed to not conflict with County or city emergency response and/or evacuation plans. The combined effects of future development under the Proposed Project and cumulative projects would not result in a significant cumulative impact.

Mitigation: None required.

Summary

Except for emergency access and evacuation, adherence to required Encroachment Permits, Traffic Control Plans, the existing ALUCP, proposed policies and actions, SCAs, and regulatory compliance; future development under the Proposed Project, combined with cumulative development, would not cause or contribute considerably to a significant cumulative impact related to hazards and hazardous materials. Cumulative impacts would, therefore, be less than significant.

Impact HAZ-9: Adoption of the Proposed Project, combined with cumulative development, could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (*Significant and Unavoidable*)

Cumulative projects located within VHFHSZs, and inundation areas from tsunamis, dam failures, and 100-year/500-year flood zones could contribute to substantial and immediate over capacity conditions on roadways throughout the City because majority of evacuation trips travel out in all directions to the north, south and east of the City, worsening the congestion over the entire roadway network. The destinations for this evacuation scenario are located within the City as well as outside, in the City of San Leandro and the City of Berkeley. The City would be required to periodically update its emergency response and evacuation plan(s) as required under AB 747 and the City's Safety Element. However, the policies described above for the updated Safety Element would not clearly and adequately mitigate potential evacuation interference caused by congestion and over-capacity issues that would result from increased density. No additional mitigation has been identified that can feasibly reduce this impact to less than significant. Therefore, the impact relative to emergency access and evacuation would be significant and unavoidable.

Mitigation: None feasible.

Summary

Despite the existing and proposed policies, SCAs, and regulatory compliance; future development under the Proposed Project, combined with cumulative development, could cause or contribute considerably to a significant cumulative impact related to emergency access and evacuation, and there is no feasible mitigation. Cumulative impacts would, therefore, be significant and unavoidable.

4.8.6 References – Hazards and Hazardous Materials

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4.9 Hydrology and Water Quality

This section describes conditions and potential environmental effects of the Proposed Project pertaining to hydrology and water quality. The section discusses relevant existing environmental conditions of the Plan Area and regulations pertinent to this section, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts to the physical environment that could result from implementation of the Proposed Project and its associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that would reduce potential impacts to this environmental topic are identified; both existing and proposed updated/new General Plan policies and SCAs are considered.

This section incorporates relevant information from the General Plan Update Map Atlas (see Appendix A) prepared in support of the Proposed Project. The NOP (Notice of Preparation) for this Draft EIR did not receive scoping comments related to hydrology and water quality.

4.9.1 Environmental Setting

4.9.1.1 Environmental Setting

Climate

The City of Oakland is located in a region generally characterized as having a Mediterranean climate with moist, mild winters and hot, dry summers. However, the region's varied topography creates microclimates dependent upon elevation, proximity to the Bay or coast, and orientation. As a result, stark climatic differences reflected in temperature, rainfall amounts, and evapotranspiration can occur over relatively short distances. More than 90 percent of precipitation in the Bay Area falls between November and April. The average annual rainfall within the City of Oakland is approximately 24 inches (U.S. Climate Data, 2022).

Surface Water Hydrology

The City of Oakland is bordered to the west by the San Francisco Bay (Bay), the Oakland Estuary, and San Leandro Bay. There are 26 individual watersheds within the Plan Area, as shown on **Figure 4.9-1**, *Watersheds*. Surface water bodies within the Plan Area include Lake Merritt and Lake Temescal, and Arroyo Viejo, Elmhurst, Glen Echo, Lion, Indian Gulch, Palo Seco, Peralta, Pleasant Valley, San Antonio, San Leandro, Sausal, Temescal, and Wildwood Creeks, shown on **Figure 4.9-2**, *Creeks*. The surface water bodies all drain to the Bay, the Oakland Estuary, and San Leandro Bay.

Surface Water Quality

Surface water quality in the Plan Area's surface water bodies are influenced by past and present urban uses in the region such as industrial waste discharges and urban storm water runoff. Pollutant sources include both point and non-point discharges. A point source is any discernible, confined, and discrete conveyance (e.g., a pipe discharge) of pollutants to a water body from sources such as industrial facilities or wastewater treatment plants. Non-point pollutant sources are those that do not have a single, identifiable discharge point but are rather a combination of

many sources. For example, a non-point source can be storm water runoff from land that contains petroleum from parking lots, pesticides from farming operations, or sediment from soil erosion.

State policy for water quality control in California is directed toward achieving the highest water quality consistent with maximum benefit to the people of the State. The Regional Water Quality Control Board (RWQCB) prepared the Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin (Region 2) to identify beneficial uses and define the resources, services, and qualities of the aquatic systems in the region for goals of protecting and achieving high water quality (RWQCB, 2019). The RWQCB is charged with protecting all the beneficial uses from pollution and nuisance that may occur as a result of waste discharges in the region. Beneficial uses of surface waters, groundwater, marshes, and wetlands presented in the Basin Plan serve as a basis for establishing water quality objectives and discharge prohibitions to attain water quality goals, including the control of point and non-point pollution sources.

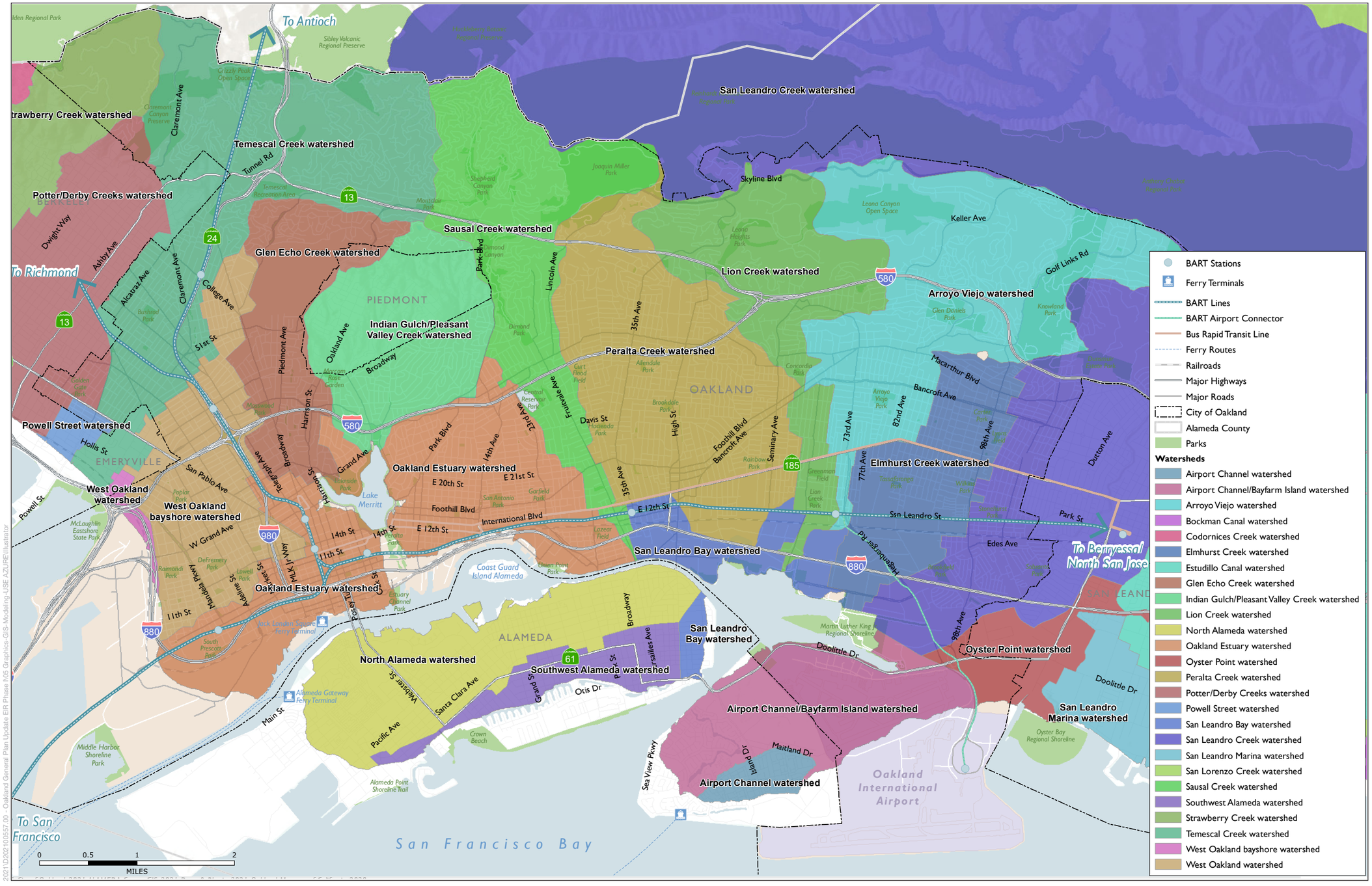
Water quality objectives for all waters of the United States are established under applicable provisions of Section 303 of the federal Clean Water Act (CWA). The State of California adopts water quality standards to protect beneficial uses of State waters as required by Section 303 of the CWA and the Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne), both described in Section 4.9.2, *Regulatory Setting*. Section 303(d) impaired water body listings within the City of Oakland, include Sausal Creek (listed for trash), Lake Merritt (listed for trash and nutrients), and San Leandro Creek (listed for trash and diazinon, a pesticide) (USEPA, 2018).

Groundwater

The City of Oakland is within the Santa Clara Valley Groundwater Basin—East Bay Plain Subbasin (No. 2-009.04), which is designated by the Department of Water Resources (DWR) as a medium priority basin (DWR, 2022). All are structural depressions formed by folding and faulting, all are filled with marine and alluvial sediments, and all are drained by streams that contain water at least part of the year. Seawater intrusion is common. Groundwater use in the East Bay Municipal Utility District service area is limited by several factors, including the effects of saltwater intrusion and contamination in shallow aquifers on groundwater quality and the availability of higher quality imported surface water. As discussed below, groundwater is currently not used by East Bay Municipal Utility District for municipal supplies.

Water Supply

Oakland is served by existing water supplies, treatment facilities, and distribution systems, which are operated and managed by the East Bay Municipal Utility District (EBMUD, 2021a). EBMUD provides potable water to approximately 1.4 million people throughout portions of Alameda and Contra Costa counties, including the City of Oakland. EBMUD obtains approximately 90 percent of its water from the Mokelumne River watershed and transports it through pipe aqueducts to temporary storage reservoirs in the East Bay hills. EBMUD has water rights and facilities to divert up to a daily maximum of 325 million gallons per day (mgd).

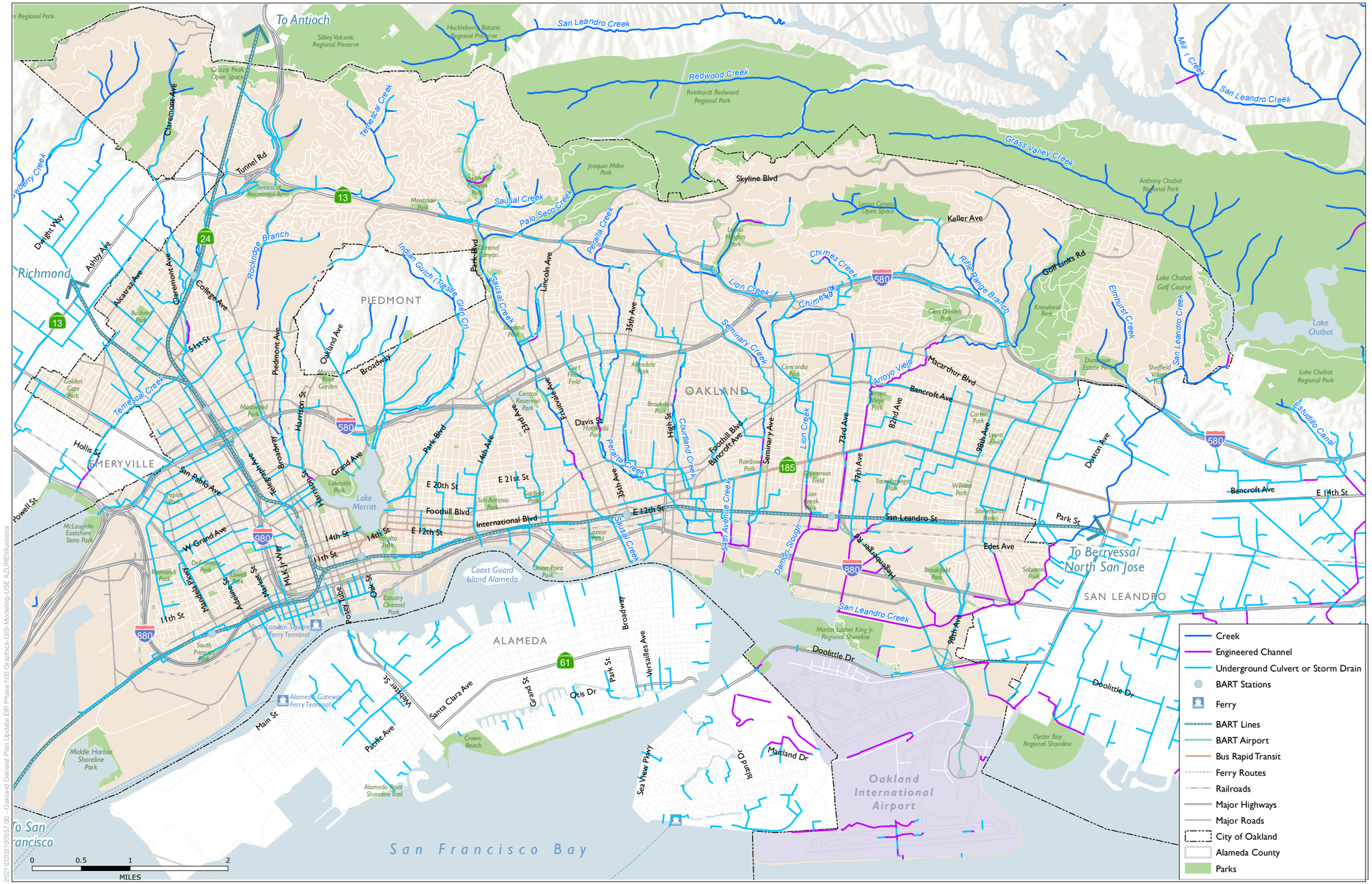


SOURCE: Dyett & Bhatia, 2022

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Figure 4.9-1
Watersheds

ESA



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SOURCE: Dyett & Bhatia, 2022

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Figure 4.9-2
Creeks

EBMUD's water supply system consists of a network of reservoirs, aqueducts (pipelines), water treatment plants (WTP), pumping plants, and other distribution facilities and pipelines that convey Mokelumne River water from Pardee Reservoir to EBMUD customers. While the number of accounts has increased steadily since 1970, the average daily water demand has not increased correspondingly; outside of droughts, demand remains relatively stable. The average daily water demand was approximately 155 mgd in 2020. This figure represents potable water demand only and does not include recycled water. Total domestic demand is projected to increase to 201 mgd in 2040 and to 218 mgd by 2050; these figures are adjusted to account for water conservation and recycled water. Despite EBMUD's aggressive conservation and water recycling programs, Mokelumne River and the local watershed supply are not enough to meet the projected 2040 customer demands during multi-year droughts without achieving potentially significant water use reductions.

To meet projected water needs and address deficient supply during severe droughts, EBMUD is working to identify supplemental water supplies and additional recycled water programs. New water supplies will come from water transfers, groundwater storage, and regional supply projects. In dry years, EBMUD may use Sacramento River water (up to 100 mgd) via the Freeport Regional Water Facility, located south of Sacramento on the Sacramento River. There are six water treatment plants in the EBMUD water supply and distribution system which have a treatment capacity of over 375 mgd.

Recycled water treatment facilities have been constructed at EBMUD's wastewater treatment plant, located at the foot of the San Francisco-Oakland Bay Bridge. EBMUD stores the recycled water in a 1.5-million-gallon storage tank at the wastewater treatment plant and uses another 2.4 mgd at the plant for various industrial processes as well as landscape irrigation. EBMUD's 2019 Updated Recycled Water Master Plan identifies additional implementation programs including planned expansions of the San Ramon Valley recycled water project, the East Bayshore recycled water project, and a satellite recycled water project at the Diablo Country Club. These are expected to increase production use by approximately one mg in 2025.

Flooding Hazards

Storm Induced Flooding

Flood hazards are mapped by the Federal Emergency Management Agency (FEMA) as part of the National Flood Insurance Program. The 100-year Flood Zone, which has a 1.0 percent annual chance flood risk, and 500-year Flood Zone, which has a 0.2 percent annual chance flood risk, are depicted in **Figure 4.9-3**, *Flood Zones*. The primary areas of potential flooding in Oakland are along the shoreline of the Bay, Oakland Estuary, and San Leandro Bay. There is also potential flooding associated with Lake Merritt and Glen Echo Creek, as well as Arroyo Viejo, Lion, Sausal, and Peralta Creeks. The areas near these bodies of water are at the most risk of being impacted during flood events. Most of the Plan Area's developed shoreline is not within the current 100-year Flood Zone, except the north part of the Oakland International Airport.

Inundation from Dams

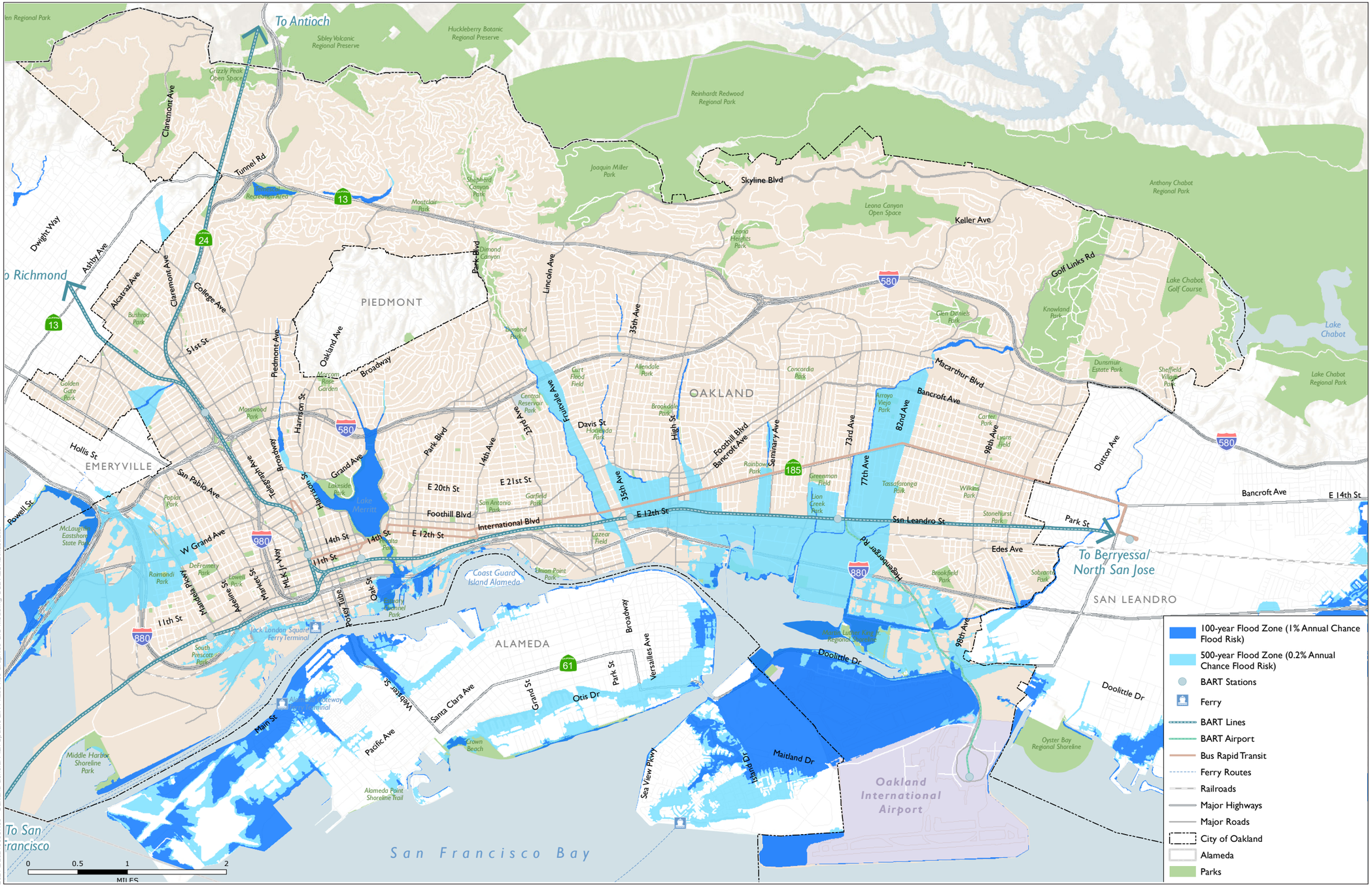
The California Department of Water Resources' Division of Safety of Dams reviews and approves inundation maps for extremely high, high, and significant hazard dams. Five dams considered extremely high hazard dams are either in Oakland or have inundation areas that extend into Oakland: Lake Temescal, Central, Dunsmuir Reservoir, New Upper San Leandro, and Chabot (DSOD, 2021; City of Oakland, 2021). The Central Reservoir is scheduled to be replaced with water storage tanks beginning in 2026 (EBMUD, 2022). Piedmont and Seneca dams are in the vicinity but are considered a low hazard and do not have associated inundation maps. **Figure 4.9-4**, *Dam Breach Inundation Area*, depicts the inundation areas for Lake Temescal, Central, Dunsmuir Reservoir, and Chabot dams.

Tsunami and Seiche

The City of Oakland General Plan Safety Element describes the tsunami hazard in Oakland as an uncommon occurrence on the California coast. The National Oceanic and Atmospheric Administration (NOAA) operates the National Tsunami Warning Center and the Pacific Tsunami Warning Center that is responsible for issuing warnings about potential tsunamis along the West Coast of the United States and alerting local authorities to order the evacuation of low-lying areas, if necessary. Tsunamis can be generated by local earthquakes, in which case the first waves could reach shore mere minutes after the ground stops shaking, giving authorities no time to issue a warning. However, most often, tsunamis are generated by large offshore earthquakes in the Pacific Ocean, producing waves that reach the California coast many hours after the earthquake. In these cases, several hours are available to evacuate residents and undertake other emergency preparations.

Although the probability of a tsunami affecting Oakland is low, given the rarity and unpredictability of the hazard, the impact from a rare tsunami would be high (City of Oakland, 2021). The City's *2021 – 2026 Local Hazard Mitigation Plan* estimate areas of Oakland that could experience inundation following a tsunami. Flooding from tsunamis would affect low-lying areas along the Bay and the Oakland Estuary, especially filled areas that are only a few feet above sea level. Areas that could be flooded with several feet of water include the Bay Bridge landing, the outer and middle harbor of the Port of Oakland's seaport, the San Leandro Bay shoreline (including Martin Luther King, Jr. Regional Shoreline) and the Oakland International Airport's shoreline. Areas along the inner harbor, Brooklyn Basin and the tidal channel would be sheltered by the island of Alameda. The likelihood of large-scale devastation in Oakland resulting from tsunamis appears to be small, especially as there would usually be ample time to evacuate residents at risk. **Figure 4.9-5**, *Tsunami Inundation Zones*, depicts tsunami hazard areas within the Plan Area.

A seiche is a resonant, side-to-side movement of water in a closed or mostly closed body of water, such as the Bay (City of Oakland, 2021). It can be caused by a number of factors, but all feature resonance where the acting force is more or less in time with the natural sloshing frequency of the body of water. The USGS defines a seiche as the sloshing of a closed body of water from earthquake shaking. Unlike tsunamis, which are created by the sudden uplift of the sea floor, seismic seiches are standing waves set up on rivers, reservoirs, ponds, and lakes when seismic waves from an earthquake pass through the area. In Oakland, the only threat of large-scale damage from seiches appears to come from downstream flooding that would be caused by large volumes of water overtopping a dam or reservoir. Lake Merritt, with depths greater than



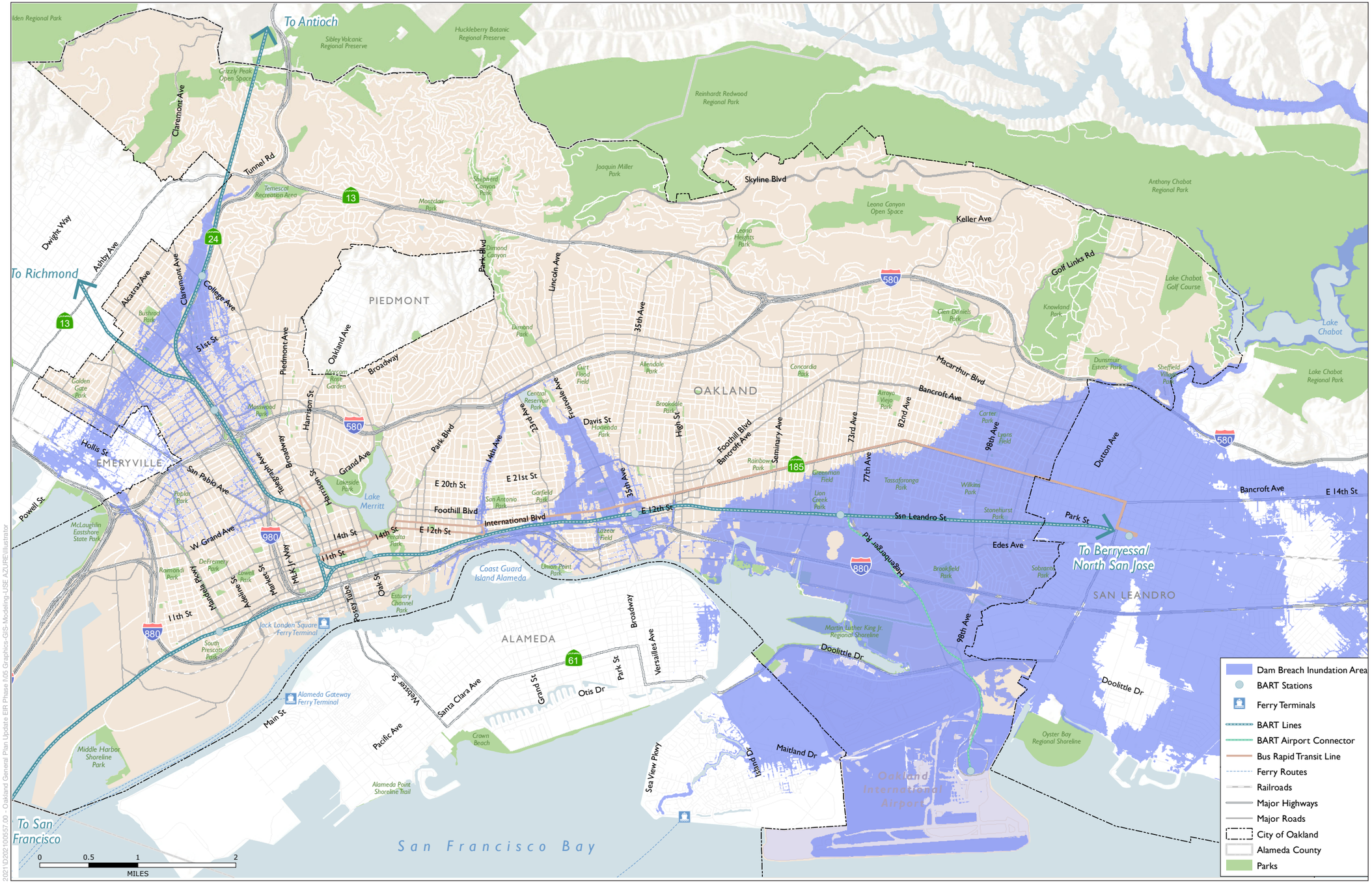
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SOURCE: Dyett & Bhatia, 2022

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Figure 4.9-3
Flood Zones

ESA



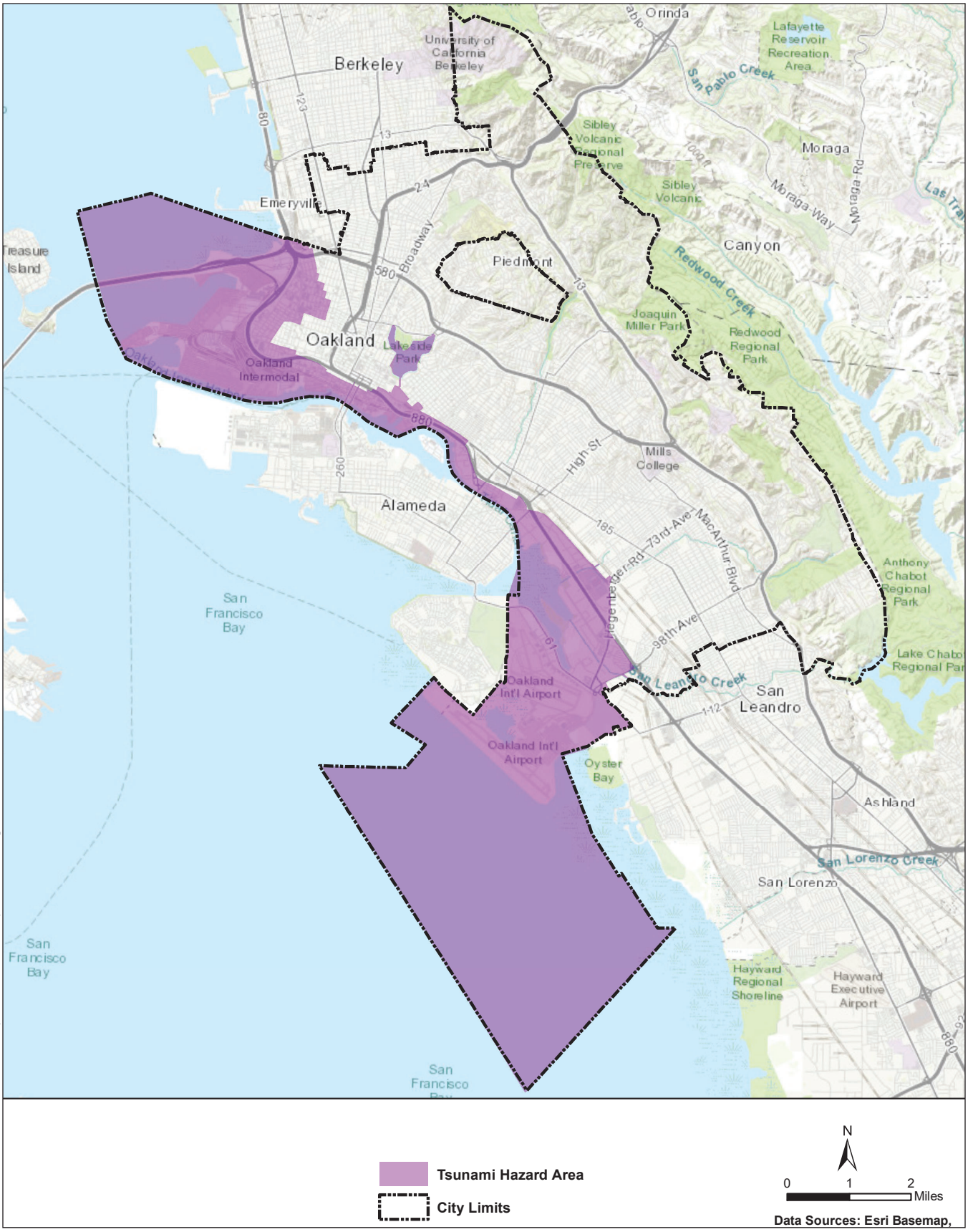
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SOURCE: Dyett & Bhatia, 2022

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Figure 4.9-4
Dam Breach Inundation Area

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SOURCE: Dyett & Bhatia, 2022

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Figure 4.9-5
Tsunami Inundation Zones

ESA

two or three feet only near its center, is likely too shallow to be able to generate devastating seiches. The likelihood of large-scale devastation in Oakland resulting from seiches appears to be minimal.

Sea Level Rise

A rise in average global temperatures due to an increase in human-induced greenhouse gas (GHG) emissions has led to rising global sea level. In the last century, Bay water levels have risen nearly eight inches (NOAA, 2018). Following from the sea-level rise (SLR) projections used in the City's *2021-2026 Local Hazard Mitigation Plan*, the 100-year coastal flood with 0.5 foot of SLR and 5.5 feet of SLR, respectively, provide a near-term and long-term indication of future flood hazards. For 0.5 foot of SLR (see **Figure 4.9-6**, *100-year Coastal Flood + 0.5 ft SLR*), the Plan Area's exposure to 100-year coastal flooding remains similar to present day, with Oakland International Airport being most at risk. A few other small sections of the Plan Area shoreline are also exposed to 100-year flood hazards. For 5.5 foot of SLR (see **Figure 4.9-7**, *100-year Coastal Flood + 5.5 ft SLR*), which is estimated to have a 1-in-200 chance of occurring by 2090, the Plan Area's entire shoreline is threatened by coastal flooding during a 100-year event.

This understanding of future sea-level rise hazards will be used for adaptation planning to increase the Plan Area's resilience. Current State guidance calls for preparing for at least 3.5 feet of sea-level rise (California Ocean Protection Council, 2020). These adaptation strategies will be incorporated into the Proposed Project through policies SAF 13 through SAF 17 (see Section 4.9.3, *Environmental Analysis*, Proposed 2045 General Plan Policies, Land Use, and Zoning, Sea Level Rise. Should in the long-term future a regional SLR adaption solution, such as water lock near the Golden Gate Bridge, be pursued, this would affect Oakland as well.

4.9.2 Regulatory Setting

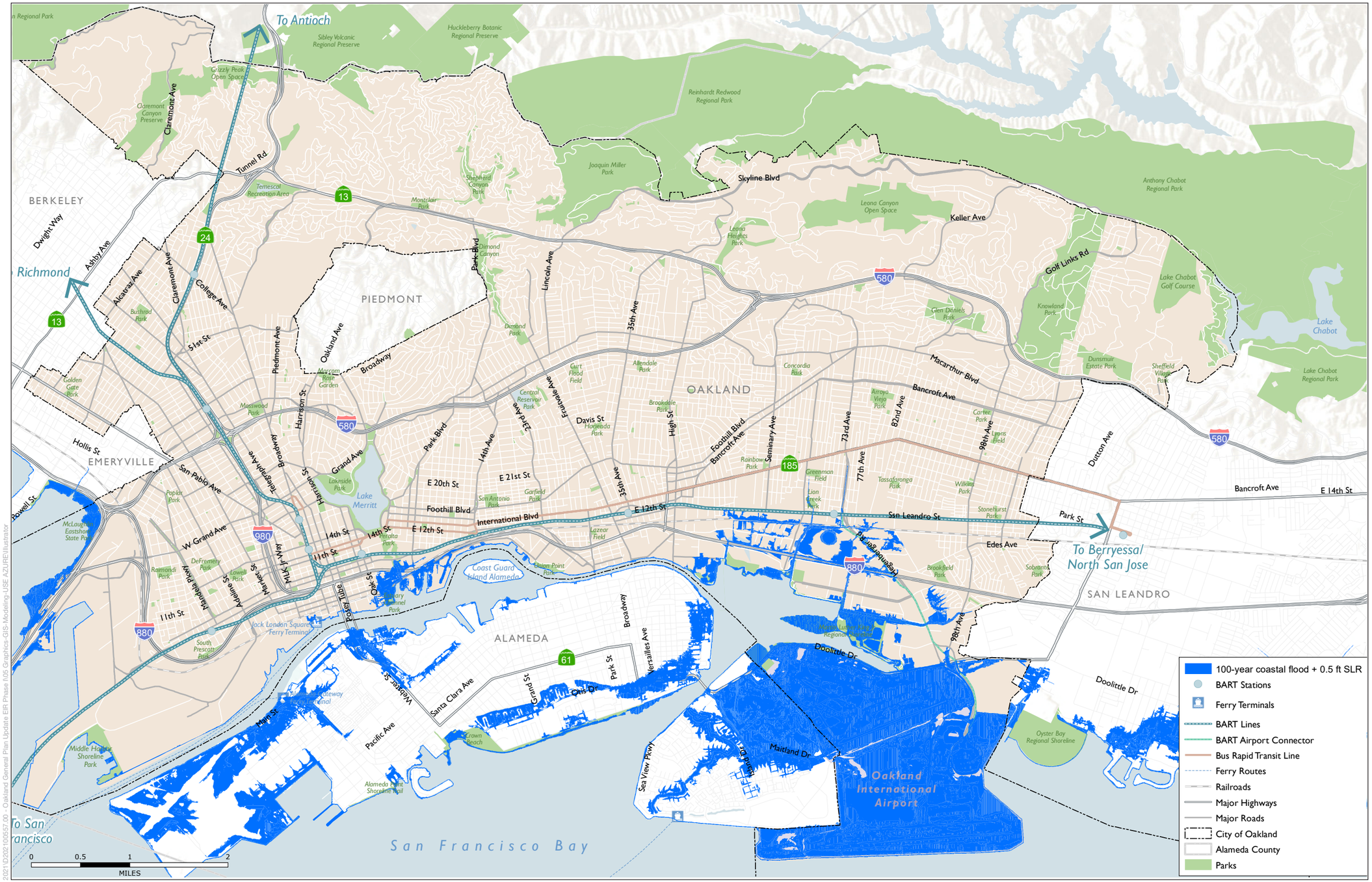
4.9.2.1 Federal

Clean Water Act

The Federal Water Pollution Control Act, commonly referred to as the Clean Water Act (CWA) was enacted in 1948 and expanded in 1972 as a basic structure for regulating discharges of pollutants into the waters of the United States and regulating water quality standards for surface waters. The U.S. Environmental Protection Agency (USEPA) is the federal agency responsible for water quality management pursuant to the CWA. The purpose of the CWA is to protect and maintain the quality and integrity of the Nation's waters by requiring states to develop and implement state water plans and policies. The relevant sections of the CWA are summarized below.

CWA Section 303(d): Impaired Waters and Total Maximum Daily Loads (TMDLs)

Water quality objectives for all waters of the United States are established under applicable provisions of Section 303 of the federal CWA. The State of California adopts water quality standards to protect beneficial uses of State waters as required by Section 303 of the CWA and the Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne). Section 303(d) of the CWA established the Total Maximum Daily Load (TMDL) process to guide the application of State water quality standards (see discussion of State water quality standards below). To identify



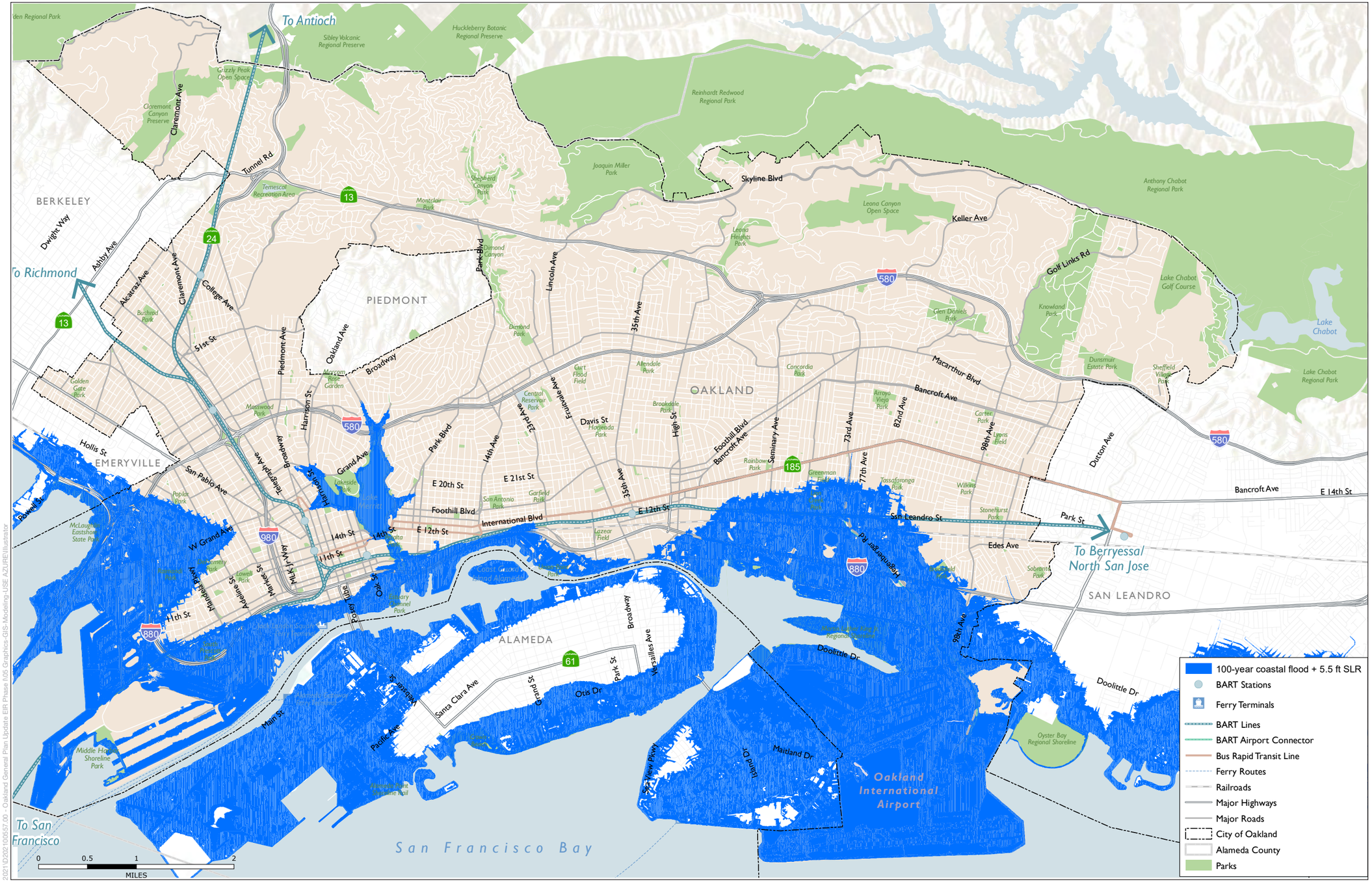
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SOURCE: Dyett & Bhatia, 2022

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Figure 4.9-6
100-Year Coastal Flood + 0.5 ft SLR

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SOURCE: Dyett & Bhatia, 2022

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Figure 4.9-7
100-Year Coastal Flood + 5.5 ft SLR

ESA

candidate water bodies for TMDL analysis, a list of water quality–limited streams and other water bodies was generated. These water bodies are impaired by the presence of pollutants, including sediment, and are more sensitive to disturbance. Section 303(d) listing associated with water bodies in the East Bay are included in the Water Board's Water Quality Control Plan, described further under State regulations. The CWA prohibits the discharge of pollutants to navigable waters from a point source unless authorized by a NPDES permit (see below). Because implementation of these regulations has been delegated to the State, additional information regarding this permit is discussed under the State subheading, below.

CWA Section 402: National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program under Section 402 of the CWA is one of the primary mechanisms for controlling water pollution through the regulation of sources that discharge pollutants into waters of the United States. The USEPA has delegated authority of issuing NPDES permits in California to the State Water Resources Control Board (SWRCB), which has nine RWQCBs. The RWQCB for the San Francisco Bay Basin (Region 2) regulates water quality in the Plan Area. The NPDES permit program is discussed in detail below under State Regulations.

4.9.2.2 State

Porter-Cologne Water Quality Control Act

Porter-Cologne, passed in 1969, articulates with the federal Clean Water Act. It established the State Water Board and divided the State into nine regions, each overseen by a RWQCB. In general, the State Water Board manages both water rights and statewide regulation of water quality, while the RWQCBs focus exclusively on water quality in their regions.

NPDES Construction General Permit

Construction associated with projects that would disturb more than one acre of land surface affecting the quality of stormwater discharges into waters of the United States would be subject to the *NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities,* or Construction General Permit (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ).[1] The permit regulates discharges of pollutants in stormwater to waters of the U.S. associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines.

The Construction General Permit requires that construction sites be assigned a Risk Level of 1 (low), 2 (medium), or 3 (high), based both on the sediment transport risk at the site and the receiving waters risk during periods of soil exposure (e.g., grading and site stabilization). The sediment risk level reflects the relative amount of sediment that could potentially be discharged to receiving water bodies and is based on the nature of the construction activities and the location of the site relative to receiving water bodies. The receiving waters risk level reflects the risk to the

[1] The State Water Board is in the process of reissuing Construction General Permit, which is scheduled to become effective on July 1, 2023. The requirements are not anticipated to substantially change from the current requirements.

receiving waters from the sediment discharge. Depending on the risk level, construction projects could be subject to the following requirements:

- Effluent standards;
- Good site management "housekeeping;"
- Non-stormwater management;
- Erosion and sediment controls;
- Run-on and runoff controls;
- Inspection, maintenance, and repair; or
- Monitoring and reporting requirements.

The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific best management practices (BMPs) designed to prevent sediment and pollutants from contacting stormwater from moving off site into receiving waters. The BMPs fall into several categories including erosion control, sediment control, and waste management and good housekeeping; and are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Examples of typical construction BMPs include scheduling or limiting certain activities to dry periods, installing sediment barriers such as silt fence and fiber rolls, and maintaining equipment and vehicles used for construction. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, vehicle and equipment washing and fueling. The Construction General Permit also sets post-construction standards (i.e., implementation of BMPs to reduce pollutants in stormwater discharges from the site following construction).

The SWPPP must be prepared before the construction begins. The SWPPP must contain a site map(s) that delineates the construction work area, existing and proposed buildings, parcel boundaries, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project area. The SWPPP must list BMPs and the placement of those BMPs that the applicant would use to protect stormwater runoff. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

In the Plan Area, the Construction General Permit is implemented and enforced by the San Francisco Bay RWQCB, which administers the stormwater permitting program. Dischargers must electronically submit a notice of intent and permit registration documents to obtain coverage under this Construction General Permit. Dischargers are to notify the San Francisco Bay RWQCB of violations or incidents of non-compliance and submit annual reports identifying deficiencies in the BMPs and explaining how the deficiencies were corrected. The risk assessment and SWPPP must be prepared by a State Qualified SWPPP Developer, and implementation of the SWPPP must be overseen by a State Qualified SWPPP Practitioner. A legally responsible person, who is

legally authorized to sign and certify permit registration documents, is responsible for obtaining coverage under the permit.

National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer Systems (MS4) Permit

In 1987, amendments to the Clean Water Act expanded the NPDES permit program to regulate discharges from storm drains owned and operated by counties and municipalities, such as the City of Oakland. In November 1990, USEPA published regulations that established application requirements for stormwater permits for municipal stormwater discharges, typically referred to as Municipal Separate Storm Sewer Systems (MS4) permits. In California, the NPDES stormwater permit program is administered and enforced by the SWRCB through the nine RWQCBs by issuing Waste Discharge Requirements and NPDES permits. These permits are reissued approximately every five years and also include applicable provisions of the State Porter-Cologne Act, which is the principal legislation for controlling stormwater pollutants in California. The permit establishes regulations covering discharge prohibitions, receiving water limitations, municipal operations, new development, construction site controls (construction site runoff), and other regulations to regulate surface water quality. The current State NPDES permit is the *California Regional Water Quality Control Board, San Francisco Bay Region, Municipal Regional Stormwater NPDES Permit. Order No. R2-2022-0018 NPDES Permit No. CAS612008* (MRP), adopted on May 11, 2022.

The permit prohibits discharge of non-stormwater (materials other than stormwater) into storm drain systems and watercourses. The municipal operations regulations include a number of requirements to control and reduce non-stormwater and polluted stormwater discharges to storm drains and watercourses during operation, inspection, and routine repair and maintenance activities of municipal facilities and infrastructure, including projects that would be constructed and operated under the proposed project. The requirements include source control, site design, and stormwater treatment requirements such as minimizing disturbance of natural infiltration areas and the addition of impervious surfaces, controlling and directing runoff, and the use of infiltration and bioretention measures, among other measures. The MS4 Permit for the Plan Area is discussed further below in the section on Local regulations.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) requires the formation of local-controlled groundwater sustainable agencies in high- and medium-priority groundwater basins. These groundwater sustainability agencies (GSAs) are responsible for developing and implementing a Groundwater Sustainability Plan (GSP) to ensure the basin is operated within its sustainable yield without causing undesirable results. The GSP was submitted to the DWR on January 26, 2022, for their review, which is in progress. GSPs include various actions to maintain and improve groundwater supplies. Relative to this Proposed Project, the GSP would likely include proposing or encouraging future development to capture and infiltrate stormwater into the subsurface to recharge groundwater, an action already required under the previously discussed MS4 permit.

California Division of Safety of Dams

The DSOD, through Division 3 of the California Water Code, is entrusted with regulatory authority and oversight for dam safety. The DSOD provides oversight of the design, construction, and maintenance of over 1,200 jurisdictional sized dams in California. Jurisdictional dams are dams that are more than 6 feet high and impound 50 acre-feet or more of water, or 25 feet or higher and impound more than 15 acre-feet of water. The jurisdictional height of a dam, as determined by DSOD, is the vertical distance measured from the lowest point at the downstream toe of the dam to its maximum storage elevation, which is typically the spillway crest. The DSOD ensures dam safety by:

- Reviewing and approving dam enlargements, repairs, alterations, and removals to ensure that the dam appurtenant structures are designed to meet minimum requirements.
- Performing independent analyses to understand the performance of the dam and appurtenant structures. These analyses can include structural, hydrologic, hydraulic, and geotechnical evaluations.
- Overseeing construction to ensure work is being done in accordance with the approved plans and specifications.
- Inspecting each dam on an annual basis to ensure it is safe, performing as intended, and is not developing issues. Roughly 1/3 of these inspections include in-depth instrumentation reviews of the dam surveillance network data.
- Periodically reviewing the stability of dams and their major appurtenances in light of improved design approaches and requirements, as well as new findings regarding earthquake hazards and hydrologic estimates in California.

The California Office of Emergency Services Dam Safety Program was enhanced though passage of SB 92 (2017). The bill required preparation of Emergency Action Plans (EAPs) (except for dams designated as low-hazard) and brings inundation mapping under the jurisdiction of the California DWR. This legislation set forth additional provisions for EAPs including compliance requirements, exercises of the plan and coordination with local public safety agencies.

EAPs are written documents that identify potential emergency conditions at a dam and specify pre-planned actions to help minimize property damage and loss of life should these conditions occur. EAPs contain procedures and information that instruct dam owners to issue early warning and notification messages to downstream emergency management authorities. EAPs also provide assistance and guidance to local jurisdictions on their emergency planning for a dam failure event to ensure effective dam incident emergency response procedures and planning. SB 92 also requires EAPs be updated (at minimum) every 10 years or when there are significant changes at the dam, its critical appurtenant structures, or downstream hazard classification.

EAPs describe the existing dam and reservoir; identifies notification, communication, and response responsibilities and impacted jurisdictions/public safety agencies; surveillance, monitoring, and response procedures; estimated inundation depths and arrival times; and training procedures. Although highly improbable, in the event of a potential and imminent dam failure, the observer of the potential failure would immediately notify the DWR Flood Operations Center,

CalOES Warning Center, and the DSOD. All of these entities have pre-established response actions designed to rapidly drain the reservoir to the nearby storm drain system, stabilize the dam and reservoir, and minimize impacts to the downstream areas.

4.9.2.3 Local Plans, Ordinances and Policies

City of Oakland Municipal Regional Stormwater Permit

The City of Oakland is covered by *Municipal Regional Stormwater NPDES Permit No. CAS612008 and Order No. R2-2022-0018* (MRP) that was adopted by the RWQCB on May 11, 2022. In accordance with the MRP requirements, new development and redevelopment projects are required to incorporate treatment measures and other appropriate source control and site design features to reduce the pollutant load in stormwater discharges and manage runoff flows. Among many other stormwater management requirements included in the MRP, Provision C.3 contains specific post-construction runoff requirements for new development and redevelopment. Provision C.3 governs storm drain systems and regulates post-construction stormwater runoff. The provision requires new development and redevelopment projects to incorporate treatment measures and other appropriate source control and site design features to reduce the pollutant load in stormwater discharges and to manage runoff flows.

City of Oakland General Plan

The current *Open Space, Conservation, and Recreation Element* of the Oakland General Plan describes the following policies regarding water resources, adopted for the purpose of protecting water resources, and that apply to the Proposed Project.

> ***Policy CO-5.1*:** Encourage groundwater recharge by protecting large open space areas, maintaining setbacks along creeks and other recharge features, limiting impervious surfaces where appropriate, and retaining natural drainage patterns within newly developing areas.
>
> ***Policy CO-5.2*:** Support efforts to improve groundwater quality, including the use of non-toxic herbicides and fertilizers, the enforcement of anti-litter laws, the clean-up of sites contaminated by the Alameda County Flood Control and Water Conservation District.
>
> ***Policy CO-5.3*:** Employ a broad range of strategies, compatible with Alameda Countywide Clean Water Program, to: (a) reduce water pollution associated with stormwater runoff; (b) reduce water pollution associated with hazardous spills, runoff from hazardous material areas, improper disposal of household hazardous wastes, illicit dumping, and marina "live-aboards"; and (c) improve water quality in Lake Merritt to enhance the lake's aesthetic, recreational, and ecological functions.

Oakland Municipal Code Chapter 13.16

The City's *Creek Protection, Stormwater Management, and Discharge Control Ordinance* (Chapter 13.16 of the Oakland Municipal Code) prohibits activities that would result in the discharge of pollutants to Oakland's waterways or in damage to creeks, creek functions, or habitat. The ordinance requires the use of standard BMPs to prevent pollution or erosion to creeks and/or storm drains. Additionally, a creek protection permit is required for any construction work on creekside properties. The Ordinance establishes comprehensive guidelines for the regulation of

discharges to the City's storm drain system and the protection of surface water quality. Under the Ordinance, the City of Oakland Public Works Agency issues permits for storm drainage facilities that would be connected to existing City drainage facilities. The Ordinance includes enforcement provisions to provide more effective methods to deter and reduce the discharge of pollutants to the storm drain system, local creeks, and San Francisco Bay.

City of Oakland Storm Drainage Design Standards

The City's 2014 *Storm Drainage Design Standards* provides design criteria, standards, policies, and procedures for storm drainage improvements within the City of Oakland. The standards promulgate design practices, runoff determination methods, and hydraulic design requirements. All storm drainage facilities are required to be designed in accordance with these standards, accepted engineering principles, and State and federal water quality regulations.

4.9.2.4 City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to reducing impacts on Hydrology and Water Quality are listed below. All SCAs would be adopted as enforceable conditions of approval and required, as applicable, to be implemented during construction and operation of the Proposed Project to help ensure less-than-significant impacts to Hydrology and Water Quality. The SCAs are incorporated and required as part of Proposed Project, so they are not listed as mitigation measures.

- **SCA 48: Erosion and Sedimentation Control Measures for Construction**

  Requirement: The project applicant shall implement Best Management Practices (BMPs) to reduce erosion, sedimentation, and water quality impacts during construction to the maximum extent practicable. At a minimum, the project applicant shall provide filter materials deemed acceptable to the City at nearby catch basins to prevent any debris and dirt from flowing into the City's storm drain system and creeks.

- **SCA 49: Erosion and Sedimentation Control Plan for Construction**

  a. Erosion and Sedimentation Control Plan Required

  Requirement: The project applicant shall submit an Erosion and Sedimentation Control Plan to the City for review and approval. The Erosion and Sedimentation Control Plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading and/or construction operations. The Plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the City. The Plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment.

b. Erosion and Sedimentation Control During Construction

Requirement: The project applicant shall implement the approved Erosion and Sedimentation Control Plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Bureau of Building.

- **SCA 50: State Construction General Permit**

  Requirement: The project applicant shall comply with the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB). The project applicant shall submit a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and other required Permit Registration Documents to SWRCB. The project applicant shall submit evidence of compliance with Permit requirements to the City.

- **SCA 51: Drainage Plan for Post-Construction Stormwater Runoff on Hillside Properties**

  Requirement: The project applicant shall submit and implement a Drainage Plan to be reviewed and approved by the City. The Drainage Plan shall include measures to reduce the volume and velocity of post-construction stormwater runoff to the maximum extent practicable. Stormwater runoff shall not be augmented to adjacent properties, creeks, or storm drains. The Drainage Plan shall be included with the project drawings submitted to the City for site improvements.

- **SCA 52: Site Design Measures to Reduce Stormwater Runoff**

  Requirement: Pursuant to Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES), the project applicant is encouraged to incorporate appropriate site design measures into the project to reduce the amount of stormwater runoff. These measures may include, but are not limited to, the following:

  a. Minimize impervious surfaces, especially directly connected impervious surfaces and surface parking areas;

  b. Utilize permeable paving in place of impervious paving where appropriate;

  c. Cluster structures;

  d. Direct roof runoff to vegetated areas;

  e. Preserve quality open space; and

  f. Establish vegetated buffer areas.

- **SCA 53: Source Control Measures to Limit Stormwater Pollution**

  Requirement: Pursuant to Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES), the project applicant is encouraged to incorporate appropriate source control measures to limit pollution in stormwater runoff. These measures may include, but are not limited to, the following:

  a. Stencil storm drain inlets “No Dumping – Drains to Bay;”

  b. Minimize the use of pesticides and fertilizers;

  c. Cover outdoor material storage areas, loading docks, repair/maintenance bays and fueling areas;

d. Cover trash, food waste, and compactor enclosures; and

e. Plumb the following discharges to the sanitary sewer system, subject to City approval:

f. Discharges from indoor floor mats, equipment, hood filter, wash racks, and, covered outdoor wash racks for restaurants;

g. Dumpster drips from covered trash, food waste, and compactor enclosures;

h. Discharges from outdoor covered wash areas for vehicles, equipment, and accessories;

i. Swimming pool water, if discharge to on-site vegetated areas is not feasible; and

j. Fire sprinkler teat water, if discharge to on-site vegetated areas is not feasible.

- **SCA 54: NPDES C.3 Stormwater Requirements for Regulated Projects**

a. Post-Construction Stormwater Management Plan Required

Requirement: The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following:

i. Location and size of new and replaced impervious surface;

ii. Directional surface flow of stormwater runoff;

iii. Location of proposed on-site storm drain lines;

iv. Site design measures to reduce the amount of impervious surface area;

v. Source control measures to limit stormwater pollution;

vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and

vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff.

b. Maintenance Agreement Required

Requirement: The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following:

i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and

ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary.

The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense.

- **SCA 55: NPDES C.3 Stormwater Requirements for Small Projects**

  Requirement: Pursuant to Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES), the project applicant shall incorporate one or more of the following site design measures into the project:

  a. Direct roof runoff into cisterns or rain barrels for reuse;
  b. Direct roof runoff onto vegetated areas;
  c. Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas;
  d. Direct runoff from driveways and/or uncovered parking lots onto vegetated areas;
  e. Construct sidewalks, walkways, and/or patios with permeable surfaces; or
  f. Construct bike lanes, driveways, and/or uncovered parking lots with permeable surfaces.

  The project drawings submitted for construction-related permits shall include the proposed site design measure(s) and the approved measure(s) shall be installed during construction. The design and installation of the measure(s) shall comply with all applicable City requirements.

- **SCA 56: Architectural Copper**

  Requirement: The project applicant shall implement Best Management Practices (BMPs) concerning the installation, treatment, and maintenance of exterior architectural copper during and after construction of the project in order to reduce potential water quality impacts in accordance with Provision C.13 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The required BMPs include, but are not limited to, the following:

  a. If possible, use copper materials that have been pre-patinated at the factory;
  b. If patination is done on-site, ensure rinse water is not discharged to the storm drain system by protecting storm drain inlets and implementing one or more of the following:
  c. Discharge rinse water to landscaped area;
  d. Collect rinse water in a tank and discharge to the sanitary sewer, with approval by the City; or haul off-site for proper disposal;
  e. During maintenance activities, protect storm drain inlets to prevent wash water discharge into storm drains; and
  f. Consider coating the copper with an impervious coating that prevents further corrosion.

- **SCA 57: Vegetation Management on Creekside Properties**

  Requirement: The project applicant shall comply with the following requirements when managing vegetation prior to, during, and after construction of the project:

  a. Identify and leave "islands" of vegetation in order to prevent erosion and landslides and protect habitat;

b. Trim tree branches from the ground up (limbing up) and leave tree canopy intact;

c. Leave stumps and roots from cut down trees to prevent erosion;

d. Plant fire-appropriate, drought-tolerant, preferably native vegetation;

e. Provide erosion and sediment control protection if cutting vegetation on a steep slope;

f. Fence off sensitive plant habitats and creek areas if implementing goat grazing for vegetation management;

g. Obtain a Tree Permit before removing a Protected Tree (any tree 9 inches diameter at breast height or dbh or greater and any oak tree 4 inches dbh or greater, except eucalyptus and Monterey pine);

h. Do not clear-cut vegetation. This can lead to erosion and severe water quality problems and destroy important habitat;

i. Do not remove vegetation within 20 feet of the top of the creek bank. If the top of bank cannot be identified, do not cut within 50 feet of the centerline of the creek or as wide a buffer as possible between the creek centerline and the development;

j. Do not trim/prune branches that are larger than 4 inches in diameter;

k. Do not remove tree canopy;

l. Do not dump cut vegetation in the creek;

m. Do not cut tall shrubbery to less than 3 feet high; and

n. Do not cut short vegetation (e.g., grasses, ground-cover) to less than 6 inches high.

- **SCA 58: Creek Protection Plan**

a. Creek Protection Plan Required

Requirement: The project applicant shall submit a Creek Protection Plan for review and approval by the City. The Plan shall be included with the set of project drawings submitted to the City for site improvements and shall incorporate the contents required under section 13.16.150 of the Oakland Municipal Code including Best Management Practices ("BMPs") during construction and after construction to protect the creek. Required BMPs are identified below in sections (b), (c), and (d).

b. Construction BMPs

Requirement: The Creek Protection Plan shall incorporate all applicable erosion, sedimentation, debris, and pollution control BMPs to protect the creek during construction. The measures shall include, but are not limited to, the following:

i. On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the creek.

ii. The project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent biodegradable erosion control fabric shall be installed on all graded slopes

to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected.

iii. Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible.

iv. All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be repacked and native vegetation planted.

v. Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the City at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding.

vi. Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains.

vii. Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek.

viii. Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the creek or storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site.

ix. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed at least on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution.

x. Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work.

xi. Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, or storm drains.

xii. All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board (RWQCB).

xiii. Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to construction (or both sides of the creek if applicable) at the maximum practical distance from the creek

centerline. This area shall not be disturbed during construction without prior approval of the City.

c. Post-Construction BMPs

Requirement: The project shall not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains. The Creek Protection Plan shall include site design measures to reduce the amount of impervious surface to maximum extent practicable. New drain outfalls shall include energy dissipation to slow the velocity of the water at the point of outflow to maximize infiltration and minimize erosion.

d. Creek Landscaping

Requirement: The project applicant shall include final landscaping details for the site on the Creek Protection Plan, or on a Landscape Plan, for review and approval by the City. Landscaping information shall include a planting schedule, detailing plant types and locations, and a system to ensure adequate irrigation of plantings for at least one growing season.

Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival.

e. Creek Protection Plan Implementation

Requirement: The project applicant shall implement the approved Creek Protection Plan during and after construction. During construction, all erosion, sedimentation, debris, and pollution control measures shall be monitored regularly by the project applicant. The City may require that a qualified consultant (paid for by the project applicant) inspect the control measures and submit a written report of the adequacy of the control measures to the City. If measures are deemed inadequate, the project applicant.

- **SCA 59: Creek Dewatering/Diversion**

  Requirement: The project applicant shall submit a Dewatering and Diversion Plan for review and approval by the City, and shall implement the approved Plan. The Plan shall comply, at a minimum, with the following:

  a. All dewatering and diversion activities shall comply with the requirements of all necessary regulatory permits and authorizations from other agencies (e.g., Regional Water Quality Control Board, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and Army Corps of Engineers).

  b. All native aquatic life (e.g., fish, amphibians, and turtles) within the work site shall be relocated by a qualified biologist prior to dewatering, in accordance with applicable regional, state, and federal requirements. Captured native aquatic life shall be moved to the nearest appropriate site on the stream channel downstream. The biologist shall check daily for stranded aquatic life as the water level in the dewatering area drops. All reasonable efforts shall be made to capture and move all stranded aquatic life observed in the dewatered areas. Capture methods may include fish landing nets, dip nets, buckets, and by hand. Captured aquatic life shall be released immediately in the nearest appropriate downstream site. This condition does not allow the take or disturbance of any state or federally listed species, nor state-listed species of special concern, unless the applicant

obtains a project specific authorization from the California Department of Fish and Wildlife and/or the U.S. Fish and Wildlife Service, as applicable.

c. If any dam or other artificial obstruction is constructed, maintained, or placed in operation within the stream channel, ensure that sufficient water is allowed to pass down channel at all times to maintain native aquatic life below the dam or other artificial obstruction.

d. Construction and operation of dewatering/diversion devices shall meet the standards contained in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board.

e. Coffer dams and/or water diversion system shall be constructed of a non-erodable material which will cause little or no siltation. Coffer dams and the water diversion system shall be maintained in place and functional throughout the construction period. If the coffer dams or water diversion systems fail, they shall be repaired immediately based on the recommendations of a qualified environmental consultant. The devices shall be removed after construction is complete and the site is stabilized.

f. Pumped water shall be passed through a sediment settling device before returning to the stream channel. Velocity dissipation measures are required at the outfall to prevent erosion.

- **SCA 60: Structures in a Flood Zone**

  Requirement: The project shall be designed to ensure that new structures within a 100-year flood zone do not interfere with the flow of water or increase flooding. The project applicant shall submit plans and hydrological calculations for City review and approval with the construction related drawings that show finished site grades and floor elevations elevated above the Base Flood Elevation (BFE).

- **SCA 61: Bay Conservation and Development Commission (BCDC) Approval**

  Requirement: The project applicant shall obtain the necessary permit/approval, if required, from the Bay Conservation and Development Commission (BCDC) for work within BCDC's jurisdiction to address issues such as but not limited to shoreline public access and sea level rise. The project applicant shall submit evidence of the permit/approval to the City and comply with all requirements and conditions of the permit/approval.

4.9.3 Environmental Analysis

4.9.3.1 Significance Criteria

The City of Oakland has established thresholds of significance for CEQA impacts, which incorporate those in Appendix G of the *CEQA Guidelines* (City of Oakland, 2020). The Proposed Project would have a significant adverse impact related to hydrology and water quality if it would:

1. Violate any water quality standards or waste discharge requirements;

2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or proposed uses for which permits have been granted);

3. Result in substantial erosion or siltation on- or off-site that would affect the quality of receiving waters;
4. Result in substantial flooding on- or off-site;
5. Create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems;
6. Create or contribute substantial runoff which would be an additional source of polluted runoff;
7. Otherwise substantially degrade water quality;
8. Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, that would impede or redirect flood flows;
9. Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
10. Expose people or structures to a substantial risk of loss, injury, or death involving flooding;
11. Expose people or structures to a substantial risk of loss, injury, or death as a result of inundation by seiche, tsunami, or mudflow;
12. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course, or increasing the rate or amount of flow, of a creek, river, or stream in a manner that would result in substantial erosion, siltation, or flooding, both on- or offsite; or
13. Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect hydrologic resources.[2]

The changes to Appendix G of the State *CEQA Guidelines* effective in December 2018 were intended to reflect recent changes to the CEQA statutes and court decisions. Many of these recent changes and decisions are already reflected in the City's adopted significance thresholds, which have been used to determine the significance of potential impacts. To the extent that the topics or questions in Appendix G are not reflected in the City's thresholds, these topics and questions have been taken into consideration in the impact analysis below, even though the determination of significance relies on the City's thresholds. Specifically, as revised in 2018, Appendix G of the *CEQA Guidelines* considers the direct, indirect, or cumulative effects on impeding or redirecting flood flows, rather than the previous criteria of the effects of flooding *on* the project or occupants that are located within the 100-year flood zone. In addition, Appendix G no longer includes the criterion of the effect of seiche, tsunami, or mudflows *on* a project. Instead, Appendix G now asks if the project would risk release of pollutants in flood hazard, tsunami, or seiche zones.

[2] Note: Although there are no specific, numeric/quantitative criteria to assess impacts, factors to be considered in determining significance include whether there is substantial degradation of water quality through (a) discharging a substantial amount of pollutants into a creek, (b) significantly modifying the natural flow of the water or capacity, (c) depositing substantial amounts of new material into a creek or causing substantial bank erosion or instability, or (d) substantially endangering public or private property or threatening public health or safety.

4.9.3.2 Approach to Analysis / Methodology

This is a program-level Draft EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Impacts relative to Hydrology and Water Quality are evaluated using the criteria listed above and based on information included in the City of Oakland General Plan, Map Atlas, and the documents listed in Section 4.9.6, *References – Hydrology and Water Quality*.

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future development under the Proposed Project, this Draft EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas and analyzes the impacts of housing development through the projection period ending in 2030.

Future development under the Proposed Project would be regulated by the various laws, regulations, and policies summarized in Section 4.9.2, *Regulatory Setting*. Compliance by the future development projects with applicable federal, State, and local laws and regulations is assumed in this analysis, and local and State agencies would be expected to continue to enforce applicable requirements to the extent that they do so now. Note that compliance with many of the laws and regulations is a condition of permit approval.

4.9.3.3 Proposed 2045 General Plan Policies, Land Use, and Zoning

Safety Element

The following policies and actions are proposed as a part of the Safety Element Update in the Proposed Project. These policies are proposed for the purpose of protecting water resources.

Policies:

SAF-3.1: Minimize Storm Induced Flooding. Continue or strengthen city programs that seek to minimize the storm-induced flooding hazard.

SAF-3.2: Storm-Induced Flooding Structural Risk. Enforce and update local ordinances, and comply with regional orders that would reduce the risk of storm-induced flooding.

SAF-3.3: Reestablish Full Compliance and Good Standing Under the National Flood Insurance Program (NFIP). Coordinate with FEMA Region IX and DWR to address all identified issues from the open September 2017 Community Assistance Visit (CAV) to reestablish the City's full compliance and good standing under the NFIP.

SAF-3.4: Flood Control Coordination. Continue to coordinate with FEMA, the Alameda County Flood Control and Water Conservation District (ACFCWCD), and the State Division of Safety of Dams on flood-control-related projects.

SAF-3.5: Green Stormwater Infrastructure. Fund and implement a green infrastructure program for the installation and maintenance of projects and existing civic resources such as the parks system and public spaces, to improve stormwater management, support

biodiversity, reduce air pollution exposure, improve water quality, and increase access to natural spaces, including trees. Prioritize green stormwater infrastructure investment in frontline communities, and particularly in residential neighborhoods dominated by concrete and asphalt with limited green space and elevated air pollution, in Priority Conservation Areas, and in areas where green infrastructure, including trees and other types of vegetated buffers, can effectively address stormwater management issues and reduce air pollution exposure among sensitive populations. This policy is cross-listed as Action EJ-A.13 in the Environmental Justice Element.

SAF-4.1: Sea Level Rise and Community Engagement. As recommended in the Sea Level Rise Roadmap and ECAP, develop a plan for continuing collaboration with community groups and local organizations working to address sea level rise adaptation and building resilience of vulnerable communities. Work with communities to use community-generated data critical to future SLR mapping efforts.

SAF-4.2: Current Development and Sea Level Rise. Use in planning and development reviews, as applicable, the best available science about projected sea level rise and other climate change-related environmental changes when addressing flooding, potential for groundwater contamination, and other hazards associated with sea level rise.

SAF-4.3: New Development and Sea Level Rise. Develop sea-level rise standards/horizon that will guide adaption and resiliency planning as part of the updated Sea Level Rise Roadmap, including recommendations and regulations for a suite of shoreline protection measures (including ecologically-friendly adaptation options), protective setbacks, and other adaptation strategies, to be incorporated into future development projects.

SAF-4.4: Sea Level Rise Vulnerability Assessment. Require applicants proposing to develop in a future inundation area (as depicted in a SLR scenario to be determined in subsequent administrative regulations or documents) to conduct a Sea Level Rise vulnerability assessment for the project, prepare a Sea Level Rise Adaptation Plan for implementation as part of the project designs, and submit the assessment, adaptation plan, and conceptual design to the City for review and approval.

SAF-4.5: Evaluating Bay/Watershed Flooding Potential. In partnership with other agencies, including the Port of Oakland, the Bay Area Bay Conservation and Development Commission, and the ACFCWCD, re-evaluate both Bay flooding and watershed flooding potential at key milestones in the Safety Element's implementation horizon, to manage for changing sea level rise projections.

SAF-4.6: Sea Level Rise Regional Strategy. As part of the Sea Level Rise Roadmap update, continue to work with regional entities to address rising water levels in the San Francisco Bay, and coordinate with the City's other climate adaptation efforts.

Actions:

SAF-A.12: As part of creek "naturalization" or restoration efforts, undertake ecologically-sensitive solutions that align with integrated open space/flooding solutions where feasible. As staff resources are available, explore these solutions in partnership with community organizations, such as partners involved in the East Oakland Neighborhood Initiative, Save the Bay, Mycelium Youth, Shoreline Leadership Academy, and other groups already implementing climate-resilient solutions.

SAF-A.13: Continue to provide sandbags and plastic sheeting to residents and businesses in anticipation of rainstorms, and to deliver those materials to people with disabilities and older adults upon request.

SAF.A-14: Ensure that new construction and major improvements to existing structures within flood zones are in compliance with federal requirements and, thus, remain a participant in the National Federal Insurance Program (NFIP).

SAF-A.15: Continue to coordinate with FEMA, the Alameda County Flood Control and Water Conservation District, and the State Division of Safety of Dams on flood-control-related projects.

SAF-A.16: Continue to repair, maintain make structural improvements to storm drains to enable them to perform to their design capacity in handling water flows.

SAF-A.17: Work with property owners to develop cohesive areawide flooding prevention strategies in the two areas most susceptible to 100-year floods – the shoreline near the mouth of the Oakland Estuary, and the Coliseum and areas north extending through to the Flea Market.

SAF-A.18: Study compounding impact of sea level rise on groundwater threats in areas with hazardous facilities. Comply with performance standards pursuant to the Alameda countywide National Pollutant Discharge Elimination System municipal stormwater permit.

SAF-A.19: Continue to enforce the grading, erosion, and sedimentation ordinance and provisions under the creek protection, storm water management and discharge control ordinance to keep watercourses free of obstructions and protect drainage facilities.

SAF-A.20: By 2025, conduct a regional and citywide community engagement effort to determine planning thresholds and appropriate sea level rise mitigation strategies.

4.9.3.4 Topics Considered and Determined to Have No Impact

All hydrology and water quality topics are analyzed below.

4.9.4 Impacts of the Project

Impact HYD-1: Adoption of the Proposed Project would not violate water quality standards or waste discharge requirements or otherwise substantially degrade water quality. (Criteria 1 and 7) (*Less than Significant*)

Future development under the Proposed Project would have a significant impact if such development would violate water quality standards or waste discharge requirements (WDR) *Order No. R2-2022-0018,* pursuant to NPDES *Permit No. CAS612008,* issued to Alameda County and in effect in the City of Oakland. A violation could occur if the development were to substantially increase pollutant loading levels in the sanitary sewer system, either through the direct introduction of contaminants generated by industrial land uses, or indirectly through stormwater pollution.

Construction Impacts

Construction associated with the Proposed Project would likely involve ground-disturbing activities, such as trenching and excavation, removal of trees and other vegetation, and grading. As soil disturbing activities occur across a landscape, the potential for erosion and sedimentation increases. Disturbed soils are typically more susceptible to erosion from rain and wind, which in the absence of preventative measures, can lead to mobilization of sediments and silt through runoff. Erosion can escalate under storm events where slopes are steep.

To accomplish such construction, heavy equipment such as bulldozers, graders, earth movers, heavy trucks, trenching equipment and other machinery is likely to be used. Such machinery could contribute pollutants to stormwater runoff in the form of sediment and other pollutants, such as fuels, oil, lubricants, hydraulic fluid, or other contaminants. Additionally, site work could result in runoff. If mobilized during construction, sediment, silt, and construction debris could be transported to receiving waters such as creeks, lakes, or the Bay. Degradation of water quality could occur and affect beneficial uses of these water bodies. In the absence of runoff controls, exceedances of water quality standards could result.

As described in Section 4.9.2, *Regulatory Setting*, construction projects that disturb one or more acres of ground disturbance, or less than one acre but would be part of a larger plan of development or sale, would be required to obtain coverage under the NPDES Construction General Permit. Preparation of a SWPPP, along with its implementation during construction, is required to comply with the NDPES Construction General Permit. Moreover, development projects implemented under the Proposed Project would be subject to controls and requirements described in Section 13.16 of the Oakland Municipal Code, which establishes permanent stormwater pollution prevention measures for development and redevelopment projects. This code specifies that a stormwater management plan be prepared for such projects, subject to the City's guidelines. Consistent with General Plan Policy CO-5.3, these standards are required to minimize pollutants in stormwater runoff and protect watercourses. In addition, proposed 2045 General Plan Policies SAF-3.1, Minimize Storm-Induced Flooding; and SAF-3.2, Storm-Induced Flooding Structural Risk, each require actions to reduce flood risk that could spread sediment and other pollutants to water bodies and adversely affect water quality. Actions SAF-A.14 and SAF-A.18 also requires compliance with federal requirements and the Construction General Permit. These measures are reinforced by SCA 48 through 54 that establish requirements to control runoff during construction, as well as construct permanent measures to control runoff during operations and prevent pollution from entering water ways.

Adherence to these proposed policies, SCAs, and with the numerous laws and regulations described above that regulate water quality would prevent adverse effects to water quality. The impact associated with construction activities would therefore be less than significant.

Operational Impacts

Once constructed, future development under the Proposed Project would be subject to municipal stormwater requirements (Order No. R2-2022-0018), which regulate stormwater discharges within the Plan Area. The City of Oakland *Storm Drainage Design Standards*, as well as Provision C.3 of the Municipal Regional Stormwater NDPES Permit, contain post-construction stormwater control

requirements that would ensure ongoing water quality exceedances in stormwater do not occur. In addition, proposed 2045 General Plan Policies SAF-3.1, Minimize Storm-Induced Flooding; and SAF-3.2, Storm-Induced Flooding Structural Risk, each address storm-induced flooding. Further, SCAs 51, 52, 53, and 55 reinforce compliance with Provision C.3 requirements. Stormwater falling on a given site would be required to be treated using bioswales, bioretention basins, or other best management practices. Adherence to proposed policies, SCAs, and the NPDES permits cited above would ensure that operational water quality impacts associated with future development under the Proposed Project would be less than significant.

Mitigation: None required.

Summary

With adherence to proposed policies, SCAs, and regulatory compliance, future development under the Proposed Project would result in a less than significant impact related to water quality.

Impact HYD-2: Adoption of the Proposed Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or proposed uses for which permits have been granted. (Criterion 2) (*Less than Significant*)

The consideration of groundwater sustainability impacts includes both the Proposed Project's groundwater demand and its alteration of the recharge capability of the groundwater basins. If, for example, development of a future project under the Proposed Project were to require substantial quantities of groundwater during construction or operation, or if the development were to include placement of impervious surfaces to the extent that there would be an appreciable reduction in the overall recharge area for the groundwater basin, such activities could be considered potentially significant.

Construction Impacts

Until construction is completed, there would be no increase likely in the amount of impervious surfaces and therefore no impact on groundwater recharge.

Construction of future development under the Proposed Project may require water to suppress fugitive dust or for other construction purposes. As the projects have not been formally proposed, the estimated water demand associated with this construction is not currently known. However, as discussed above in Section 4.9.1, *Environmental Setting, Groundwater*, groundwater within the Santa Clara Valley Groundwater Basin—East Bay Plain Subbasin — is not used for water supply. Water supply in Oakland is provided by EBMUD with the majority of supply coming from surface water supplies outside of the City of Oakland and outside of the basin. Therefore, construction would not substantially decrease groundwater supplies within the basin, and the impact would be less than significant.

Operational Impacts

Once constructed, future development under the Proposed Project would be constructed and operated in compliance with the Regional MRP and SCA 54, NPDES C.3 Stormwater Requirements for Regulated Projects. As part of the required measures, future development would be required to maximize capture of stormwater falling on a given site, followed by treatment and onsite infiltration, which is expected to reduce stormwater runoff from future development sites compared to existing developments. In other words, whether the percentage of impervious surfaces increase, decrease, or remain unchanged with future development under the Proposed Project, the overall volume of infiltration of stormwater into the underlying aquifer for groundwater recharge is expected increase and render the impact relative to impervious surfaces and groundwater recharge less than significant.

Mitigation: None required.

Summary

With adherence to SCAs and regulatory compliance, future development under the Proposed Project would result in a less than significant impact related to groundwater supplies and groundwater recharge.

Impact HYD-3: Adoption of the Proposed Project would not result in substantial erosion or siltation on- or off-site that would affect the quality of receiving waters; result in substantial flooding on- or off-site; create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems; create or contribute substantial runoff which would be an additional source of polluted runoff; or substantially degrade water quality. (Criteria 3, 4, 5, 6, and 7) (*Less than Significant*)

Construction Impacts

As discussed above in Impact HYD-1, construction of future development under the Proposed Project would likely involve ground disturbing activities such as trenching and excavation, removal of trees and other vegetation, and grading. Soil disturbing activities that occur across a landscape have the potential to cause erosion and send sediment or other pollutants into receiving waters, cause onsite and/or offsite flooding, exceed the capacity of a stormwater drainage system, create or contribute substantial runoff which would be an additional source of polluted runoff; or substantially degrade water quality.

As further discussed in Impact HYD-1 and described in Section 4.9.2, *Regulatory Setting, NPDES Construction General Permit*, construction projects that disturb one or more acres of ground, or less than one acre but would be part of a larger plan of development or sale, would be required to obtain coverage under the NPDES Construction General Permit. Preparation of a SWPPP, along with its implementation during construction, is required to comply with the NDPES Construction General Permit. Moreover, development under the Proposed Project would be subject to controls and requirements described in Section 13.16 of the Oakland Municipal Code, which establishes permanent stormwater pollution prevention measures for development and redevelopment projects. This code specifies that a stormwater management plan be prepared

for such projects, subject to the City's guidelines. Consistent with General Plan Policy CO-5.3, these standards are required to minimize pollutants in stormwater runoff and protect watercourses. These requirements cover managing the volume and rate of runoff to prevent erosion and the potential to carry sediment and other pollutants or cause erosion and flooding both onsite and offsite. In addition, proposed 2045 General Plan Policies SAF-3.1, Minimize Storm-Induced Flooding; and SAF-3.2, Storm-Induced Flooding Structural Risk, SAF-4.5, Evaluating Bay/Watershed Flooding Potential, and Actions A.15 (coordination on flood-control-related projects), SAF-A.16 (repair and maintenance of storm drains), and SAF-A.19 (continuing to enforce grading, erosion, and sedimentation ordinance and provisions) each require actions to reduce flood risk that could cause erosion, flooding, the exceedance of the capacity of a stormwater system, or adversely affect water quality. SAF-3.2 and Action SAF-A.18 also requires compliance with the Construction General Permit, which also serves to prevent erosion and impacts to water quality. These measures are reinforced by SCA 48 through 54 that establish requirements to control runoff during construction, as well as construct permanent measures to control runoff during operations and prevent pollution from entering water ways.

Adherence to proposed policies, SCAs, and the numerous laws and regulations described above that regulate water quality would prevent adverse effects to erosion and siltation. The impact associated with construction activities would therefore be less than significant.

Operational Impacts

Once constructed, future development under the Proposed Project would be subject to municipal stormwater requirements (Order No. R2-2022-0018) which regulates stormwater discharges within the City of Oakland. The City of Oakland *Storm Drainage Design Standards*, as well as Provision C.3 of the Municipal Regional Stormwater NDPES Permit, contain post-construction stormwater control requirements that would be applicable to future development. In addition, proposed 2045 General Plan Policies SAF-3.1, Minimize Storm-Induced Flooding; SAF-3.2, Storm-Induced Flooding Structural Risk, SAF-4.4, Sea Level Rise Vulnerability Assessment; as well as Action SAF-A.17 (areawide flooding prevention strategies) each require the design of future development under the Proposed Project to collect and treat stormwater that could cause erosion, flooding, the exceedance of the capacity of a stormwater system, or adversely affect water quality. In addition, SCAs 51, 52, 53, and 55 reinforce compliance with Provision C.3 requirements. The combination of these requirements means that the stormwater capture system: (1) must be able to handle the anticipated volume of stormwater falling on a given site such that the volume exiting the site is less than or equal to the carrying capacity of the municipal stormwater system and not cause erosion or flooding; (2) must be able to control the flow rate such that the rate at which stormwater exits a given site does not exceed the capacity of the stormwater system and cause erosion or flooding; and (3) must treat stormwater before it exits the site to prevent sediment or other pollutants from entering the municipal stormwater system and surface water bodies such as creeks, lakes, or the bay. Compliance with the regulations cited would ensure that the operation of future development under the Proposed Project would be less than significant.

Mitigation: None required.

Summary

With adherence to proposed policies, SCAs, and regulatory compliance, future development under the Proposed Project would result in a less than significant impact related to erosion and siltation.

Impact HYD-4: Adoption of the Proposed Project could place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, that would impede or redirect flood flows; or expose people or structures to a substantial risk of loss, injury, or death involving flooding. (Criteria 8, 9, and 10) (*Less than Significant with Mitigation*)

Construction Impacts

Until constructed, there would be no new housing placed within a 100-year flood zone and there would be no impact.

Operational Impacts

100-Year Flood Zones

As discussed above in Section 4.9.1, *Environmental Setting, Flood Hazards*, portions of the Plan Area are located within FEMA-designated 100-year flood zones. Proposed 2045 General Plan Policies SAF-3.1 Minimize Storm-Induced Flooding, and SAF-3.2 Storm-Induced Flooding Structural Risk, each require future development under the Proposed Project to be designed to have the foundations be above the Base Flood Elevation (BFE) to prevent flood risk. SCA 60 requires projects to be designed to ensure that new structures within a 100-year flood zone do not interfere with the flow of water or increase flooding and that finished site grades and floor elevations are above the BFE. Adherence to existing and proposed policies, SCAs, and the numerous laws and regulations discussed above would ensure that future development under the Proposed Project would not cause flooding or placing housing in a 100-year flood zone. Impacts relative to flooding would be less than significant.

Sea Level Rise

As discussed above in Section 4.9.1, *Environmental Setting, Sea Level Rise*, current State guidance calls for preparing for SLR. To address SLR, the Proposed Project includes Policies SAF-4.1 through SAF-4.6, and Action SAF-A.20, listed above in *Proposed 2045 General Plan Policies, Land Use, and Zoning*. These policies would require future development under the Proposed Project to incorporate shoreline protection measures, protective setbacks, and other adaptation strategies; conduct a SLR vulnerability assessment for projects proposed in areas susceptible to SLR; prepare an SLR Adaptation Plan for implementation as part of the project designs; and submit the assessment, adaptation plan, and conceptual design to the City for review and approval. In addition, SCA 61 reinforces Bay Conservation and Development Commission (BCDC) permit requirements to address issues such as but not limited to sea level rise. Adherence to the proposed policies, SCAs, and Mitigation Measure HYD-1 presented below, would ensure that future development under the Proposed Project would be designed to address SLR.

Mitigation Measure HYD-1: Sea Level Rise Vulnerability Assessment.

To avoid and minimize impacts related to Sea Level Rise, the City shall adopt a new SCA that applies to all projects located in the 100-year coastal flood zone with 5.5 feet of SLR, or the most current SLR projection to be determined by the City.

The SCA shall require the following measures:

Conduct a Sea Level Rise vulnerability assessment for the project, prepare a Sea Level Rise Adaptation Plan for implementation as part of the project designs, and submit the assessment, adaptation plan, and preliminary design to the City for review and approval.

Summary

With adherence to proposed policies, SCAs, regulatory compliance, and Mitigation Measure HYD-1; future development under the Proposed Project would result in a less than significant impact related to flooding and SLR.

Impact HYD-5: Adoption of the Proposed Project would not risk release of pollutants in flood hazard, tsunami, or seiche zones (Criterion 11) (*Less than Significant*)

As discussed in Section 4.9.1, *Environmental Setting, Tsunami and Seiche*, Lake Merritt and the other City lakes are shallow and do not have the volume of water necessary to generate devastating seiches and the potential for seiches is considered minimal.

Construction Impacts

Until constructed, there would be no new housing placed within area susceptible to flooding, tsunamis, or seiches and there would be no impact.

Operational Impacts

Flood Impacts Related to Storms

Proposed Policies SAF-3.1, Minimize Storm-Induced Flooding; and SAF-3.2, Storm-Induced Flooding Structural Risk, and Action SAF-A-14, each require future development under the Proposed Project to be designed to have the foundations be above the Base Flood Elevation (BFE) to prevent flood risk. These regulations and policies are further reinforced by SCA 60, which requires projects to be designed to ensure that new structures within a 100-year flood zone do not interfere with the flow of water or increase flooding and that finished site grades and floor elevations are above the BFE. Adherence to existing and proposed policies, SCAs, and the regulations cited would ensure that future development under the Proposed Project would not cause flooding or placing housing in a 100-year flood zone. Impacts relative to flooding would be less than significant.

Flood Impacts Related to Tsunamis

As discussed in Section 4.9.1, *Environmental Setting, Tsunami and Seiche*, some shoreline areas in the Plan Area are located within a mapped tsunami inundation area (see Figure 4.9-5 above). While the Bay is a mostly enclosed body of water and thus limits the probability for a potential

tsunami, because of the Plan Area's low-lying nature, a tsunami could result in damage. As discussed above. NOAA operates the National Tsunami Warning Center and the Pacific Tsunami Warning Center that alert local authorities to order the evacuation of low-lying areas, if necessary. Precautions and warning systems would be activated by the City Emergency Management Services Division in coordination with first responders, and local, State, and federal emergency management agencies to instruct the public on preparedness and response in the event of a tsunami. For most tsunamis approaching the coast, several hours are available to evacuate residents and undertake other emergency preparations. Therefore, although portions of the Plan Area are located within a tsunami inundation zone, the City and County's tsunami warning system coupled with the infrequent nature of tsunamis would result in a less-than-significant impact.

Dam Inundation

As discussed above in Section 4.9.1, *Environmental Setting, Inundation from Dams*, there are four dams in Oakland that are considered extremely high hazard dams: Lake Temescal, Central, Dunsmuir Reservoir, and Chabot that could cause inundation of downslope areas in the event of a dam failure. As previously noted, the Central Reservoir is scheduled to be replaced with water storage tanks beginning in 2026. The dams are under the jurisdiction of the State of California Division of Safety of Dams (DSOD), discussed above in Section 4.9.2, *Regulatory Setting, California Division of Safety of Dams*. As part the normal maintenance program, all jurisdictional dams are generally inspected at least once per year. High hazard dams are typically inspected twice a year, and special inspections may be made in response to follow-up work. The likelihood of a seismic failure of these major dams is small and regular inspection ensures that potential defects in dam integrity are quickly identified. Other dams potentially subject to failure are smaller and inundation areas are not substantial. Routine inspections would ensure that integrity defects are identified and corrective action is taken. In addition, the operator of each dam is required to have an Emergency Action Plan (EAP) to establish emergency procures and notifications in the event of an imminent or actual dam failure. Compliance with the regulations cited would ensure that impacts from unlikely dam failures would be less than significant.

Mitigation: None required.

Summary

With adherence to proposed policies, SCAs, and regulatory compliance, impacts related to flood hazard, tsunami, or seiche zones would be less than significant.

Impact HYD-6: Adoption of the Proposed Project would not substantially alter the existing drainage pattern of the site or area including through the alteration of the course or increasing the rate or amount of flow, of a creek, river, or stream in a manner that would result in substantial erosion, siltation, or flooding, both on- or offsite; or fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect hydrologic resources. (Criteria 12 and 13) (*Less than Significant*)

Construction Impacts

Until constructed, drainages would not be altered and there would be no impact.

Operational Impacts

The City's *Creek Protection, Stormwater Management, and Discharge Control Ordinance* prohibits activities that would result in the discharge of pollutants to Oakland's waterways or in damage to creeks, creek functions, or habitat. The ordinance requires the use of standard BMPs to prevent pollution or erosion to creeks and storm drains. In addition, a creek protection permit is required for any construction work on creek side properties. Design submittals required by this permit require the design demonstrate that drainages would not be altered in such a manner that would result in substantial onsite or offsite erosion, siltation, or flooding. The Creek Protection Ordinance is reinforced by SCA 57, Vegetation Management on Creekside Properties; SCA 58, Creek Protection Plan; and SCA 59, Creek Dewatering/Diversion, which ensure creeks and drainages are protected through the preparation and implementation of creek protection plans, ensuring that impacts would be less than significant.

Mitigation: None required.

Summary

With adherence to the City's Creek Protection Ordinance, future development under the Proposed Project would result in a less than significant impact related to alteration of drainages.

4.9.5 Cumulative Impacts

This section presents an analysis of the cumulative effects of future development under the Proposed Project in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to hydrology and water quality could occur if the incremental impacts of future development under the Proposed Project combined with the incremental impacts of cumulative development would be significant and if the Proposed Project's contribution would be considerable.

As previously discussed, the Proposed Project would have no impact with respect to groundwater supplies or seiches. Accordingly, the Proposed Project could not contribute to cumulative impacts related to groundwater supplies or seiches, which are not discussed further.

Impact HYD-7: Adoption of the Proposed Project, combined with cumulative development, could result in significant cumulative impacts to hydrology and water quality. (*Less than Significant with Mitigation*)

Geographic and Temporal Context

The geographic scope of analysis for cumulative hydrology and water quality impacts encompasses the Plan Area, its surrounding drainages, and underlying groundwater basin. In addition, impacts related to hydrology and water quality are generally time-specific. Cumulative impacts could only be cumulative if two or more hydrology and water quality impacts occurred at the same time, as well as overlapping at the same location.

Cumulative Impacts – Construction

If projects are constructed at the same time, erosion, flooding, and water quality effects could be cumulatively significant, if stormwater runoff from the sites were not controlled. However, construction activities for cumulative development would be subject to the same regulatory requirements discussed above for the Proposed Project. As with the Proposed Project, the State Construction General Permit, as well as City of Oakland requirements, would require each cumulative project to prepare and implement a SWPPP. The SWPPPs would describe BMPs to control runoff, prevent erosion and flooding, and manage the use of hazardous materials for each project. Through compliance with this requirement, erosion, flooding, and water quality impacts would be prevented. The Construction General Permit has been developed to address cumulative conditions arising from construction throughout the State, and is intended to maintain cumulative effects of projects subject to this requirement below levels that would be considered significant. For example, two adjacent construction sites would be required to implement BMPs to reduce and control the release of sediment and/or other pollutants in any runoff leaving their respective sites. The runoff water from both sites would be required to achieve the same regulatory action levels, measured as a maximum amount of sediment or pollutant allowed per unit volume of runoff water. Thus, even if the runoff waters were to combine after leaving the sites, the sediments and/or pollutants in the combined runoff would still be at concentrations (amount of sediment or pollutants per volume of runoff water) below regulatory action levels and would not be cumulatively considerable. This cumulative impact would be less than significant.

Cumulative Impact – Operations

As discussed above in *Impact HYD-1*, similar to the Proposed Project, cumulative projects would be required to comply with the City's municipal stormwater requirements that regulate stormwater discharges within the Plan Area. The City of Oakland *Storm Drainage Design Standards*, as well as Provision C.3 of the Municipal Regional Stormwater NDPES Permit, contain post-construction stormwater control requirements that would ensure that ongoing erosion and water quality exceedances in stormwater do not occur. In addition, proposed 2045 General Plan Policies SAF-3.1, Minimize Storm-Induced Flooding; SAF-3.2, Storm-Induced Flooding Structural Risk, and Action SAF-A.19 each address storm-induced flooding. Further, SCAs 51, 52, 53, and 55 reinforce compliance with Provision C.3 requirements. Stormwater falling on a given site would be required to be treated using bioswales, bioretention basins, or other best management practices. Adherence to proposed policies, SCAs, and the NPDES permits cited above would ensure that operational erosion and water quality impacts associated with future development under the Proposed Project and cumulative projects would not be cumulatively considerable. This cumulative impact would be less than significant.

Mitigation Measure HYD-1: Sea Level Rise Vulnerability Assessment.

Summary

With adherence to proposed policies, SCAs, regulatory compliance, and Mitigation Measure HYD-1; future development under the Proposed Project would result in less than significant impacts related to water quality; groundwater supplies and groundwater recharge; erosion and siltation; flooding and SLR; flood hazard, tsunami, or seiche zones; and alteration of drainages. Therefore, future development under the Proposed Project, combined with cumulative

development, would not cause or contribute considerably to a significant cumulative impact related to hydrology and water quality. Cumulative impacts would, therefore, be less than significant.

4.9.6 References – Hydrology and Water Quality

California Ocean Protection Council, 2020. *Strategic Plan to Protect California's Coast and Ocean 2020-2025*.

California Regional Water Quality Control Board (RWQCB), 2022. *California Regional Water Quality Control Board, San Francisco Bay Region, Municipal Regional Stormwater NPDES Permit. Order No. R2-2022-0018, NPDES Permit No. CAS612008. Adopted May 11*.

City of Oakland, 2020. *City of Oakland CEQA Thresholds of Significance Guidelines*, December 16, 2020.

City of Oakland, 2021. *2021 – 2026 Hazard Mitigation Plan*. July.

Department of Water Resources (DWR), 2022. *SGMA Portal, Santa Clara Valley – East Bay Plain (2-009.04)*.

Division of Safety of Dams, 2021. *Dams within Jurisdiction of the State of California, Listed Alphabetically By County*. September.

East Bay Municipal Utility District (EBMUD), 2021a. *Urban Water Management Plan 2020*. June.

East Bay Municipal Utility District (EBMUD), 2022. *Central Reservoir Replacement Project*.

National Oceanic and Atmospheric Administration (NOAA), 2018. Center for Operational Oceanographic Products and Services (CO-OPS), NOAA Sea-Level Trends 1987-2018, 2018. tidesandcurrents.noaa.gov/sltrends/sltrends_station.shtml?stnid=9414290.

Regional Water Quality Control Board (RWQCB) – San Francisco Bay Region, 2019. *San Francisco Bay Basin (Region 2), Water Quality Control Plan (Basin Plan)*. November 5.

U.S. Environmental Protection Agency (USEPA), 2018. *California 2018 Integrated Report (303(d) List/305(b) Report), Appendix A: Final 2018 303(d) List*.

U.S. Climate Data, 2022. *Climate for Oakland, California*. https://www.usclimatedata.com/climate/oakland/california/united-states/usca2500, accessed on September 15, 2022.

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4.10 Land Use and Planning

This section describes conditions and potential environmental effects of the Proposed Project pertaining to land use, and the potential for land use conflicts with Project development that may result in environmental impacts. The section discusses relevant existing environmental conditions of the Plan Area and regulations pertinent to this section, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts to the physical environment that could result from implementation of the Proposed Project and its associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that would reduce potential impacts to this environmental topic are identified; both existing and proposed updated/new General Plan policies and SCAs are considered.

This section and incorporates relevant information from the General Plan Update Map Atlas prepared in support of the Proposed Project (see Appendix A). No scoping comments related land use and planning were received in response to the NOP (Notice of Preparation) of this Draft EIR.

4.10.1 Environmental Setting

4.10.1.1 Environmental Setting

Oakland is located on the eastern shore of the San Francisco Bay (Bay) and is the county seat of Alameda County and geographic center of the Bay Area. The City's Planning Area encompasses 78 square miles (49,910 acres), including about 55.8 square miles of land and 22.2 square miles of water. As shown in Figure 3-1 in the *Project Description*, the City is bounded by the Bay and Oakland Estuary with the City of Alameda on the opposite side of the Estuary on the southwest, the crest of the Oakland Hills (Siesta Valley Recreation Area, Sibley Volcanic Regional Preserve, Reinhardt Redwood Regional Park, and Anthony Chabot Regional Park) on the northeast and east, the city boundaries of Emeryville and Berkeley and Tilden Regional Park to the north, and the City of San Leandro boundary to the south. The City also abuts the City of Piedmont, which is bounded entirely by Oakland. There are no unincorporated areas within the City's Sphere of Influence.

San Francisco is located just west across the Bay Bridge. Four interstates (I-80, I-880, I-980, and I-580) pass through the City. All Bay Area Rapid Transit (BART) lines traverse the City, serving eight stations. The City is also served by Amtrak, San Francisco Bay Ferry, and AC Transit. Oakland International Airport connects the City and the region to the rest of the world, and the Port of Oakland is the largest in Northern California.

Certain parts of the Plan Area fall under jurisdictions aside from the City of Oakland. The Port of Oakland is given responsibility by the Oakland City Charter to own, develop and manage lands along the Oakland Estuary, including but not limited to the Oakland International Airport, within the specified area of Port jurisdiction. The land within the Port jurisdiction is subject, like the rest of the City, to the General Plan and is included within the City's General Plan Planning Area. Additionally, the San Francisco Bay Conservation and Development Commission (BCDC) oversees sites that lie within a 100-foot 'Shoreline Band' surrounding the Bay, ensuring

development within this area is consistent with the San Francisco Bay Plan and the San Francisco Bay Area Seaport Plan. BCDC reviews and has permit authority over all individual waterfront projects that are developed within the Shoreline Band, to ensure that they maximize public access to the Bay and minimize the amount of bay fill that is used. The United States Army Corps of Engineers (USACE) governs the federally owned Inner Harbor Tidal Canal, which extends 1,800 feet northwest of the Park Street Bridge to the mouth of the San Leandro Bay. Work permits for any bridges, piers, and other properties that touch the canal must be reviewed by USACE to ensure compliance with Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act, in addition to review by the City and BCDC.

Existing Land Uses

Existing (on the ground) land uses were identified from City and County data and aerial photography. Figure 3-6 in Chapter 3, *Project Description*, shows the pattern of existing land use in the City based on 2021 Alameda County Assessor data. **Table 4.10-1** shows the breakdown of existing land uses. "Mixed Use – Residential" includes any mixed-use parcel that is partly residential. "Mixed Use – Commercial" does not include any parcels with residential uses. The majority land use category is Residential (38 percent), particularly Single-Family Residential (28.3 percent), followed by Recreation and Open Space (29.9 percent), and then by Industrial (16.5 percent).

Oakland's existing land use and development pattern reflects the City's history and evolution. The City was incorporated in 1852, and the earliest development areas were Downtown and West Oakland. These areas have a strong grid pattern of streets. Downtown has a diverse mix of uses, including office and general commercial uses, City and County administrative offices, courthouses, and facilities such as the Main Library. Downtown features many entertainment venues, and while it was once a destination for department store shopping, it is now home to several vibrant restaurants and smaller retail shops. Downtown also includes a thriving Chinatown.

Soon after incorporation, Oakland was chosen as the western terminus of the Transcontinental Railroad, resulting in development of major port and manufacturing establishments. The Port of Oakland, at the northern end of the waterfront, is the fourth largest container shipping port on the West Coast. The Oakland International Airport is at the southern end of the City's estuary waterfront. In between these two nodes, much of the estuary waterfront is lined with industrial establishments. Exceptions include the Jack London District, where formerly industrial areas have been converted to retail, residential and entertainment uses; and Brooklyn Basin, a new master-planned residential development east of Estuary Park. Large concentrations of industrial uses extend inland in both West and East Oakland.

Commercial uses line the City's major corridors, such as Telegraph Avenue and International Boulevard, many of which were previously streetcar lines. The former auto row along Broadway, proximate to Downtown, is being redeveloped with mid-rise residential and neighborhood commercial uses, facilitated by the Broadway-Valdez Specific Plan. As of June 2022, 4,091 units are in various stages of completion. Downtown has also recently seen several new high-rise residential buildings.

TABLE 4.10-1
EXISTING LAND USE SUMMARY TABLE

Existing Use Categories	Acres	Percentage
Residential	12,535	38.0%
Single-Family Residential	9,335	28.3%
Single-Family Residential - Attached	188	0.6%
Multi-Family Residential	2,762	8.4%
Mobile Homes	4	0.0%
Mixed Use - Residential	246	0.7%
Commercial	1,107	3.4%
Mixed Use - Commercial	14	0.0%
Service Stations	37	0.1%
Hotel, Motel, Lodging Commercial	104	0.3%
General Commercial	658	2.0%
Office	294	0.9%
Industrial	5,461	16.5%
General Industrial	1,201	3.6%
Heavy Industrial	133	0.4%
Port	4,126	12.5%
Public and Community Facilities	2,664	8.1%
School/College/Educational Facility	1,797	5.4%
Hospitals	70	0.2%
Religious/Institutional	298	0.9%
Assisted Living/Nursing Facility	35	0.1%
Cemetery/Mortuary	300	0.9%
Marina	165	0.5%
Recreation and Open Space	9,865	29.9%
Parks, Recreation, & Open Space	4,422	13.4%
Public	5,443	16.5%
Parking Lot/Garage	78	0.2%
Vacant	1,312	4.0%
Total	**33,022**	**100.0%**

Outside of Downtown, industrial areas, and the corridors, the dominant use is residential, arranged in many diverse neighborhoods, together with neighborhood commercial uses, parks and open spaces, and facilities such as schools. Oakland has significant concentration of high-density, mid-rise (three to five stories) residential uses around Lake Merritt, with the largest extent in the Adams Point area extending between Lake Merritt and Piedmont. Approximately 29 percent of the City's population lives within a 1.5-mile radius centered on Children's Fairyland next to Lake Merritt.

Oakland has several thriving neighborhood main streets and commercial areas with restaurants and cafés, neighborhood shopping, and small-scale retail uses. These include College Avenue in Rockridge, Lakeshore and Grand avenues near Lake Merritt, Fruitvale Avenue, Chinatown, Montclair Village, and Jack London Waterfront District, as well as extensive neighborhood retail extending across multiple neighborhoods along East 12th Street, Telegraph and San Pablo Avenues; and MacArthur, Foothill, Park, and International boulevards. Commercial areas

currently benefitting from focused investment include the 7th Street Corridor in West Oakland and the Seminary Point Shopping Center in East Oakland.

Across Oakland, many neighborhoods balance single- and multi-family buildings, while some are predominantly multi-family (such as Adams Point) and others are predominantly single-family (such as Maxwell Park). Densities are generally lower in areas of the hills because of the challenging topography and access. There are several regional parks in the hills, as well as the Oakland Zoo and a municipal golf course (Lake Chabot).

Residential Development Projects and Trends

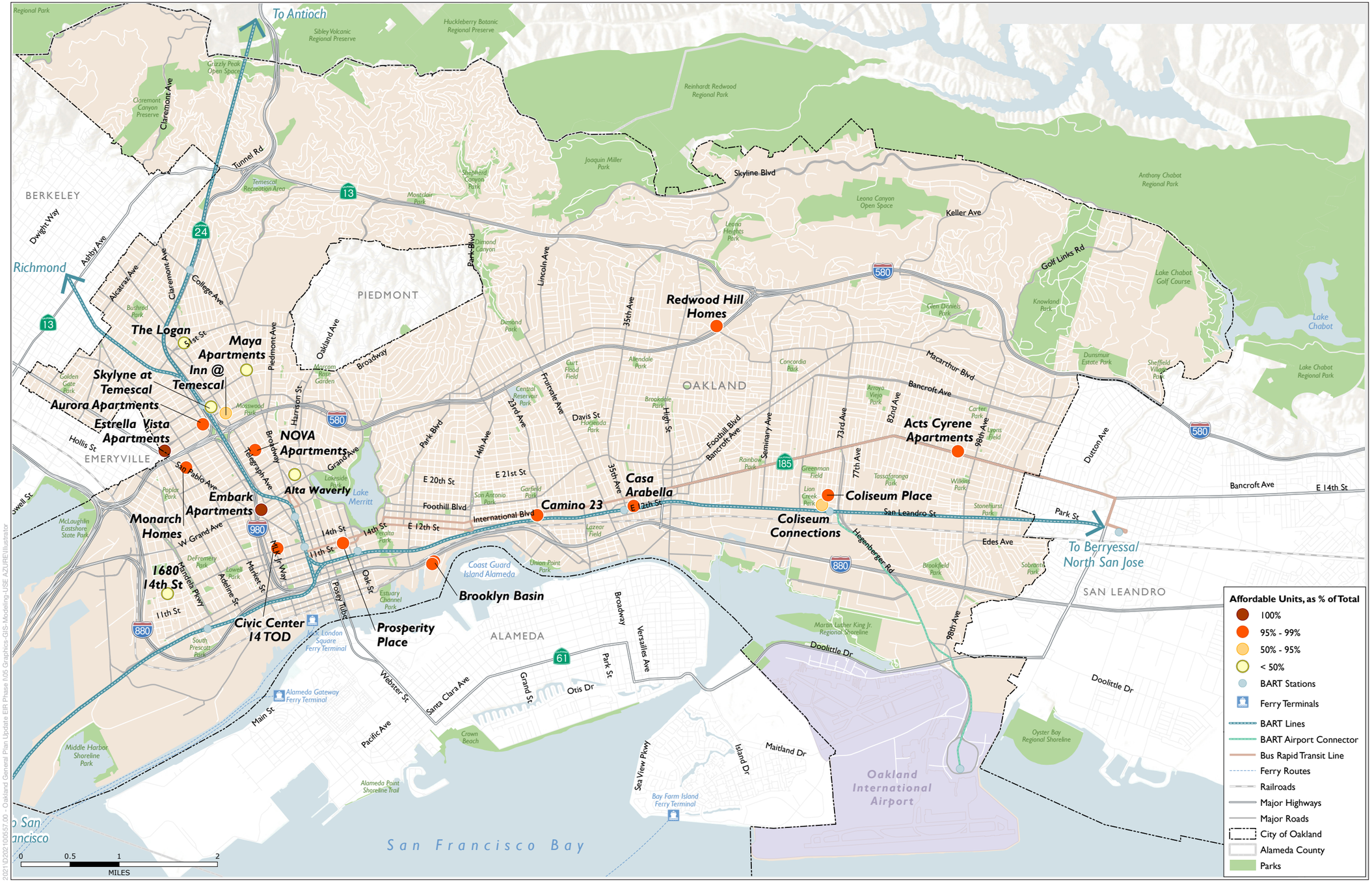
Among other goals, housing development has been a key directive of most specific plans in Oakland over the past few years. From 2015 to 2020, 22 new projects with affordable housing were completed, totaling approximately 1,038 affordable units. These projects are shown in **Figure 4.10-1**, and details for each project are shown in **Table 4.10-2**.

TABLE 4.10-2
PROJECTS WITH AFFORDABLE UNITS, 2015-2020

Project Name	Address	Year Built[1]	Total Units	Affordable Units[2]	Percent Affordable
Prosperity Place	188 11th St	2015	71	70	99%
Acts Cyrene Apartments	9400 International Blvd	2015	59	58	98%
Embark Apartments	2126 MLK Jr Way	2017	62	62	100%
-	1680 14th Street	2017	26	2	8%
Alta Waverly	1680 Valdez St	2017	234	25	11%
Estrella Vista	3706 San Pablo Ave	2017	33	33	100%
Redwood Hill Homes	4856-68 Calaveras Ave	2017	28	27	96%
Civic Center 14 TOD	632 14th St	2017	40	39	98%
Maya Apartments	4045 Broadway	2018	47	4	9%
Casa Arabella	3611 E 12th St	2019	94	92	98%
Coliseum Connections	805 71st Ave	2020	110	55	50%
Camino 23	1245 23rd Ave	2020	37	36	97%
Inn @ Temescal (Homekey Project)	3720 Telegraph Ave	2021	22	21	95%
Skylyne at Temescal	3883 Turquoise Way	2021	402	45	11%
The Logan	5110 Telegraph Ave	2017	204	17	8%
Brooklyn Basin 2 (Vista Estero)	285 8th Ave	2021	110	109	99%
Brooklyn Basin 1 (Paseo Estero)	255 8th Ave	2021	101	100	99%
NOVA Apartments (aka Oak Hill)	445 30th St	2021	57	56	98%
Monarch Homes (aka 3268 San Pablo)	3268 San Pablo Ave	2021	51	50	98%
Aurora Apartments	3737 MLK Jr Way	2021	44	43	98%
-	1233 23rd Ave	2021	37	36	97%
Coliseum Place	3300 Hawley St	2021	59	58	98%
Total			**1,928**	**1,038**	

NOTES:
1 "Year Built" refers to date of project completion as recorded in 2015-2017 Annual Progress Reports Table A and 2018-2021 Annual Progress Reports Table A2.
2 Affordable Units = Very Low (30-50% of Area Median Income) and Low-Income (50-80% of Area Median Income) Units

SOURCE: City of Oakland Annual Progress Reports, 2015-2017 (Table A), 2018-2020 (Table A2)



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SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 4.10-1
Projects with Affordable Housing Units, Constructed 2015-2020

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Pipeline projects are those projects that have already received an approved planning permit; have not yet applied for a building permit, are currently seeking a building permit, or have already received an approved building permit; and will likely be completed during the projection period. Pipeline projects are spread across the City, with the majority of new capacity in the Downtown, West Oakland, Eastlake/Fruitvale, and North Oakland/Adams Point areas, as shown in the 2023-2031 Housing Element, Appendix C, Figure C-2: Pipeline Projects. As described in the 2023 – 2031 Housing Element Sites Inventory, Appendix C, projects with entitlements have capacity for 1,790 lower income units, 202 moderate-income units, and 6,175 above-moderate units. Projects with building permits include 1,003 lower-income units, 80 moderate-income units, and 3,602 above moderate-income units.

4.10.2 Regulatory Setting

4.10.2.1 State

California Government Code Section 65300

Government Code Sections 65300 states that each planning agency shall prepare, and the legislative body of each county and city shall adopt, a comprehensive, long-term general plan for the physical development of the county or city, and of any land outside its boundaries in which the planning agency's judgment bears relation to its planning.

Sustainable Communities and Climate Protection Act of 2008 (Chapter 728, Statutes of 2008)

The Sustainable Communities and Climate Protection Act of 2008, otherwise known as Senate Bill (SB) 375, requires the integration of land use, housing, and transportation planning to achieve regional greenhouse gas (GHG) emission reductions, adopted by the California Air Resources Board. SB 375 requires Metropolitan Planning Organizations (MPOs) to develop a Sustainable Communities Strategy (SCS)—a new element of the regional transportation plan (RTP)—to plan for achieving these GHG reduction targets. The SCS must demonstrate the attainment of the regional GHG emissions reduction targets while accommodating the full projected population of the region.

4.10.2.2 Regional and Local Plans, Policies, and Regulations

Presented below are applicable plans and regulations that pertain to the adoption and development under the Proposed Project, followed by a discussion of the overall consistency (or inconsistency) with each plan.

Plan Bay Area 2050

Plan Bay Area 2050 is the Association of Bay Area Government's (ABAG) and Metropolitan Transportation Commission's (MTC) long-range strategic plan focused on housing, the economy, transportation, and the environment. The Plan highlights four types of "Growth Geographies", including Priority Development Areas (PDAs) and Priority Production Areas (PPAs). Areas designated as PDAs will support future housing and job growth in the region, while areas designated as PPAs will help retain industrial land in key locations in the region to support the

expansion in the number of middle wage jobs related to industrial activities. The Plan also highlights Priority Conservation Areas (PCAs), which are regionally significant open spaces which have broad agreement for long-term protection. Oakland has nine designated PDAs, two PPAs, and 13 PCAs. PDAs are shown in Figure 3-4.

Oakland 2030 Equitable Climate Action Plan

The City's adopted 2030 Equitable Climate Action Plan (ECAP) (City of Oakland 2020) contains goals and actions that apply to activities within the City, with a GHG reduction target for the year 2030 of 56 percent below 2005 levels. The ECAP describes the importance of locating housing near necessary neighborhood services as well as transit; planning for housing to be all-electric; and aligning all planning policies and regulations with ECAP goals and actions. The ECAP also gives direction to plan for climate-related disasters and build community resiliency to climate change.

Alameda County ALUC - Oakland International Airport Land Use Compatibility Plan

The Oakland International Airport Land Use Compatibility Plan (ALUCP), adopted by the Alameda County Airport Land Use Commission (ALUC), promotes compatibility between the Oakland International Airport (OAK) and the surrounding land uses. The ALUC was established by Alameda County in accordance with State law as a tool for reviewing general plans, proposed changes to zoning codes and ordinances, land use actions and development projects, and airport development plans that are within the Airport Influence Area (AIA) for consistency with compatibility criteria. ALUCP compatibility criteria are used for safeguarding the general welfare of the public. Section 21674(b) of the California Public Utilities Code provides the ALUC with advisory jurisdiction over the AIA. The role of the ALUC is to review and make recommendations based on the ALUCP criteria. It does not authorize the ALUC to zone property or apply land use controls. Additionally, the advisory jurisdiction of the ALUC is limited to new land uses. Airspace protection criteria are intended to reduce the risk of harm to people and property resulting from an aircraft accident. Compatibility criteria seek to prevent the creation of land use features that can be hazards to aircraft or that have the potential to cause an aircraft accident.

City of Oakland General Plan

The Oakland General Plan includes the Land Use and Transportation Element (LUTE) (adopted March 24, 1998), including the 2019 Oakland Bike Plan (July 2019) and the Pedestrian Master Plan (December 2007, updated June 2017), which are adopted as part of the LUTE; the Historic Preservation Element (adopted March 8, 1994 and amended July 21, 1998); the Open Space, Conservation, and Recreation (OSCAR) Element (adopted June 11, 1996); the Safety Element (November 2004, amended 2012); and the Noise Element (June 21, 2005).

2023-2031 Housing Element

The following policies included in the 2023-2031 Housing Element are relevant to the land use and planning analysis.

Policies:

Policy 2.1: Existing Housing Stock Improvement

Policy 3.2: Create a More Diverse Mix of Homes to Meet Community Needs

Policy 3.3: Expand Resources for the Construction of Affordable Homes

Policy 3.4: Reform Zoning and Land Use to Address Community Priorities

Policy 3.7: Expand Options for Special Needs Housing

Policy 3.8: Convert Vacant Land and Units to Housing

Policy 4.3: Promote Permanent Supportive and Deeply Affordable Housing for Unhoused Communities

Policy 5.2: Promote Resilient and Sustainable Development

Actions:

Action 2.1.6: Increase funding for improved indoor air quality.

Action 3.2.1: Develop zoning standards to encourage missing middle and multi-unit housing types in currently single-family-dominated neighborhoods, including flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and ADUs.

Action 3.2.3: Promote flexibility in adaptive reuse to increase the housing stock.

Action 3.2.5: Reduce constraints to the development of ADUs.

Action 3.3.4. Development of permanent housing affordable to extremely low-income (ELI) households on public land.

Action 3.3.5: Implement an affordable housing overlay.

Action 3.3.7: Study the targeted implementation of an inclusionary housing requirement.

Action 3.3.11: Support innovations by design.

Action 3.4.1: Revise development standards, including allowable building heights, densities, open space and setbacks requirement.

Action 3.4.3: Revise conditional use permit (CUP) requirements.

Action 3.4.4: Revise citywide parking standards.

Action 3.4.5: Revise open space requirements.

Action 3.4.5: Correct zoning district boundaries that cut through parcels.

Action 3.4.7: Capture the diversity of existing built fabric in zoning.

Action 3.4.8: Implement objective design standards.

Action 3.4.10: Implement a Housing Sites Overlay Zone to permit sites included in the Housing Sites Inventory to develop with affordable housing by right.

Action 3.7.6: Expand areas where rooming units and efficiency units are permitted by right.

Action 3.7.7: Amend Planning Code to comply with the Employee Housing Act.

Action 3.7.8: Expand areas where Residential Care Facilities are permitted by right.

Action 3.8.2: Encourage the conversion of vacant ground floor commercial space to residential uses in appropriate locations.

Action 4.3.2: Streamline approval for modular development to provide quality shelter quickly to address the scale of the crisis.

Action 4.3.3: Remove regulatory constraints to the development of transitional housing and supportive housing.

Action 4.3.5: Provide development standards for Low Barrier Navigation Centers.

Action 4.3.6: Expand opportunities for the permitting of Emergency Shelters

Action 5.2.2: Promote infill, transit-oriented development (TOD), and mixed-use development.

Action 5.2.3: Study options to provide financing for the remediation of environmentally contaminated sites, with priority for affordable projects.

Action 5.2.4: Secure funding from the State's Affordable Housing and Sustainable Communities (AHSC) Program.

Action 5.2.8: Encourage new affordable housing in higher resource neighborhoods.

Action 5.2.9: Prioritize improvements to meet the needs of low-resourced and disproportionately burdened communities.

Action 5.2.10: Promote the development of mixed-income housing to reduce income-based concentration.

Land Use and Transportation Element (LUTE)

The LUTE contains the following land use policies that address issues related to land use and planning.

Policy I/C.4.1: Protecting Existing Activities. Existing industrial, residential, and commercial activities and areas which are consistent with long term land use plans for the City should be protected from the intrusion of potentially incompatible land uses.

Policy I/C4.2: Minimizing Nuisances. The potential for new or existing industrial or commercial uses, including seaport and airport activities, to create nuisance impacts on surrounding residential land uses should be minimized through appropriate siting and efficient implementation and enforcement of environmental and development controls. Transportation and Transit-Oriented Development Policies.

Policy D10.4: Providing Housing for a Range of Needs. Housing in the downtown should not be geared toward any one housing market, but rather should be promoted for a range of incomes, ownership options, household types, household sizes, and needs.

Policy T 1.8: Re-routing and Enforcing Truck Routes. The City should make efforts to re-route truck traffic away from neighborhoods, wherever possible, and enforce truck route controls.

Policy T2.1: Encouraging Transit-Oriented Development. Transit-oriented development should be encouraged at existing or proposed transit nodes, defined by the convergence of two or more modes of public transit such as BART, bus, shuttle service, light rail or electric trolley, ferry, and inter-city or commuter rail.

Policy T2.3: Promoting Neighborhood Services. Promote neighborhood-serving commercial development within one-quarter to one-half mile of established transit routes and nodes.

Policy T2.2: Guiding Transit-Oriented Development. Transit-oriented developments should be pedestrian oriented, encourage night and day times use, provide the neighborhood with needed goods and services, contain a mix of land uses, and be designed to be compatible with the character of surrounding neighborhoods.

Policy T2.5: Linking Transportation and Activities. Link transportation facilities and infrastructure improvements to recreational uses, job centers, commercial nodes, and social services (i.e., hospitals, parks, or community centers).

Policy T3.8: Screening Downtown Parking. Cars parked in downtown lots should be screened from public view through the use of ground floor store fronts, parks and landscaping, or other pedestrian-friendly, safe, and attractive means.

Policy T3.9: Providing Parking for Transportation. The City should strive to provide parking for multiple modes of transportation throughout the city where it is needed and does not unduly disrupt traffic flow.

Policy T 3.10: Balancing Parking Demands and Economic Development Activity. The City should balance the parking demands and parking charges in City-owned facilities with the need to promote economic activity in certain areas (such as Downtown and neighborhood commercial areas).

***Policy T3.11: Prioritizing Parking*.** Parking in residential areas should give priority to adjacent residents.

Policy T4.1: Incorporating Design Features for Alternative Travel. The City will require new development, rebuilding, or retrofit to incorporate design features in their projects that encourage the use of alternative modes of transportation such as transit, bicycling, and walking.

Policy T6.2: Improving Streetscapes. The City should make major efforts to improve the visual quality of streetscapes. Design of the streetscape, particularly in neighborhoods and commercial centers, should be pedestrian oriented, include lighting, directional signs, trees, benches, and other support facilities

Policy W1.3: Reducing Land Use Conflicts. Land uses and impacts generated from Port or neighborhood activities should be buffered, protecting adjacent residential areas from the impacts of seaport, airport, or other industrial uses. Appropriate siting of industrial activities, buffering (e.g., landscaping, fencing, transitional uses, etc.), truck traffic management efforts, and other mitigations should be used to minimize the impact of incompatible uses.

Policy W2.2: Buffering of Heavy Industrial Uses. Appropriate buffering measures for heavy industrial uses and transportation uses on adjacent residential neighborhoods should be developed and implemented.

Policy W2.9: Parking at Key Points. Parking should be developed at key points generally set back from the waterfront to minimize the impact of private automobile use in high-activity areas. Parking structures that incorporate ground floor uses, are available for day and night activities, and allow for shared use, are preferred.

Policy W 9.3: Defining Development Characteristics Along the Estuary. Mixed use and residential developments should be sensitive to adjacent properties and designed to enhance the existing and unique characteristics of the waterfront and immediate surroundings. Individual properties should be designed to encourage and provide sufficient public access to the waterfront and designed to avoid the feeling of "gated" or private communities.

Policy W9.6: Developing Housing Along the Estuary: Quality, Type, and Services. Housing quality, type, and services should be developed in a manner that is consistent with the policies and requirements of future detailed plans created for the Waterfront; the Housing Element of the General Plan; the City's Building Code; and/or other appropriate codes or regulations.

Policy W9.7: Supporting Existing Residential Communities Along the Estuary. The existing residential communities within and adjacent to the waterfront should be supported and enhanced.

Policy W10.6: Specifying Public Access and Linkages. Public access along the estuary should be facilitated by commercial and active recreational uses. It is important to have physical access to and between uses and activities along the waterfront, particularly along the shoreline.

Policy W12.5: Mitigating Land Use Conflicts. Since this area is and may continue to be an area that has a variety of uses including industrial, incompatibilities should be mitigated through appropriate site planning, landscaping, and buffering.

Policy W12.6: Specifying Public Access and Linkages. With a residential community, the Kennedy Tract neighborhood, adjacent to the waterfront, efforts should be made to create inviting, landscape, and signed connections and gateways to the waterfront. Support efforts in developing access to the Fruitvale Bridge fishing pier and additional open space.

Policy N 1.3: Locating Parking Facilities. Wherever feasible, and desired by merchants and residents, the City should construct strategically located, safe, and attractive parking facilities in Neighborhood Activity Centers. Use of in lieu fees, parking assessment districts, or other programs to pay for these facilities should be explored.

Policy N3.1: Facilitating Housing Construction. Facilitating the construction of housing units should be considered a high priority for the City of Oakland.

Policy N3.2: Encouraging Infill Development. In order to facilitate the construction of needed housing units, infill development that is consistent with the General Plan should take place throughout the City of Oakland.

Policy N3.3: Facilitating Development of Second Units. One accessory housing unit (also known as second or secondary unit) per property should be permitted outright in all residential zones provided that it meets the setback requirements for the primary structure, is clearly secondary to the primary structure, is compatible with other structures on the site and in the vicinity, and the property owner lives on-site. The permitting procedures and performance criteria applied to these units should facilitate construction of units, and not be prohibitive in their requirements. Accessory units should be allowed when anew primary residence is being constructed or maybe added to properties with an existing residence.

Policy N3.4: Constructing Housing on Orphan Lots. Construction of housing units on "orphan lots" in residential areas (i.e. lots that are substandard in area but which cannot be increased in size because existing development is located on all sides) should be allowed where the proposed unit meets other applicable standards.

Policy N3.5: Encouraging Housing Development. The City should actively encourage development of housing in designated mixed housing type and urban housing areas through regulatory and fiscal incentives, assistance in identifying parcels that are appropriate for new development, and other measures

Policy N3.6: Encouraging Retention of Dwellings. The City strongly encourages the moving of dwellings which might otherwise be demolished onto vacant lots, where appropriate and economically feasible, such as onto infill lots.

Policy N3.7: Allowing Rebuilding. Legal non-conforming residential structures in residential areas may be allowed to rebuild at the original density in the case of catastrophic damage or destruction. However, such rebuilding should be subject to development standards and should address other neighborhood concerns, as appropriate.

Policy N3.8: Required High-Quality Design. High-quality design standards should be required of all new residential construction. Design requirements and permitting procedures should be developed and implemented in a manner that is sensitive to the added costs of those requirements and procedures.

Policy N3.9: Orienting Residential Development. Residential developments should be encouraged to face the street and to orient their units to desirable sunlight and views, while avoiding unreasonably blocking sunlight and views for neighboring buildings, respecting the privacy needs of residents of the development and surrounding properties, providing for sufficient conveniently located on-site open space, and avoiding undue noise exposure.

Policy N3.10: Guiding the Development of Parking. Off-street parking for residential buildings should be adequate in amount and conveniently located and laid out, but its visual prominence should be minimized.

Policy N3.11: Enforcing Codes. The City should aggressively enforce the requirements of the City's Housing Code and other applicable regulations on housing of all types.

Policy N4.1: Supporting" Fair Share "Accountability. The City is generally supportive of any efforts to establish accountability for communities that do not provide their fair share of affordable housing units.

Policy N4.2: Advocating for Affordable Housing. The City encourages local non-profit organizations, affordable housing proponents, the business community, the real estate

industry, and other local policy makers to join in efforts to advocate for the provision of affordable housing in communities throughout the Bay Area region.

Policy N5.1: Environmental Justice. The City is committed to the identification of issues related to the consequences of development on racial, ethnic, and disadvantaged socio-economic groups. The City will encourage active participation of all its communities, and will make efforts to inform and involve groups concerned about environmental justice and representatives of communities most impacted by environmental hazards in the early stages of the planning and development process through notification and two-way communication.

Policy N6.1: Mixing Housing Types. The City will generally be supportive of a mix of projects that provide a variety of housing types, unit sizes, and lot sizes which are available to households with a range of incomes.

Policy N 6.2: Increased Home Ownership. Housing developments that increase home ownership opportunities for households of all incomes are desirable.

Policy N7.3: Subdividing Hill Area Properties. At least 8,000 square feet of lot area per dwelling unit should be required when land in the hill area is subdivided. Lots smaller than 8,000 square feet may be created to cluster development, and as long as this ratio is maintained for the parcel being divided.

Policy N7.4: Designing Local Streets. Local streets should be designed to create an intimate neighborhood environment and not support high speed nor large volumes of traffic. Providing on-site parking for cars and bicycles, planting and maintaining street trees, and landscaping, minimizing the width of driveway curb cuts, maintaining streets, bike routes, and sidewalks, and orienting residential buildings toward the street all contribute to the desired environment.

Policy N7.6: Developing Subdivided Parcels. Development on subdivided parcels should be allowed where site and building design minimize environmental impacts, building intensity and activity can be accommodated by available and planned infrastructure, and site and building designs are compatible with neighborhood character.

Policy N 7.7: Facilitating Lot Consolidation. Where full development of subdivided parcels cannot occur due to infrastructure constraints, the City should work with property owners to facilitate lot consolidation that will permit development.

Policy N11.2: Streamlining Permit Procedures. The City of Oakland should review, streamline, modernize, and simplify its permit review procedures to facilitate new construction.

Policy N12.1: Developing Public Service Facilities. The development of public facilities and staffing of safety-related services, such as fire stations, should be sequenced and timed to provide a balance between land use and population growth, and public services at all times.

Policy N12.2: Making Schools Available. Adequate public school capacity should be available to meet the needs of Oakland's growing community. The City and the Oakland Unified School District (OUSD) should work together to establish a continuing procedure for coordinating residential and commercial development and exploring residential and commercial development and exploring the imposition of mutually agreed upon reasonable and feasible strategies to provide for adequate school capacity. The City and

OUSD should jointly consider where feasible and appropriate, finding mechanisms such as assessment districts, Redevelopment Agency funding (AB 1290), use of surplus, City owned land, bond issues, and adjacent or shared use of land or school facilities with recreation, libraries, childcare and other public uses.

Policy N12.3: Making Day Care Available. High quality day care should be available throughout Oakland, appropriately sited and designed based on its capacity and attributes. The City should, when appropriate and feasible, require major development projects to provide on oi off-site facilities or other means to address potential child care inadequacies and encourage the inclusion of child care centers in major residential and commercial developments near transit centers, community centers, and schools.

Policy N 12.4: Undergrounding Utility Lines. Electrical, telephone, and related distribution lines should be undergrounded in commercial and residential areas, except where special local conditions such as limited visibility of the poles and wires make this unneeded. They should also be underground in appropriate institutional, industrial, and other areas, and generally along freeways, scenic routes, and heavily traveled streets. Programs should lead systematically toward the eventual undergrounding of all existing lines in such places. Where significant utility extensions are taking place in these areas, such as in new subdivisions, utilities should be installed underground from the start.

Policy N12.5: Reducing Capital Improvement Disparities. In its capital improvement and public services programs, the City should give special priority to reducing deficiencies in, and disparities between, existing residential areas.

Policy N12.6: Applying Development Standards Within Oakland's Sphere of Influence. Potential development of propertied outside Oakland's municipal boundary but inside the City's Sphere of Influence shall be governed by the" Agricultural" land use designation of Contra Costa County.

Policy N12.7: Billboard Reduction. Billboards should be reduced or eliminated in commercial and residential areas in Oakland neighborhoods through mechanisms that minimize or do not require the expenditure of City funds.

Policy D3.2: Incorporating Parking Facilities. New parking facilities for cars and bicycles should be incorporated into the design of any project in a manner that encourages and promotes safe pedestrian activity.

Policy D10.2: Locating Housing. Housing in the downtown should be encouraged in identifiable districts, within walking distance of the 19th Street, 12th Street/City Center, and Lake Merritt BART stations to encourage transit use, and in other locations where compatible with surrounding uses.

Policy D11.2: Locating Mixed-Use Development. Mixed-use development should be allowed in commercial areas, where the residential component is compatible with the desired commercial function of the area.

Policy D13.2: Providing Parking. An adequate quantity of car, bicycle, and truck parking, which has been designed to enhance the pedestrian environment, should be provided to encourage housing development and the economic vitality of commercial, office, entertainment, and mixed-use areas.

Oakland Planning Code and Zoning Ordinance

The Planning Code serves to implement General Plan policies and is found in the Oakland Municipal Code, Title 17. The Planning Code governs land uses and development standards, such as building height, bulk and setback, for specific zoning districts within Oakland.

As indicated in the Project Description, the Proposed Project includes several changes to the Planning Code that include revised densities, maximum building heights, and minimum lot standards where appropriate throughout the city in Hillside Residential RH-4, all Detached Residential (RD) zones, all Residential Mixed Housing Type (RM) Zones, and Urban Residential RU-1 and RU-2 Zones, allow for additional building heights and densities in specific locations of the City, including along existing transit corridors such as International Boulevard, Foothill Boulevard, MacArthur Boulevard, San Pablo Avenue, Telegraph Avenue, and College Avenue, and in areas near high-capacity transit, including areas near BART and Bus Rapid Transit (BRT) Stations. To increase missing middle and affordable housing in existing neighborhoods including currently single-family-dominated neighborhoods, and along corridors, transit-proximate areas, and high resource neighborhoods, new zoning standards in low-density residential zones (Detached Unit Residential [RD] and Mixed Housing Type Residential [RM]) would reduce the minimum lot size, remove constraints to lot splitting, allow a variety of building types (attached, detached, bungalow courts) and housing types (flats, duplexes, triplexes, fourplexes, townhomes/ rowhouses, and ADUs), and develop objective design standards. The Affordable Housing Overlay Zone would allow for a bonus height for eligible affordable housing projects as well as relaxation of other listed development standards and an elimination of any maximum residential density standards.

Specific Plans

The City uses specific plans to coordinate development and infrastructure improvements on large sites or series of parcels. Specific plans must be consistent with the General Plan and are typically used to establish development plans and standards to achieve the design and development objectives for a particular area. Existing and planned development under the following specific plans is included in buildout projections of the Proposed Project.

Downtown Oakland Specific Plan (In Progress)

The Downtown Oakland Specific Plan encompasses 930 acres of land bounded by the Oakland Estuary to the south, Lake Merritt to the east, I-980 to the west, and 27th Street/Grand Avenue to the north. This plan seeks to create policy guidance as Downtown Oakland continues to redevelop, focusing on economic opportunity, housing needs and homelessness, transportation, cultural arts, public space, and social equity.

Coliseum Area Specific Plan (2015)

The Coliseum Area Specific Plan (CASP) seeks to transform 800 acres of underutilized land around the Oakland-Alameda County Coliseum (centered around I-880, north of Hegenberger Road) into a state-of-the-art district with a sports, entertainment, and science and technology focus. In tandem with this goal, the plan seeks to expand employment opportunities, create a pedestrian-friendly environment, and provide housing. At the time this plan was prepared, the area was home to three professional sports teams – the Oakland Raiders, Golden State Warriors,

and Oakland A's. Both the Warriors and Raiders have since departed to locations outside Oakland, and the future plans of the Oakland A's are currently in flux.

West Oakland Specific Plan (2014)

The West Oakland Specific Plan (WOSP) is a comprehensive approach to developing vacant or underutilized commercial and industrial parcels in West Oakland, a 1,900-acre area bounded by I-580 to the north, I-980 to the east, and I-880 wrapping around the south and west. It additionally identifies necessary transportation improvements and seeks to improve the quality of life for residents by reducing blight and creating 22,000 living-wage jobs through the development of commercial, office, and industrial space. It also supports transit-oriented, mixed-use development around the West Oakland BART station to supply 1,325-2,300 new housing units.

Lake Merritt Station Area Specific Plan (2014)

The Lake Merritt Station Area Specific Plan encompasses generally a half-mile radius around the Lake Merritt BART Station. This includes Chinatown, Laney College, the channel connecting Lake Merritt to the Oakland Estuary, and Oakland and Alameda County civic buildings. This plan seeks to: reduce auto use and increase multimodal transportation use (transit, biking, walking); increase housing near the BART station; streamline the real estate development process; increase jobs, services, and retail; support existing businesses; and increase recreational space.

Broadway Valdez District Specific Plan (2014)

The Broadway Valdez District Specific Plan includes approximately 95 acres, encompassing the Broadway corridor between West Grand Avenue and Interstate 580, including stretches of 27th and Valdez streets, where many of the City's auto dealers were formerly located. The goal of this plan is to transform this area, located directly north of Downtown and near two BART stations, into a pedestrian-friendly retail and employment destination for the region. Additionally, the plan seeks to promote a diverse array of housing, medical services, and dining options.

Central Estuary Area Plan (2013)

The Central Estuary Area Plan includes 416 acres and is composed of the estuary shoreline and surrounding neighborhoods, roughly from 19th Avenue south to 54th Avenue between the estuary (west) and I-880 (east). This plan was developed in response to increased development interest. The Plan addresses conflicting land use priorities and infrastructure deficiencies with the goal of developing a vibrant destination that supports a mix of uses. It recommends several transportation improvements and street redesigns for safer, pedestrian-oriented streets, and many objectives focus on public space and public access to the shoreline.

International Boulevard Transit-Oriented Development (TOD) Plan (2011)

The International Boulevard TOD Plan is a transportation-focused plan that seeks to revitalize the once-bustling (during the early 20th century) International Boulevard corridor from 14th Avenue to the Oakland/San Leandro boundary. The impetus for the plan was the receipt of funding for a Bus Rapid Transit (BRT) system along the corridor, which opened in 2020. The Plan includes assessing and realizing TOD projects for the International Boulevard corridor in tandem with citywide commercial and residential Planning Code updates allowing for higher density development near transit hubs.

Let's Bike Oakland: 2019 Oakland Bike Plan

Let's Bike Oakland ('Bike Plan') is the City's bicycle master plan. The first bicycle plan was adopted in 1999, revised in December 2007, reaffirmed in 2012, and comprehensively updated in 2019. The Bike Plan updates the 2007 Plan's vision, goals, and policies with a focus on equity. The Bike Plan includes an action plan with performance measures for increasing the number of people who bike, decreasing bicyclist crashes, and improving the quality of bikeways to serve all ages and abilities. The Plan makes several recommendations for programs that expand work with existing organizations, support the local bicycling economy, and providing bike repair, maintenance, and education resources. Infrastructure improvements include 219 miles of proposed upgraded and new bikeways, safety improvements, and other amenities.

Oakland Walks!: Oakland Pedestrian Master Plan (2017)

In 2017, the City of Oakland completed an update of the Pedestrian Plan that reflects Oakland's changing conditions, needs and priorities. The Pedestrian Plan identified the "High Injury Network," a set of 34 high-injury corridors and 37 high-injury intersections which make up just 2 percent of Oakland's streets but where 36 percent of pedestrian collisions happen. This network of high-injury corridors and intersections was identified by analyzing seven years pedestrian crashes (2008-2014) as well as the physical characteristics of the roadway and prioritized based on equity, safety, and walkability.

4.10.2.3 City of Oakland Standard Conditions of Approval

While there are no SCAs that specifically apply to land use conflicts, conflicts may occur as a result of exposure to air quality, noise, and hazardous materials from adjacent land uses. The following SCAs would serve to reduce land use incompatibilities:

- **SCA 23: Exposure to Air Pollution (Toxic Air Contaminants).** See Section 4.2, Air Quality.
- **SCA 45: Hazardous Materials Business Plan.** See Section 4.8, Hazards and Hazardous Materials.
- **SCA 67: Exposure to Community Noise.** See Section 4.11, Noise.
- **SCA 68: Operational Noise.** See Section 4.11, Noise.

4.10.3 Environmental Analysis

4.10.3.1 Significance Criteria

The City of Oakland has established thresholds of significance for CEQA impacts, which incorporate those in Appendix G of the *CEQA Guidelines* (City of Oakland, 2020). The Proposed Project would have a significant adverse impact related to land use and planning if it would:

1. Physically divide an established community;
2. Result in a fundamental conflict between adjacent or nearby land uses;

3. Fundamentally conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment; or

4. Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan.

The changes to Appendix G of the *CEQA Guidelines* effective in December 2018 were intended to reflect recent changes to the CEQA statutes and court decisions. Many of these recent changes and decisions are already reflected in the City's adopted significance thresholds, which have been used to determine the significance of potential impacts. In the case of Land Use, the changes to Appendix G modified the third criterion above and moved the fourth criterion to the section about biological resources. The third criterion now reads as follows in Appendix G: "Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?" The analysis in this EIR is consistent with these changes.

4.10.3.2 Approach to Analysis / Methodology

This is a program-level EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Impacts relative to land use and planning are evaluated using the criteria listed above and based on information included in the City of Oakland General Plan, Map Atlas, and the documents listed in Section 4.10.6, *References – Land Use and Planning*.

The Proposed Project includes several components relevant to Land Use and Planning analysis. As noted in the Project Description, the Proposed Project includes amendments to the Planning Code and Zoning Map, an Affordable Housing Overlay, a Housing Sites Overlay as well as LUTE General Plan designations (shown in Project Description Figures 3-12 through 3-15). The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the Buildout Program. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future development under the Proposed Project, this EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas and analyzes the impacts of housing development through the projection period ending in 2030.

The methodology for analysis of land use and planning impacts includes an assessment of operational impacts. Impacts related to aesthetics and height changes are further described in Section 4.1, *Aesthetics, Shadow, and Wind*. Impacts related to exposure of sensitive populations to pollutants is described in Section 4.2, *Air Quality*.

4.10.3.3 Proposed 2045 General Plan Policies, Land Use and Zoning

Environmental Justice Element

Policies

EJ-1.1: Toxic Air Contaminants. Reduce the public's exposure to toxic air contaminants through appropriate land use and transportation strategies, particularly in Environmental Justice Communities and other areas most burdened by air pollution, as identified in Figure EJ-12.

EJ-1.3: Industrial Uses Near Sensitive Land Uses. Ensure that heavy industrial uses are adequately buffered from residential areas, schools and other sensitive land uses. In new developments, require adequate mitigation of air contaminant exposure and vegetative barriers near large stationary and mobile sources of air pollution.

EJ-1.4: Performance Standards. Develop zoning standards applicable to new industrial and commercial developments in order to minimize or avoid the potential for adverse effects related to air quality, noise, or safety on adjacent existing residential uses. This includes expansion of the S-19 Health and Safety Protection Combining Zone to include air quality effects.

EJ-1.15: Sensitive Uses. Coordinate with BAAQMD and community partners in evaluating human exposure to toxic air contaminants, particularly in Environmental Justice Communities, and impose conditions as appropriate on projects to protect public health and safety beyond those in the 2020 standard conditions of approval.

EJ-A.1: Amend the City's Zoning code to include the following changes:

- Allow greater residential density in less-polluted areas, including existing single-family residential neighborhoods.
- Condition the permitting of heavy industrial businesses within five hundred (500) feet of a zone that permits residential activities.
- Establish special permit criteria for truck-intensive industrial activities located within five hundred (500) feet of any zone that permits residential activities.
- Establish special performance standards and standard conditions of approval for Truck-Intensive Industrial Activities located within five hundred (500) feet of any zone that permits residential activities.
- Amend the permit procedures for nonconforming Truck-Intensive Industrial Activities.
- Condition the permitting of commercial kitchen operations designed for online ordering and food delivery.
- Modify the S-19 Health and Safety Protection Combining Zone to prohibit use of diesel generators as the primary source of power within five hundred (500) feet from any Residential, Open Space, or Institutional Zone boundary.

EJ-A.3: Work with BAAQMD and other partners in the region to explore creation of a grant program for installation and maintenance of air filtration devices/systems in existing buildings. Schools, nursing homes, and other sensitive uses within EJ

Communities and areas most affected by air quality issues, shown in Figure EJ-12 should be prioritized.

EJ-A.6: Prioritize and implement vegetative buffer projects, including those between industrial land and sensitive land uses, as identified in specific plans and community plans, including EONI and WOCAP.

EJ-A.7: As part of the LUTE update in Phase 2, evaluate residential/industrial conflicts, especially in areas such as West and East Oakland, and evaluate measures, including limiting additional residential development in high pollution areas and ensuring adequate buffering (as defined by BAAQMD standards) between industrial and residential land uses through land use designations.

EJ-A.8: As part of the LUTE Update in Phase 2, explore modifications to truck routes and truck management in partnership with the Port of Oakland and WOIEP.

EJ-A.9: Designate an adequate system of roads connecting port terminals, warehouses, freeways and regional arterials, and other important truck destinations that minimizes impacts to sensitive uses This system should rely upon arterial streets away from residential neighborhoods.

EJ-A.10: Adopt requirements that new commercial and employment uses that generate truck traffic are located along existing truck routes to the extent feasible and work with project proponents to develop preferred truck routing that avoids sensitive land uses, such as schools, hospitals, elder and childcare facilities, and residences wherever feasible.

EJ-6.1: Public Facilities Distribution. Ensure the equitable distribution of beneficial public, civic, and cultural facilities, and places for public gatherings, prioritizing new facilities and creative spaces in traditionally underserved areas.

EJ-A.24: As part of the update of the LUTE and OSCAR Elements, and the creation of a new Infrastructure and Facilities Element in Phase II, include policies that address equitable distribution and maintenance of public facilities in EJ Communities.

EJ-A.25: As part of the LUTE update in Phase II, explore land use changes that are supportive of cultural organization operation in partnership with community groups, small business associations, and the Cultural Affairs office.

EJ-7.1: Complete Neighborhoods. Promote "complete neighborhoods"— where residents have safe and convenient access to goods and services on a daily or regular basis—that address unique neighborhood needs, and support physical activity, including walking, bicycling, active transportation, recreation, and active play.

EJ-7.2: Accessible Neighborhoods. Encourage active modes of transportation and transit accessibility by supporting neighborhoods that provide access to a range of daily goods, services, and recreational resources within comfortable walking or biking distance. Encourage transit providers to prioritize, establish, and maintain routes to jobs, shopping, schools, parks and healthcare facilities that are convenient to EJ Communities.

EJ-7.9: Enhancing Access to Parks. Pursue strategies that increase community access to parks and recreational facilities, including expanding joint use agreements with schools and educational institutions; removing of physical barriers to access (ex: fences); and

providing a choice of legible routes to and from park areas through the installation of new or improved multi-use shared paths, wayfinding, and signage.

EJ-A.26: As part of the LUTE update in Phase II, include policies that promote a fine-grained neighborhood land use pattern that encourages walking, biking, and getting around without a car.

EJ-A.27: As part of the LUTE update in Phase II, include policies that prioritize bicyclist, pedestrian, and roadway improvements that prioritize safety and comfort of non-auto users. Target these improvements in EJ Communities and areas identified in Figure EJ-21.

Safety Element Update

Policies

SAF-5.1: Risks from Hazardous Materials Facilities. Review proposed facilities that would produce or store hazardous materials, gas, natural gas, or other fuels to identify, and require feasible mitigation for, any significant risks. The review shall consider, at a minimum, the following:

- presence of seismic or geologic hazards;
- presence of other hazardous materials;
- proximity to residential development and areas in which substantial concentrations of people exist, particularly Environmental Justice communities already overburdened by pollution, including toxic releases from facilities, cleanup sites, groundwater threats/threats from sea level rise, and other sources; and
- nature and level of risk and hazard associated with the proposed project.

SAF-5.5: Study Options to Provide Financing for the Remediation of Environmentally Contaminated Sites, with Priority for Affordable Projects. As grant and loan funding sources are secured, support property owners through technical assistance and financing of characterization and/or remediation of environmentally contaminated sites.

SAF-6.1: ALUCP Updates. Periodically review and coordinate with the Oakland Airport Land Use Commission on updates and modifications to ALUCPs conducted for airport facilities within Alameda County.

SAF-6.2: Land Use Compatibility. Require land uses surrounding the Oakland International Airport to be compatible with the operation of the airport and restrict development of potentially hazardous obstructions or other hazards to flight.

SAF-A.26: Continue to apply for and manage EPA or other federal grants for the clean up of Brownfield sites.

SAF-A.28: Incorporate land use compatibility considerations in LUTE as part of Phase 2.

Proposed General Plan and Planning Code Amendments

Proposed General Plan Amendments

The Proposed Project contains several land use designation changes as shown in Figures 3-12 through 3-15 in the Project Description. The land use designation revisions were designed to ensure future development is compatible with surrounding existing, entitled, and future land uses and proposed zoning changes. Land use changes can largely be grouped into the categories below:

Compatibility with Upzoning

Many land use designation changes are proposed to encourage housing development by supporting upzoning (described below in Proposed Zoning) and protecting land use compatibility by correcting inconsistencies with existing and entitled land uses. Along the Macarthur Boulevard corridor near 73rd Street, Detached Unit Residential parcels are changed to Mixed Housing Type Residential and Urban Residential to be compatible with proposed upzoning to allow for more housing units and encourage more dense housing developments. This rationale also applies to a Bancroft Avenue change from Detached Unit Residential to Mixed Housing Type Residential. Proposed land use designation changes on several parcels around High Street between Foothill Boulevard and I-880, would increase permitted residential density and reflect existing commercial uses, in addition to parcels near the Emeryville border in West Oakland.

Buffering

Several proposed land use designation changes are intended to create a buffer between industrial and residential areas to protect existing residential uses and encourage residential development in surrounding mixed use zones. These changes would occur in several areas. In the area south of International Boulevard and north of I-880, changes from General Industrial and Business Mix to Community Commercial and Housing Business Mix intend to guide future development away from heavier industry that may be in conflict with residential uses and surrounding land use designations permitting residential development. This change would also occur on parcels surrounding the train tracks west of Fruitvale Avenue, where the Business Mix is revised to the Community Commercial designation to prohibit currently permitted higher-intensity commercial/ industrial uses and reduce incompatibilities with higher density residential uses allowed as part of the other adjacent proposed Community Commercial designations. Along Hegenberger Road, on either side of I-880, several parcels would change from Business Mix to Regional Commercial, thereby permitting more uses intended to create a regional draw (including commercial, office, entertainment, arts, recreation, sports and visitor serving activities, residential mixed use development, and other uses) and limiting higher impact industrial uses on these parcels. This change is intended to provide a more compatible land use type between industrial land uses west of Hegenberger and residential uses to the east of Hegenberger, by requiring new types of uses that have less potential for nuisances or impacts on health.

Land Use Compatibility

Near MacArthur BART along West MacArthur Boulevard, two parcels (currently service stations) would be changed from Mixed Housing Type Residential to Neighborhood Commercial Mixed Use to reflect the existing commercial land uses and the existing adjacent West Macarthur commercial corridor designation as CN-2. Finally, along College Avenue, changes from Mixed

Housing Type Residential to Neighborhood Commercial Mixed Use would reflect existing land use conditions. Along San Pablo Avenue, west of I-980, an Urban Residential portion would be changed to Community Commercial to allow more ground floor commercial development and create a continuous commercial corridor.

Other Changes

Proposed land use designation changes in the area northeast of State Highway 13 and I-580 southeast of its intersection with State Highway 13 would update the General Plan land use map to be consistent with the entitled and currently under construction Oak Knoll Residential Project. The change would occur on an approximately 4.7-acre parcel fronting Barcelona Street currently designated "Hillside Residential" with a portion designated "Resource Conservation." To be consistent with the entitled development, the Proposed Project would revise the land use designation on this parcel to include Hillside Residential and Mixed Housing Type Residential (see Figure 3-15). These proposed changes align with action taken by the City Council Resolution 87031 to issue a Request for Proposals for affordable housing development on this site (known as the "Barcelona" parcel).

Proposed Zoning Amendments

Proposed zoning changes include the following:

Affordable Housing Overlay

The AHO Zone is intended to create and preserve affordable housing restricted for extremely low, very low, low, and/or moderate-income households (as defined in California Health and Safety Code Sections 50093, 50105, and 50106). Generally, the AHO Zone would allow for a bonus height for eligible affordable housing projects (AHO Zone projects), as well as relaxation of other listed development standards and an elimination of any maximum residential density standards.

- The zoning districts and buffer areas included in the AHO Zone are shown in Figure 3-14 in the Project Description. Generally, they include existing Hillside Residential-4 (RH-4), Detached Unit Residential (RD), Mixed Housing Type Residential (RM), Urban Residential (RU), Housing and Business Mix Commercial (HBX), Central Estuary District (D-CE), Neighborhood Center Commercial (CN), Community Commercial (CC), Central Business District (CBD), Regional Commercial (CR), Transit-Oriented Development Commercial (S-15), Broadway Valdez District (D-BV), Lake Merritt District (D-LM), and Coliseum Area District (D-CO) zones, in addition to consideration of areas with access to the Highway 13 and I-580 corridor (portion of I-580 south of the merge with Hwy 13) that are not located in the S-9 Fire Safety Protection Combining Zone, specifically the areas within 1,000 feet in either direction from Highway 13 and I-580 corridor that are outside the S-9 Fire Safety Protection Combining Zone. By-right approvals would be allowed for 100 percent affordable housing projects that fall within the AHO Zone. The following property development standards would apply to AHO Zone projects:
  - Bonus height (two additional stories) or at least a height of 65 feet, whichever is higher
  - Unlimited density that fits within the allowed building envelope of new or existing structures
  - Reduced open space requirements
  - No parking minimums

The following additional property development standards would apply to AHO Zone projects in certain residential zones (RH-4, RD, RM, RU) and HBX (Housing and Business Mix Commercial Zone) zones:

- Allow additional lot coverage (70 percent), and
- Allow reduced rear setback (10 feet).

Parcels with designated City, State, or federal Historic Landmarks and parcels within the S-9 Fire Safety Protection Zone would be excluded from the AHO Zone and new regulations would not apply (see Figure 4.4-1 in Section 4.4, *Cultural Resources* and Figure 3-14 in Chapter 3, *Project Description*). In addition, certain Historic Districts would be exempt from the AHO Zone height increases.

Specific Area Changes

As shown on Figure 3-13 in the Project Description, the Proposed Project includes zoning changes throughout the City. These changes fall into three general categories:

- **Upzoning.** A majority of zoning changes represent an upzoning, when the zoning code that governs a parcel of land is changed to allow for greater building height or density. For example, in some areas Mixed Housing Type Residential Zone 1 (RM-1) would be upzoned to Mixed Housing Type Residential Zone 2 (RM-2), which would permit duplexes and smaller multifamily dwellings by right. RM-1 will also be changed to allow duplexes by right. All RD and RM Zones will allow duplexes by right and allow up to 4 units by right on lots that are 4,000 square feet or more. Mixed Housing Type Residential zones 3 (RM-3) and 4 (RM-4) would allow for even higher densities; RM-4 permits residential densities that exceed 30 dwelling units per acre (du/ac) on lots greater than 4,000 square feet. These changes are intended to increase the allowable density in specific areas consistent with the land use designation changes described above, or in other existing residential neighborhoods where the land use designation remains the same.
- **Buffering.** Several zoning changes are intended to buffer existing industrial uses and residential uses and reduce potential land use conflicts through zone changes that have more restrictions on certain heavier industrial or commercial uses. These zoning changes would occur in the area bounded by International Boulevard in central East Oakland, and along Hegenberger Road on either side of I-880, consistent with the proposed land use designation changes described above.
- **Boundary changes.** There are several parcels in the City where the existing zoning boundary splits lots. Several zoning changes "clean up" these changes so that zoning follows property lines.

Height Increases

The Proposed Project would increase the height limits of key corridors in the City. As shown in Figure 4.1-1 in the *Aesthetics, Shadow, and Wind* section, corridor heights permitted as part of proposed zoning range from an increase of 5 feet, to an increase of 90 feet in some parts of West Oakland and increase of 140 feet in Rockridge. This could result in buildings up to 250 feet tall in West Oakland, and buildings up to 175 feet tall in Rockridge near the BART station.

Additionally, the Affordable Housing Overlay Zone would allow for a bonus height for eligible affordable housing projects (AHO Zone projects), as well as relaxation of other listed development standards and an elimination of any maximum residential density standards. Bonus height increases would permit two additional stories or at least a height of 65 feet, depending on the zone or lot size. The AHO Zone is applied on top of existing Hillside Residential-4 (RH-4), Detached Unit Residential (RD), Mixed Housing Type Residential (RM), Urban Residential (RU), Housing and Business Mix Commercial (HBX), Central Estuary District (D-CE), Neighborhood Center Commercial (CN), Community Commercial (CC), Central Business District (CBD), Regional Commercial (CR), Transit-Oriented Development Commercial (S-15), Broadway Valdez District (D-BV), Lake Merritt District (D-LM), and Coliseum Area District (D-CO) zones.

The only proposed height changes in the area northeast of State Highway 13 and Interstate 580 southeast of its intersection with State Highway 13 is a 20-foot permitted height increase in the existing commercially zoned shopping center (from 45 feet to 65 feet) on a little over 60 parcels fronting Highway 13 (see Figure 4.1-1). Please see Section 4.1, *Aesthetics, Shadow, and Wind*, for more information on height increases in the Planning Area.

Other Citywide Changes

Several proposed zoning changes would encourage additional housing development citywide. Generally, they fall into three categories, described below.

- **Removing constraints to housing.** This includes allowing residential development in certain commercial zones under certain conditions, and eliminating certain conditionally permitted densities so that all housing is by-right.
- **Increasing density allowances.** This includes revising density standards to permit more housing units per lot in Mixed Housing Type (22 to 35 units/gross acre); Detached Unit Residential (22 to 44 units/gross acre); Urban Residential, Neighborhood Center Commercial, Community Commercial, Regional Commercial, Institutional (all 125 to 165 units/gross acre); and Housing and Business Mix land use classification types (30 to 47 units/gross acre).

  All RD, RM and RU Residential Zones will allow 4 or more units on lots that are 4,000 sf or more and 2 units on any lot smaller than 4,000 square feet. The Zoning changes propose to consolidate RD-1 and RD-2 Zones into one zone called RD Zone. Zoning changes would also allow two primary units in the Hillside Residential Zone 4 (RH-4, where only one primary unit is currently allowed), as long as the project is not located within an area restricted by emergency access in the VHFHSZ.)
- **Reducing potential conflicts with housing.** Proposed zoning changes would reduce the allowed intensity of commercial and industrial activities permitted in the Housing and Business Mix (HBX) Commercial Zones, particularly HBX-1, to minimize impacts on the residential uses existing in and nearby these zones.

Changes Over Existing Conditions

Taken together, these land use designation and zoning changes are anticipated to add the most housing units over existing conditions in the Rockridge area; near Rockridge BART, in portions of West Oakland, including around the BART Station; in the downtown area; near Fruitvale BART; in the area east of 66th Avenue near the Coliseum and Coliseum BART; in the Elmhurst

Park area near 98th Ave and San Leandro Street; in the Eastmont Mall area (at the corner of 73rd Ave and Bancroft Ave); and the area along Keller where the Oak Knoll project is being constructed. The Proposed Project's housing unit percentage increase over existing number of units is shown in Figure 3-16 in the Project Description.

Zoning Changes related to Industrial Land Use

The Proposed Project Planning Code change would require truck-intensive industrial activities located within 500 feet of any residential zone boundary in the M, CIX, IG, IO, D-CE-5, D-CE-6, C-CO-5, and D-CO-6 Zones to obtain a special conditional use permit. Proposal shall conform to the general criteria set forth in the Conditional Use Permit procedure (see Section 17.134.050) and to all of the following additional use permit criteria:

1) That truck traffic, truck idling, truck loading, and manufacturing activities associated with the proposal will not adversely affect sensitive receptor locations within five hundred (500) feet of the site in terms of air quality, noise, parking, and vibrations. Means of demonstrating compliance with these criteria include, but are not necessarily limited to, the following measures:

    a. Locating truck loading, truck idling, truck ingress and egress, vents, smokestacks and other sources of air contaminants so as to minimize impacts on sensitive receptor locations;

    b. Sizing truck loading areas to be sufficiently large to allow easy truck entrance, egress, maneuvering;

    c. Providing sufficient onsite parking and maneuvering areas for trucks, cars, and heavy equipment;

    d. Meeting local, regional, and state requirements regarding air quality and performance standards;

    e. Incorporating measures to assure trucks follow designated truck routes;

    f. Installing landscaping, vegetative buffers and/or walls to reduce diesel air contamination, contamination due to manufacturing operations, or any other sources of air contamination; and

    g. Limiting adverse effects regarding dust, including dust resulting from tire and brake wear.

In addition, these truck-intensive uses within 500 feet of a zone that allows residential activities are subject to additional special performance standards to avoid impacts to sensitive receptors and standard conditions of approval related to buffering and landscaping, including a sound wall and/or vegetative buffer to block diesel and other emissions from sensitive receptor locations.

4.10.3.4 Topics Considered and Determined to Have No Impact

The Plan Area is located within the Pacific Gas and Electric Company (PG&E) Bay Area Operations and Maintenance Habitat Conservation Plan (HCP) boundary (82 Federal Register 15063). Projects within the City of Oakland are not a PG&E-covered activity under the HCP and would not conflict with the HCP's conservation strategy or provisions. The Plan Area is not covered

within any other HCPs; therefore, the Proposed Project would not conflict with provisions adopted by an HCP, NCCP, or other approved local, regional, or State habitat conservation plan. Thus, there would be no impact.

4.10.4 Impacts of the Proposed Project

Impact LUP-1: Adoption of the Proposed Project would not result in the physical division of an established community. (Criterion 1) (*Less than Significant*)

For the purpose of this impact analysis, physically dividing an established community means the creation of barriers that prevent or hinder the existing flow of people or goods through an established community, or the placement of a development in such a manner that it physically separates one portion of an established community from the remainder of that community. The construction of a new major highway through an existing residential neighborhood would constitute a typical example of a physical division of an established community.

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the Proposed Project *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. No new roadways, parks, or other features that could divide any existing communities are included in the Proposed Project.

The Plan Area encompasses multiple neighborhoods in Oakland, and some zoning changes, such as the Affordable Housing Overlay, apply to most of the City. Land use and zoning changes mirror, densify, or create more mixed-use opportunities within the existing neighborhood land use pattern. Higher densities, especially in mixed-use designations and along key transit corridors, increase capacity for residential development near community-serving commercial, retail, and office uses as well as schools, parks, and recreational facilities. Proposed improvements to the bicycle, pedestrian, and road networks already planned as part of the City's existing specific plans and Bicycle and Pedestrian master plans will make it easier for residents to travel throughout the community. Additionally, future development under the Proposed Project would occur on sites already zoned for residential use and would not disrupt the existing land use connectivity and circulation routes within the area.

Existing building heights in the City vary by neighborhood, with the tallest buildings located in downtown, around the Lake Merritt Station Area, and the Broadway Valdez area of Oakland. Existing zoning in the Plan Area allows major corridor heights ranging from 45 to 65 feet, with most other parts of the city, including residential neighborhoods, set at 35 feet. The tallest permitted heights are located in the downtown, around the 14th and 18th Street BART Stations, followed by the Lake Merritt BART Station. As described in Section 4.1, *Aesthetics, Shadow, and Wind*, heights permitted as part of the Proposed Project range from a permitted height increase along some corridors of 5 feet, to an increase of 90 feet in some parts of West Oakland and increase of 140 feet in Rockridge. As shown in Figure 4.1-1, the largest changes from existing to proposed permitted height would occur near the West Oakland BART (with buildings up to 250 feet tall allowed) and near Rockridge BART (with buildings up to 175 feet tall allowed). These BART Stations have raised tracks or are adjacent to freeways that already

visually and physically bifurcate neighborhoods. Most other height changes would be consistent with existing development in those areas and would not create a new physical barrier between those existing communities. While there are a few other areas where allowable heights increase (such as near Broadway and 51st Street, and International Boulevard and 104th Avenue, these increases would largely occur within commercial corridors or shopping centers that already follow the existing street grid pattern. For 100 percent affordable projects, the AHO Zone would increase allowable heights by two stories or to 65 feet in the zones described above; however, these proposed building heights would result in buildings relatively compatible with existing buildings. In summary, although the Proposed Project would allow for taller buildings, the adoption and development under the Proposed Project would not result in a physical or visual barrier that divides the community.

In addition, future development under the Proposed Project would need to comply with the Oakland General Plan and the Planning Code and Zoning Ordinance. The General Plan contains substantial policy requirements pertaining to community development patterns that must be implemented throughout all of the City's neighborhoods. Existing policies T1.2, T2.2, T4.1, and T6.2 direct development to be oriented toward transit and pedestrian- or bicycle-oriented connectivity within neighborhoods. Policy W10.6 directs public access and connectivity to the shoreline, and policies D10.2 and D11.2 integrate housing into commercial and mixed-use areas, including the downtown. Adoption of the Proposed Project would not replace the General Plan's existing policy directions on land uses and thus these policies would apply to future development under the Proposed Project. Conformance to the General Plan, including LUTE policies listed above, would discourage development of land uses that would result in a division within an established community and would reduce potential impacts to a less-than-significant level.

Proposed policies in the Environmental Justice Element also seek to preserve existing neighborhoods by supporting a land use pattern of "complete neighborhoods" where residents have accessible connections to safe and convenient access to goods, services, and amenities nearby (EJ-7.1, EJ-7.2, and EJ-7.10; EJ-A.26. and EJ-A.27).

Mitigation: None required.

Summary

With adherence to the General Plan and Planning Code, a, future development under the Proposed Project would not physically divide an established community, and the impact would be less than significant.

Impact LUP-2: Adoption of the Proposed Project would not cause a significant environmental impact due to a fundamental conflict between adjacent or nearby land uses. (Criterion 2) (*Less Than Significant*)

While fundamental land use conflicts are no longer included in the *CEQA Guidelines* Appendix G checklist, this topic remains an adopted CEQA significance threshold for the City of Oakland. Thus, this discussion evaluates the potential for fundamental conflicts by assessing potential

physical impacts of the Proposed Project. This discussion also evaluates potential impacts of the environment on the Proposed Project (e.g., exposure of new residents to air pollutants), even though CEQA does not generally require an agency to consider the effects of existing environmental conditions on a proposed project's future users or residents, except to the extent the proposed project will exacerbate those conditions.

For the purpose of this analysis, a fundamental conflict with adjacent or nearby land uses means that the character of activities associated with one land use is in fundamental conflict with activities associated with the adjacent land use or the characteristics of one land use disrupts or degrades adjacent land uses to such a degree that the functional use of the adjacent land for its existing or planned purpose is imperiled. Land use compatibility is an important component of the well-being of communities, especially in urban areas where densities are high and a mixture of differing land uses can generate conflicts.

Residential and heavy industrial uses are particularly difficult to harmonize. Development under the Proposed Project would occur in areas where the land use and current zoning allow residential uses. However, there are some areas in West and East Oakland where industrial zones abut residential zones where new housing could be developed. People living close to industrial uses experience higher levels of noise, pollution and truck traffic and less visually attractive conditions. Industrial uses can experience greater community regulatory controls over their activities and, despite a facility's location in an industrial zone, complaints may force a facility to change or permanently restrict its operations.

Through various zoning changes described above in *Proposed Land Use and Zoning*, the Proposed Project would increase residential capacity in some areas that contain or are surrounded by industrial uses. The Proposed Project also includes some land use designation and zoning changes (e.g., from Commercial Industrial Mix-1(CIX) to Housing and Business Mix (HBX)) in West Oakland (near I-880) and Central Oakland (near 23rd Avenue and International Boulevard), which would allow housing in areas where it was not permitted prior. The HBX zone implements the Housing and Business Mix land use classification, with an intent to (1) guide a transition from heavy industry to low impact light industrial and other businesses that can co-exist compatibly with residential development, and (2) increase opportunities for housing and neighborhood-friendly business development. The classification also specifies that development of site-specific buffers are essential as are specific conditions under which business and housing will coexist; HBX zoning includes development of a landscaping and buffering plan for any new development. This represents an intentional direction to phase out heavy industrial uses that are not compatible with residential development in this area and buffer any new development, consistent with the Proposed Project's Environmental Justice goals and actions. Additionally, as directed in the WOSP and CASP, several industrial use areas near residential zones where housing development is anticipated are already envisioned to transform into more compatible land uses and would not represent a fundamental conflict. However, some existing industrial uses located immediately adjacent to new residential uses would remain operational during the Proposed Project's development timeline to 2030. Beyond these specific plan areas, some change areas in East Oakland border existing light and heavy industrial activities, and compatibility impacts may remain.

The Proposed Project would increase residential capacity near high volume roadways, including Highway 580 and 880, and other sources of diesel exhaust particulates and other toxic air contaminants (TACs) which may pose a significant risk to human health. Housing developed near the freeways, high volume roadways, BART and the railroads would also be exposed to noise levels that may exceed City and State standards for noise compatibility. Additionally, certain proposed residential land uses would be located on properties with known previous contamination from prior industrial uses or other sources. Each of these existing environmental hazards could present a land use conflict with new residential development on adjacent sites (see Sections 4.2, *Air Quality*; and 4.8, *Hazards and Hazardous Materials*, for more information about these potential impacts). While there are no explicit existing SCAs that specifically apply to land use conflicts, there are SCAs for new development that seek to reduce the impact of exposure to air quality, noise, and hazardous materials from adjacent land uses. Such SCAs include requiring project applicants of certain projects (including sensitive land uses within 1000 feet of pollutant sources) to incorporate measures in project construction and operation design to reduce risk to TAC exposure, ensuring noise levels from land use activity comply with performance standards, and the regulation of transporting and disposing of hazardous materials.

The General Plan policies and actions, including those in the existing General Plan, the 2023-2031 Housing Element, the proposed Environmental Justice Element and the proposed Safety Element as well as select SCAs, establish a citywide vision and consistent direction for future development, including discouragement of conflict between adjacent or nearby land uses. The General Plan contains substantial policy requirements pertaining to compatibility of land uses that must be implemented throughout all of the City's neighborhoods. Conformance to the LUTE policies I/C 4.1, I/C 4.1, W1.3, and W2.2 listed above would discourage land use incompatibilities or land uses that would result in conflicts between residential and industrial uses.

Housing Element policies and associated actions would also help to reduce potential land use incompatibilities, including increasing funding for improved indoor air quality (Action 2.1.6); studying options to provide financing for the remediation of environmentally contaminated sites, with priority for affordable projects (Action 5.2.3), and encouraging new affordable housing in higher resource neighborhoods (Action 5.2.8) that have less existing pollution exposure.

The Environmental Justice Element contains several policies and actions that focus on reducing conflicts between residential and industrial land uses, particularly in EJ Communities. Proposed policies and actions focus on the reduction of potential conflicts and impacts between residential and heavy industrial land uses such as buffering sensitive uses (EJ-1.1, EJ-1.3, EJ- A.3, EJ-A.5, EJ-A.6) and changing zoning (EJ-1.4, EJ-A.1) to regulate permitting of heavy industrial businesses and truck-intensive activities (EJ-A.7, EJ-A.8, EJ-A.10). To implement Action 1.A, the Proposed Project also includes Planning Code changes that require truck-intensive industrial activities within 500 feet of a zone that allows residential uses to obtain a conditional use permit, comply with specific performance standards, and submit to conditions of approval to buffer projects and reduce potential impacts on sensitive uses.

The Safety Element includes a policy to reduce the potential impacts of hazardous materials facilities in areas that are proximate to residential development, and an action to incorporate these considerations into LUTE Phase 2 planning (Policy 4.1, Action 4.F, and Action 5.B)

While there are no SCAs that specifically apply to land use conflicts, conflicts may occur as a result of exposure to air quality, noise, and hazardous materials from adjacent land uses. Future projects that would site sensitive receptors in the vicinity of sources of TACs such that risk at these receptor locations would exceed the health risk screening criteria after a screening analysis be required to implement SCA 23, Exposure to Air Pollution (Toxic Air Contaminants). This SCA would require future projects that meet the criteria above to incorporate appropriate measures into the project design to reduce the potential health risk due to exposure to TACs (see Section 3.2, Air Quality for more information.) Any new projects that involve handling, storage, or transportation of hazardous materials during business operations that may arise near residential uses are subject to SCA 45, Hazardous Materials Business Plan (HMBP), which requires project applicants or their contractors to prepare and implement a HMBP to ensure hazardous materials used for construction would be used and stored properly to contain a potential release, thereby minimizing risk. Finally, SCAs 67 and 68, described in Regulatory Setting of this section, would serve to reduce noise exposure of projects adjacent to noise-producing uses and would require project noise levels to comply with performance standards of the Planning and Municipal code.

Mitigation: None required.

Summary

With adherence to proposed policies, SCAs, and regulatory compliance, future development under the Proposed Project would result in a less than significant impact related to potential land use conflicts.

Impact LUP-3: Adoption of the Proposed Project would not cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment. (Criterion 3) (*Less than Significant*)

Conflicts between a project and applicable policies do not constitute significant physical environmental impacts in and of themselves. A policy inconsistency is considered a significant adverse environmental impact only when it is related to a policy adopted for the purpose of avoiding or mitigating an environmental effect and it is anticipated that the inconsistency would result in a significant adverse physical impact based on the established significance criteria. As discussed below, adoption and development under the Proposed Project generally would not conflict with applicable land use policies adopted for the purpose of avoiding or mitigating an environmental effect. As a result, no significant land use impacts related to the consistency of adoption and development under the Proposed Project with land use policies would occur.

Existing regulations would be updated as needed to be consistent with the updated General Plan and/or to effectively implement the Proposed Project, if it were adopted. The Proposed Project includes several concurrent amendments to the Planning Code, LUTE, and Land Use Diagram for internal consistency, as required by State law (Government Code Section 65860[a]). The Zoning Code translates the proposed General Plan policies into specific use regulations, development standards, and performance criteria to govern development on individual properties. The Proposed Project includes multiple policies from the existing General Plan and proposes additional policies for the purpose of avoiding or mitigating an environmental effect.

The City has adopted specific plans to tailor appropriate development standards and policies to individual neighborhoods, as described in the Regulatory Setting above. These specific plans include Downtown Oakland Specific Plan (DOSP)[1], the CASP, the WOSP, the Lake Merritt Station Area Specific Plan, Broadway Valdez District Specific Plan, Central Estuary Area Plan, and International Boulevard TOD Plan. All of these plans provide direction to develop higher density housing near transit.

State law specifies that specific plans must be consistent with the General Plan. As of 2022, development under these specific plans is still underway; however, the Proposed Project takes these plans and policy direction into consideration such that changes to land use designations within the boundaries of various specific plans, as well as throughout the City, would continue to be harmonious and consistent with existing land uses. As such, the Proposed Project would not conflict with policies included in these specific plans adopted for the purpose of avoiding or mitigating an environmental effect.

The City of Oakland Planning Bureau has primary responsibility for administering the laws, regulations, and requirements that pertain to the physical development of the City. Specific duties relating to the implementation of the proposed General Plan update would include preparing zoning and subdivision ordinance amendments, reviewing development applications, conducting investigations, and making reports and recommendations on planning and land use, zoning, subdivisions, development plans, and environmental regulations.

The Proposed Project also must be consistent with regional and local plans. Like Plan Bay Area 2050, the Proposed Project locates housing in mixed use, transit-oriented development patterns primarily in existing neighborhoods. These land use patterns reduce GHG emissions. Goal 5 of the Housing Action Plan contains policies (Policy 5.2) and actions (5.2.2, 5.2.3, 5.2.4, 5.2.6, 5.2.7, 5.2.8, and 5.2.9) that would reduce greenhouse gas emissions through promotion of sustainable design and decarbonization/electrification; encouraging higher-density, infill, and mixed-use development near transit; securing funding from the State's Affordable Housing and Sustainable Communities (AHSC) Program; and encouraging climate-resilient housing. Proposed zoning changes, including the AHO Zone, would implement proposed missing middle amendments and related amendments to encourage a diversity of housing types such as flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and accessory dwelling units (ADUs) in currently single-family-dominated neighborhoods, and along corridors and transit-proximate areas. Policies in the Environmental Justice and Safety Element align directly with actions and programs

[1] The DOSP is not yet adopted at time of this EIR publication.

in the 2030 ECAP to build equitable resilience to climate change. Thus, the Proposed Project would be consistent with the 2030 ECAP.

While the Plan Area includes a portion of the Airport Influence Zone, height and land use changes fall within Safety Zones 6 and 7 only. There are no restrictions on the types of land use changes envisioned for this area. Thus, the Proposed Project would not conflict with the Airport Land Use Compatibility Plan (ALUCP). SAF-6.1 and SAF-6.2 would require periodic review and coordination of airport land use compatibility. Given that the Proposed Project would not conflict with any other applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, conflicts with existing local and regional plans and the Zoning Ordinance are expected to have a less than significant impact.

Mitigation: None required.

Summary

Conflicts between a project and applicable policies do not constitute significant physical environmental impacts in and of themselves. A policy inconsistency is considered a significant adverse environmental impact only when it is related to a policy adopted for the purpose of avoiding or mitigating an environmental effect and it is anticipated that the inconsistency would result in a significant adverse physical impact based on the established significance criteria.

The Proposed Project includes several concurrent amendments to the Planning Code, LUTE, and Land Use Diagram for internal consistency. As discussed above, adoption and development under the Proposed Project generally would not conflict with applicable land use policies adopted for the purpose of avoiding or mitigating an environmental effect. As a result, no significant land use impacts related to the consistency of adoption and development under the Proposed Project with land use policies would occur. Therefore, impacts due to a conflict with any applicable land use plan would be less than significant.

4.10.5 Cumulative Impacts

Impact LUP-4: Adoption of the Proposed Project, combined with cumulative development, would not result in significant cumulative impacts to Land Use and Planning. (*Less than Significant)*

Geographic Context

The geographic context for cumulative impacts associated with land use issues is the Bay Area region, which assumes full buildout of the Proposed Project, in combination with buildout of neighboring jurisdictions' general plans.

Cumulative Impacts

Future development in the area, including growth anticipated under the Proposed Project, would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, as future development in each jurisdiction would be required

to be consistent with each jurisdiction's general plan and zoning code. Future development in the North Bay region of Alameda County would be required to be consistent with regional plans such as Plan Bay Area 2050. In addition, because development under the Proposed Project would not result in a conflict with a land use plan, policy or regulation in manner that could result in a significant environmental effect, whether other present or future development would have such a conflict, the effect would not combine to create cumulative conflict.

Future development in the Bay Area would be required to undergo planning review in each jurisdiction, which would ensure the future development would not divide an established community and would not create a conflict with adjacent or nearby land uses in bordering cities. Within Oakland, past projects have been, and present and reasonably foreseeable future projects would be, subject to development guidance contained within the General Plan and other applicable land use plans to ensure land use compatibility. Additionally, incorporation of SCAs 23, 45, 67, and 68 would also serve to reduce potential for cumulative land use conflicts, particularly potential conflicts between adjacent industrial land uses and residential uses, or other areas in transition to a different envisioned land use as outlined in these land use plans. Thus, development under the Proposed Project would not combine with, or add to, any potential adverse land use impacts or conflicts that may be associated with other cumulative development.

For these reasons, future development in the Bay Area, including future development under the Proposed Project, would have a less-than-significant cumulative impact with respect to land use and planning.

Mitigation: None required.

Summary

With adherence to proposed policies, SCAs and other regulatory compliance, adoption of the Proposed Project would result in a less than significant impact to potentially physically dividing an established community; conflicting with adjacent or nearby land uses; and conflicting with applicable land use plans, policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect.

4.10.6 References – Land Use and Planning

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City of Oakland, 2022. Oakland 2045 Map Atlas. https://cao-94612.s3.amazonaws.com/documents/Map-Atlas_Revised.pdf. Accessed September 30, 2022.

4.11 Noise and Vibration

This section describes conditions and potential environmental effects of the Proposed Project pertaining to noise and vibration. The section discusses relevant existing environmental conditions of the Plan Area and regulations pertinent to this section, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts to the physical environment that could result from implementation of the Proposed Project and its associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that would reduce potential impacts to this environmental topic are identified; both existing and proposed updated/new General Plan policies and SCAs are considered.

This section incorporates relevant information from the General Plan Update Map Atlas (see Appendix A) prepared in support of the Proposed Project. The NOP (Notice of Preparation) for this Draft EIR received no scoping comments related to noise or vibration.

4.11.1 Environmental Setting

4.11.1.1 Technical Background and Noise Terminology

Noise can be generally defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) that is measured in decibels (dB), which is the standard unit of sound amplitude measurement. The dB scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound, with 0 dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain. Pressure waves traveling through air exert a force registered by the human ear as sound.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude. When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. Therefore, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to extremely low and extremely high frequencies. This method of frequency weighting is referred to as A weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements.

Noise Exposure and Community Noise

Noise exposure is a measure of noise over a period of time. Noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to

the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual receptor. These successive additions of sound to the community noise environment vary the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts.

This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

- **L_{eq}:** The equivalent-continuous sound level, used to describe noise over a specified period of time in terms of a single numerical value. The L_{eq} of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. May also be referred to as the "average sound level."
- **L_{max}:** the instantaneous maximum noise level for a specified period of time.
- **L_{min}:** The minimum, instantaneous noise level experienced during a given period of time.
- **L_{dn}:** The average A-weighted noise level during a 24-hour day, obtained after 10 dB are added to noise levels measured between 10 p.m. and 7 a.m. to account for nighttime noise sensitivity. Also referred to as the "day-night average noise level" (DNL).
- **CNEL:** The community noise equivalent level. This is the average A-weighted noise level during a 24-hour day that is obtained after 5 dB are added to measured noise levels between 7 p.m. and 10 p.m. and 10 dB are added to noise levels between 10 p.m. and 7 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The CNEL is the metric generally used for assessment of aircraft noise. The result is normally about 0.5 dBA higher than DNL using the same 24-hour data (Caltrans, 2013).

As a general rule, in areas where the noise environment is dominated by traffic, the L_{eq} during the peak-hour is generally within one to two decibels of the L_{dn} at that location.

Effects of Noise on People

Noise is generally loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity that is a nuisance or disruptive. The effects of noise on people can be placed into four general categories:

- Subjective effects (e.g., dissatisfaction, annoyance).
- Interference effects (e.g., communication, sleep, and learning interference).
- Physiological effects (e.g., startle response).
- Physical effects (e.g., hearing loss).

Although exposure to high noise levels has been demonstrated to cause physical and physiological effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. Interference effects of environmental noise refer to those effects that interrupt daily activities and include interference with human communication activities, such as normal conversations, watching television, telephone conversations, and interference with sleep. Sleep interference effects can include both awakening and arousal to a lesser state of sleep. With regard to the subjective effects, the responses of individuals to similar noise events are diverse and are influenced by many factors, including the type of noise, the perceived importance of the noise, the appropriateness of the noise to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity.

Overall, there is no completely satisfactory way to measure the subjective effects of noise, nor the corresponding reactions of annoyance and dissatisfaction on people. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted (i.e., comparison to the ambient noise environment). In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships generally occur (Caltrans, 2013):

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived.
- Outside of the laboratory, a 3 dB change in noise levels is considered to be a barely perceivable difference.
- A change in noise levels of 5 dB is considered to be a readily perceivable difference.
- A change in noise levels of 10 dB is subjectively heard as doubling of the perceived loudness.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence the decibel scale was developed. Since the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, but rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dB, the combined sound level would be 53 dB, not 100 dB.

Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate between 6 dB for hard sites and 7.5 dB for soft sites for each doubling of distance from the reference measurement. Hard sites are those with a reflective surface between the source and the receiver such as parking lots or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dB (per doubling distance) is normally assumed for soft sites. Line sources (such as traffic noise from vehicles) attenuate at a

rate between 3 dB for hard sites and 4.5 dB for soft sites for each doubling of distance from the reference measurement.

Noise levels may also be reduced by intervening structures, such as a row of buildings, a solid wall, or a berm located between the receptor and the noise source.

Fundamentals of Vibration

As described in the Federal Transit Administration's (FTA) Transit Noise and Vibration Impact Assessment Manual (FTA, 2018), ground borne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard. In contrast to airborne noise, ground borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of ground borne vibration are trains, buses and heavy trucks on rough roads, and construction activities such as blasting, sheet pile-driving, and operation of heavy earth-moving equipment.

Several different methods are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal, which is measured in inches per second (in/sec). The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (V_{db}) is commonly used to express RMS. The decibel notation acts to compress the range of numbers required to describe vibration. Typically, ground borne vibration generated by human-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration assessment include structures (especially older masonry structures), people who spend a lot of time indoors (especially residents, students, the elderly and sick), and vibration sensitive equipment such as hospital analytical equipment and equipment used in computer chip manufacturing.

The relationship of PPV to RMS velocity is expressed in terms of the "crest factor," defined as the ratio of the PPV amplitude to the RMS amplitude. Peak particle velocity is typically a factor of 1.7 to 6 times greater than RMS vibration velocity (FTA, 2018). The decibel notation acts to compress the range of numbers required to describe vibration.

Typically, groundborne vibration generated by human activity attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment. The effects of ground borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings.

4.11.1.2 Regional / Local Conditions

Existing Noise-Sensitive Land Uses

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication, and can cause physiological and psychological stress and hearing loss. Given these effects, some land uses are considered more sensitive to noise levels than others due to the duration and nature of time people spend at these uses. In general, residences are considered most sensitive to noise as people spend extended periods of time in them, including the nighttime hours. Therefore, noise impacts to rest and relaxation, sleep, and communication are highest at residential uses. Schools, hotels, hospitals, nursing homes, and recreational uses are also considered to be more sensitive to noise as activities at these land uses involve rest and recovery, relaxation and concentration, and increased noise levels tend to disrupt such activities. Places such as churches, libraries, and cemeteries, where people tend to pray, study, and/or contemplate, are also sensitive to noise but due to the limited time people spend at these uses, impacts are usually tolerable. Commercial and industrial uses are considered the least noise-sensitive.

Existing Noise Environment

Noise sources are typically categorized as mobile or stationary. Most mobile sources are transportation-related from vehicles operating on roadways, fixed railways, and aircraft and airport operations. Off-road construction equipment is also considered a mobile source. Stationary noise sources typically include machinery; fabrication; heating, ventilation, and air conditioning systems; compressors and generators; and landscape maintenance equipment. Stationary noise sources generated by light industrial and commercial activities can result in noise-related land use conflicts when these operations (e.g., loading docks or equipment operations) are adjacent to residential land uses (collocation).

The dominant noise source within Oakland is vehicle traffic on its roadways, primarily freeways, highways, and arterial roadways. Noise contours for the freeways and major State routes within the Plan Area are presented in **Figure 4.11-1**. The noise contours shown in Figure 4.11-1 represent the predicted noise level based on roadway volumes, the percent of trucks, speed, and other factors. Rail transit is also a major mobile noise source throughout the Plan Area with multiple above-ground BART lines and the Amtrak/freight rail corridor that runs through the southern extent of the Plan Area. Noise contours for railways within the Plan Area are presented in **Figure 4.11-2**. The noise contours shown in Figure 4.11-2 represent the predicted noise level based on operational Amtrak/freight frequencies monitored for the Waterfront Ballpark District at Howard Terminal Draft EIR and account for the required sounding of horns at at-grade crossings. In this figure, the noise contours reflect the attenuating effects of structures for distances in excess of 300 feet from the tracks. The Oakland International Airport also generates noise that is demonstrated in the noise contours developed for its Airport Land Use Compatibility Plan and presented in **Figure 4.11-3**. As shown in the figure, existing noise levels often exceed 65 CNEL/DNL within the Plan Area. This is considered a threshold for a generally acceptable level of noise when outdoors.

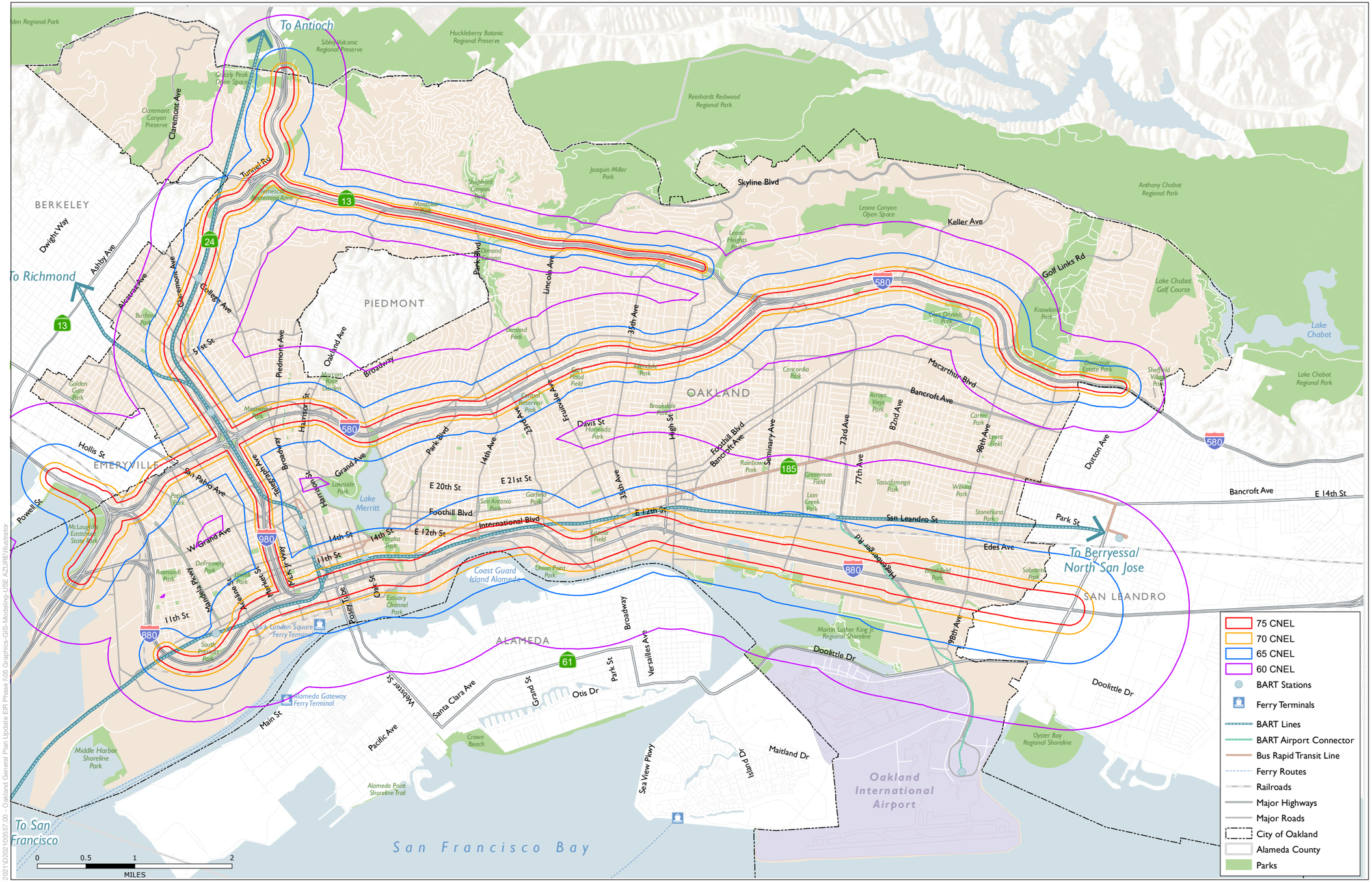
Ambient noise levels are frequently measured within the Plan Area to establish the existing environment for projects undergoing environmental review. **Table 4.11-1** presents the monitored DNL noise level (where available) and the daytime ambient equivalent noise level for a range of locations throughout the Plan Area. These monitoring locations are presented in **Figure 4.11-4**.

TABLE 4.11-1
MONITORED NOISE ENVIRONMENTS WITHIN THE PLAN AREA

Noise Monitoring Location	Day-Night Noise level (DNL)	Daytime hourly average (Leq[1])
OAK-1 Telegraph Avenue at 51st Street	N/A	60
OAK-2 Mandela Parkway adjacent and north of I-580	78	70
OAK-3 Martin Luther King Jr. Way adjacent to SR 24	68	62
OAK-4 Mosswood Recreation Center, Webster Street adjacent to I-580	69	67
OAK-5 2515 Adeline Street	72	71
OAK-6 Northgate Avenue at 25th Street	N/A	62
OAK-7 San Pablo Avenue at 18th Street	N/A	59
OAK-8 Webster Street at 15th Street	66	64
OAK-9 15th Street between Jackson and Madison	N/A	50
OAK-10 8th Street and Jefferson Street	N/A	63
OAK-11 North side of 737 2nd Street	72	68
OAK-12 Terminus of Clay Street adjacent to Port Offices	77	73
OAK-13 222 Broadway	N/A	67
OAK-14 3rd Street at Madison Street	N/A	56
OAK-15 Embarcadero and 9th Avenue	N/A	65
OAK-16 1321 Leimert Boulevard	N/A	63
OAK-17 2245 International Boulevard	76	71
OAK-18 1045 Derby Street	84	76
OAK-19 5441 International Boulevard	N/A	70
OAK-20 Mountain Boulevard at Sequoyah Road	75	71
OAK-21 701 105th Avenue	80	79

NOTE:
[1] The equivalent noise level (Leq), also referred to as the time-average sound level, is the equivalent steady state sound level over a stated period of time.

SOURCE: Data compiled from CEQA documents within the city of Oakland, available at *https://www.oaklandca.gov/resources/current-environmental-review-ceqa-eir-documents-2011-2021*. All data was measured after 2016.



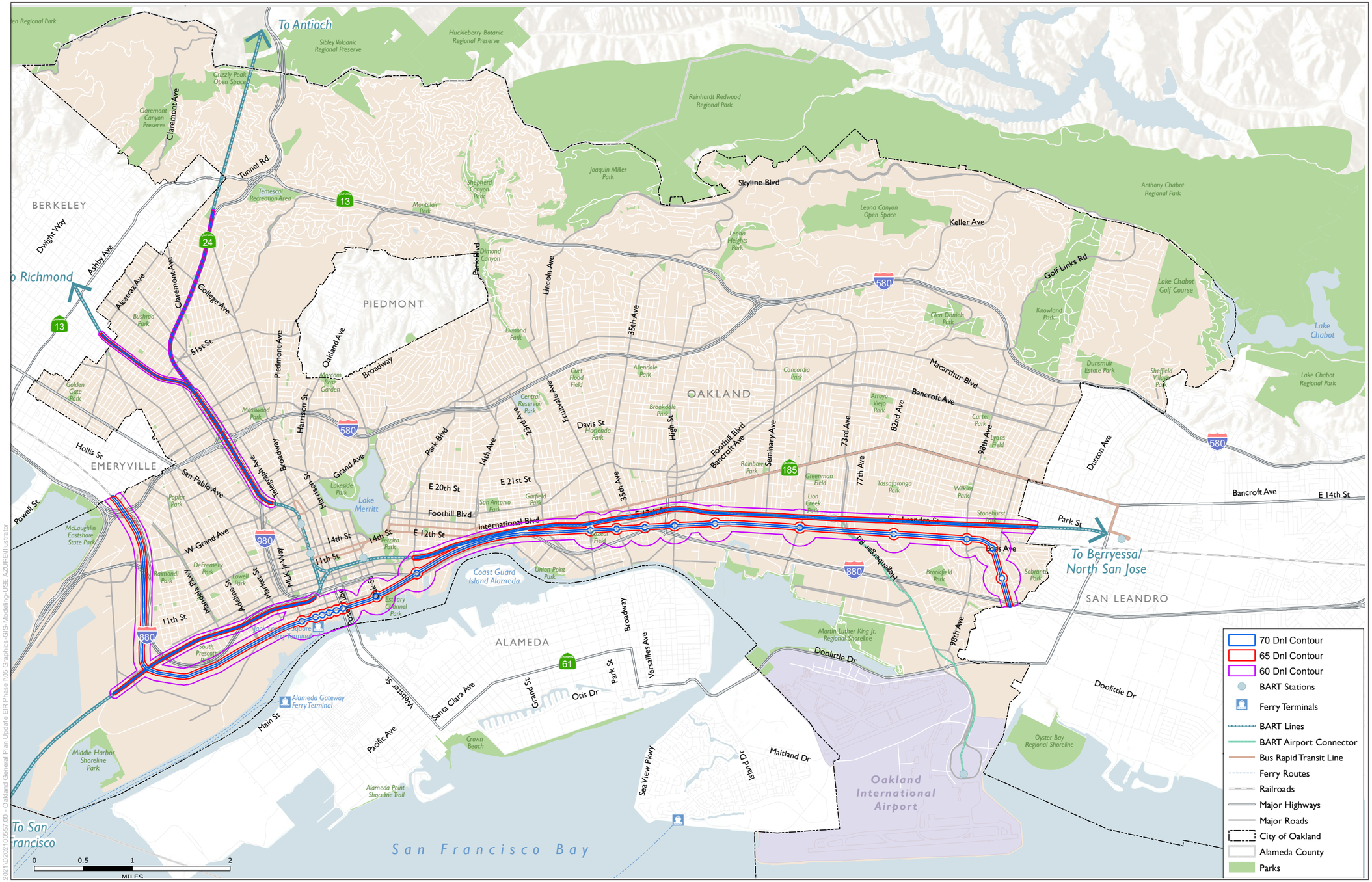
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SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 4.11-1
Highway Noise Contours

ESA



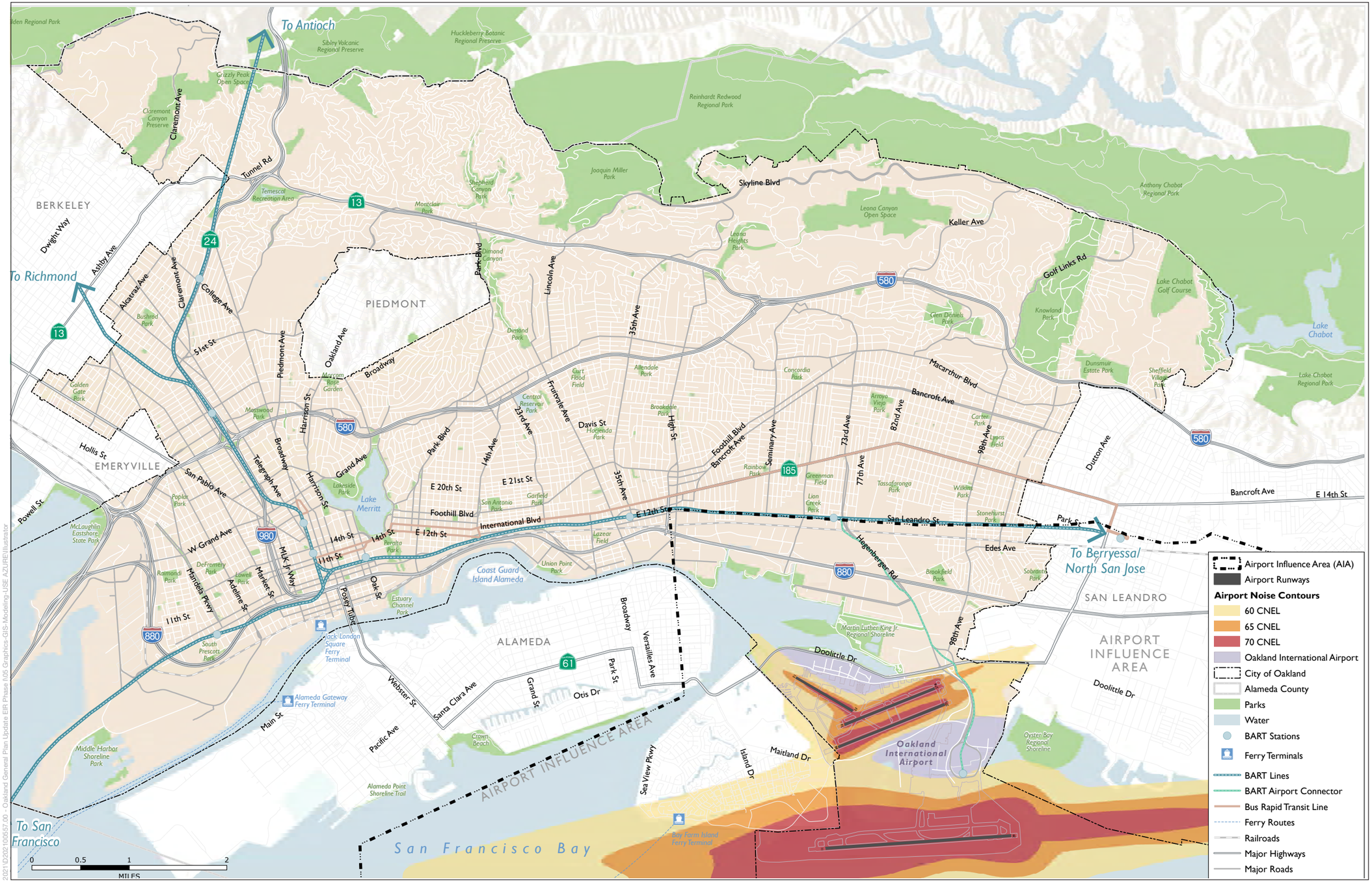
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SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 4.11-2
Railway Noise Contours

ESA



SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 4.11-3
Airport Noise Contours

ESA

SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 4.11-4
Noise Measurement Locations

4.11.2 Regulatory Setting

4.11.2.1 Federal

Noise Control Act

In 1972, the Noise Control Act (42 United States Code section 4901 et seq.) was passed by congress to promote limited noise environments in support of public health and welfare. It also established the U.S. Environmental Protection Agency (U.S. EPA) Office of Noise Abatement and Control to coordinate federal noise control activities. The U.S. EPA established guidelines for noise levels that would be considered safe for community exposure without the risk of adverse health or welfare effects. The U.S. EPA found that to prevent hearing loss over the lifetime of a receptor, the yearly average L_{eq} should not exceed 70 dBA, and the DNL should not exceed 55 dBA in outdoor activity areas or 45 dBA indoors to prevent interference and annoyance (U.S. EPA, 1974). In 1982, noise control was largely passed to state and local governments.

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under Title 40 of the Code of Federal Regulations (CFR), Part 205, Subpart B. The federal truck passby noise standard is 80 dBA at 50 feet from the vehicle pathway centerline, under specified test procedures. These requirements are implemented through regulatory controls on truck manufacturers. There are no comparable standards for vibration, which tend to be specific to the roadway surface, the vehicle load, and other factors.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) aims to ensure worker safety and health in the United States by working with employers and employees to create better working environments. With regard to noise exposure and workers, OSHA regulations set forth accepted criteria to protect the hearing of workers exposed to occupational noise. Noise exposure regulations are listed in 29 Code of Federal Regulations (CFR) Section 1910.95. Section 1910.95(c)(1) states that an employer shall administer a hearing conservation program whenever noise exposure levels equal or exceed an 8-hour time-weighted average sound level of 85 dBA.

Federal Aviation Administration

The Federal Aviation Administration (FAA) has published guidelines for land use compatibility in 14 CFR Part 150. For aviation noise analyses, the FAA has determined that the 24-hour cumulative exposure of individuals to noise resulting from aviation activities must be established in terms of L_{dn} as FAA's primary metric. However, the FAA recognizes CNEL as an alternative metric for assessing aircraft (e.g., helicopters) noise exposure in California.

Appendix G of the *CEQA Guidelines* recommends that proposed projects assess whether projects located within an airport land use plan and would expose people residing or working in the project area to excessive noise levels. Based on FAA standards, a significant noise impact would occur if analysis shows that the project would cause noise sensitive areas to experience an increase in the aircraft noise level of 1.5 dB CNEL or more when aircraft levels are 65 dBA CNEL or higher. In addition, a significant noise impact would occur if noise sensitive land uses would be newly exposed to levels of 65 dBA CNEL or higher as a result of a project. For

example, a 1.5 dB increase at an aircraft noise level of 63.5 dBA CNEL that brings the aircraft noise level to 65 dBA CNEL would be considered a significant impact.

According to Chapter 65 of Title 42 of the United States Code, and Articles 3 and 3.5 of Chapter 4 of Division 9 of the Public Utilities Code of the State of California, local enforcement of noise regulations and land use regulations related to noise control of airports (e.g., helistops) are preempted by the FAA.

Federal Transit Administration Vibration Standards

The Federal Transit Administration (FTA) has adopted vibration standards that are used to evaluate potential building damage impacts related to construction activities. The vibration damage criteria adopted by FTA are shown in **Table 4.11-2**.

TABLE 4.11-2
CONSTRUCTION VIBRATION DAMAGE CRITERIA

Building Category	PPV (in/sec)
I. Reinforced concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

NOTES: in/sec = inches per second; PPV = peak particle velocity

SOURCE: FTA, 2018.

In addition, FTA has adopted standards related to human annoyance for groundborne vibration impacts for the following three land use categories: Vibration Category 1, High Sensitivity; Vibration Category 2, Residential; and Vibration Category 3, Institutional. FTA defines these categories as follows:

- **Category 1:** Buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes.
- **Category 2:** All residential land uses and any buildings where people sleep, such as hotels and hospitals.
- **Category 3:** Institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference.

Under conditions where there is an infrequent number of events per day, FTA has established thresholds of 65 VdB for Category 1 buildings, 80 VdB for Category 2 buildings, and 83 VdB for Category 3 buildings.[1] Under conditions where there is an occasional number of events per day,

[1] FTA defines "infrequent events" as fewer than 30 vibration events of the same kind per day.

FTA has established thresholds of 65 VdB for Category 1 buildings, 75 VdB for Category 2 buildings, and 78 VdB for Category 3 buildings.[2] No thresholds have been adopted or recommended for commercial and office uses.

4.11.2.2 State

California Department of Public Health Noise Standards

The California Department of Public Health has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. These guidelines for land use and noise exposure compatibility are shown in **Table 4.11-3**. In addition, Section 65302(f) of the California Government Code requires each county and city in the State to prepare and adopt a comprehensive long-range general plan for its physical development, with Section 65302(g) requiring a noise element to be included in the general plan. The noise element must: (1) identify and appraise noise problems in the community; (2) recognize Office of Noise Control guidelines; and (3) analyze and quantify current and projected noise levels.

TABLE 4.11-3
COMMUNITY NOISE EXPOSURE (DNL OR CNEL)

Land Use	Normally Acceptable[a]	Conditionally Acceptable[b]	Normally Unacceptable[c]	Clearly Unacceptable[d]
Single-Family Homes, Duplexes, Mobile Homes	50–60	55–70	70–75	above 75
Multifamily Homes	50–65	60–70	70–75	above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	above 80
Transient Lodging—Motels, Hotels	50–65	60–70	70–80	above 75
Auditoriums, Concert Halls, Amphitheaters	—	50–70	—	above 70
Sports Arenas, Outdoor Spectator Sports	—	50–75	—	above 75
Playgrounds, Neighborhood Parks	50–70	—	67–75	above 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–75	—	70–80	above 80
Office Buildings, Business and Professional, Commercial	50–70	67–77	above 75	—
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	above 75	—

NOTES: CNEL = community noise equivalent level; DNL = day-night average noise level

[a] *Normally Acceptable*: Specified land use is satisfactory, based upon the assumption that any building involved is of normal conventional construction without any special noise insulation requirements.

[b] *Conditionally Acceptable*: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

[c] *Normally Unacceptable*: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

[d] *Clearly Unacceptable*: New construction or development should generally not be undertaken.

SOURCE: Governor's Office of Planning and Research, *State of California General Plan Guidelines – Noise Element Guidelines*, 2017.

[2] FTA defines "occasional events" as between 30 and 70 vibration events of the same source per day.

The State of California also establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the State pass-by standard is consistent with the federal limit of 80 dB. The State pass-by standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dB at 15 meters (50 feet) from the centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by State and local law enforcement officials.

California Building Code

The California Building Code requires that walls and floor/ceiling assemblies separating dwelling units from each other, or from public or service areas, have a sound transmission class[3] of 50 dB for all common interior walls and floor/ceiling assemblies between adjacent dwelling units, or between dwelling units and adjacent public areas for multifamily units and transient lodging. The code specifies a maximum interior performance standard of 45 dBA.

The State of California establishes uniform minimum noise insulation performance standards for new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family dwellings that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (California Code of Regulations, Title 24). Specifically, Title 24 states that interior noise levels attributable to exterior sources shall not exceed 45 dBA CNEL in any habitable room of new dwellings. The standards require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than 60 dBA CNEL. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

Department of Industrial Relations

The Division of Occupational Safety and Health (DOSH) protects workers and the public from safety hazards through its California Divisions of Occupational Safety and Health (Cal/OSHA) program. The Cal/OSHA Program is responsible for enforcing California laws and regulations pertaining to workplace safety and health and for providing assistance to employers and workers about workplace safety and health issues. DOSH enforces noise standards in the workplace in conjunction with OSHA through the CAL/OSHA program.

4.11.2.3 Local Plans, Ordinances and Policies

City of Oakland General Plan

The City of Oakland General Plan serves as the guiding document for the City's planning and future development. It includes goals, policies, and implementation measures that reflect the community priorities, values, and vision. The Noise element of the General Plan includes the following policies related to noise (City of Oakland, 2005).

[3] The sound transmission class is used as a measure of a material's ability to reduce sound. The sound transmission class is equal to the number of decibels a sound is reduced as it passes through a material.

***Policy 1*:** Ensure the compatibility of existing and, especially, of proposed development projects not only with neighboring land uses but also with their surrounding noise environment.

Action 1.1: Use the noise-land use compatibility matrix in conjunction with the noise contour maps (especially for roadway traffic) to evaluate the acceptability of residential and other proposed land uses and also the need for any mitigation or abatement measures to achieve the desired degree of acceptability.

Action 1.2: Continue using the City's zoning regulations and permit processes to limit the hours of operation of noise-producing activities which create conflicts with residential uses and to attach noise-abatement requirements to such activities.

Action 1.3: Continue working with the Alameda County Community Development Agency (in its role as the county's airport land use commission) and with the Port of Oakland to ensure consistency with the county's airport land-use plan of the city's various master-planning documents, zoning ordinance and land-use development proposals near Oakland's airport.

***Policy 2*:** Protect the noise environment by controlling the generation of noise by both stationary and mobile noise sources.

Action 2.1: Review the various noise prohibitions and restrictions under the City's nuisance noise ordinance and revise the ordinance if necessary.

Action 2.2: As resources permit, increase enforcement of noise-related complaints and also of vehicle speed limits and of operational noise from cars, trucks and motorcycles.

Action 2.3: Encourage the Port of Oakland to continue promoting its noise abatement office and programs for Oakland International Airport.

***Policy 3*:** Reduce the community's exposure to noise by minimizing the noise levels that are received by Oakland residents and others in the City. (This policy addresses the reception of noise whereas Policy 2 addresses the generation of noise.)

Action 3.1: Continue to use the building-permit application process to enforce the California Noise Insulation Standards regulating the maximum allowable interior noise level in new multi-unit buildings.

Action 3.2: Review the City's noise performance standards and revise them as appropriate to be consistent with City Council policy.

Action 3.3: Demand that Caltrans implement sound barriers, building retrofit programs and other measures to mitigate to the maximum extent feasible noise impacts on residential and other sensitive land uses from any new, widened or upgraded roadways; any new sound barrier must conform with City policies and standards regarding visual and aesthetic resources and quality.

TABLE 4.11-4
LAND USE NOISE COMPATIBILITY GUIDELINES – CITY OF OAKLAND

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE (L_{DN} OR CNEL, dB)					
	55	60	65	70	75	80
Residential	NA	CA		NU		CU
Transient lodging – motels, hotels	NA		CA		NU	CU
Schools, libraries, churches, hospitals, nursing homes	NA	CA		NU		CU
Auditoriums, concert halls, amphitheaters	CA			CU		
Sports arenas, outdoor spectator sports	CA				CU	
Playgrounds, neighborhood parks	NA		NU		CU	
Golf courses, riding stables, water recreation, cemeteries	NA			NU		CU
Office buildings, business commercial and professional	NA		CA		NU	
Industrial, manufacturing, utilities, agriculture	NA			CA		NU

NA	NORMALLY ACCEPTABLE: Development may occur without an analysis of potential noise impacts *to the proposed development* (though it might still be necessary to analyze noise impacts that the project might have *on its surroundings*).
CA	CONDITIONALLY ACCEPTABLE: Development should be undertaken only after an analysis of noise-reduction requirements is conducted and if necessary noise-mitigating features are included.
NU	NORMALLY UNACCEPTABLE: Development should generally be discouraged; it may be undertaken only if a detailed analysis of the noise-reduction requirements is conducted, and if highly effective noise mitigation features are included.
CU	CLEARLY UNACCEPTABLE: Development should not be undertaken.

SOURCE: Reproduced Figure 1 of the City of Oakland CEQA Thresholds/Criteria of Significance Guidelines, 2016, consistent with Figure 6 from the Oakland General Plan Noise Element, 2005.

Oakland Municipal Code

The City of Oakland also regulates noise through enforcement of its noise ordinance, which can be found in Section 8.18.020 of the Health and Safety Code, Chapter 17.120 of the Planning Code, and Chapter 12.56 of the Municipal Code.

The noise ordinance within the Health and Safety Code qualitatively addresses persistent nuisance noise, which it defines as the persistent maintenance or emission of any noise or sound produced by human, animal, or mechanical means, between the hours of 9:00 p.m. and 7:00 a.m. next ensuing, which, by reason of its raucous or nerve-racking nature, shall disturb the peace or comfort, or be injurious to the health of any person. In addition, the code states that failure to comply with the following requirements constitutes a nuisance:

A. All construction equipment powered by internal combustion engines shall be properly muffled and maintained.

B. Unnecessary idling of internal combustion engines is prohibited.

C. All stationery noise-generating construction equipment such as tree grinders and air compressors are to be located as far as is practical from existing residences.

D. Quiet construction equipment, particularly air compressors, are to be selected whenever possible.

E. Use of pile drivers and jack hammers shall be prohibited on Sundays and holidays, except for emergencies and as approved in advance by the Building Official.

The noise ordinance within the Planning Code regulates construction noise and only operational noise from stationary sources, as cities and counties do not have regulatory authority to establish noise level limits over noise from mobile on-road sources (transportation noise), which does not include on-site construction. Transportation noise is regulated at the state and federal level by noise limits placed on vehicle manufacturers. **Table 4.11-5** presents the maximum allowable receiving noise standards applicable to long-term exposure for residential and civic land uses, for noise from stationary noise sources (not transportation noise). Section 17.120.050 states that all activities shall be so operated that the noise level inherently and regularly generated by these activities across real property lines shall not exceed the applicable values indicated in Table 4.11-5, as modified where applicable by the adjustments indicated in footnote (a) of that table. Subsection F of Section 17.120.050 further indicates that noise measurement procedures shall be conducted at a position or positions at any point on the receiver's property.

Once a structure or facility is constructed, noise from a stationary source would be limited by the standards in Table 4.11-5 (for example, between 10:00 p.m. and 7:00 a.m., residential uses may only be exposed to noises up to 45 dBA for a period of cumulative 20-minutes in a 1-hour time period). The noise ordinance states that if the measured ambient noise level exceeds the applicable standard in any category, then the stated applicable noise level shall be adjusted so as to equal the ambient noise level. In other words, if existing noise is measured to be louder than the maximum allowed (i.e., the "applicable noise level standard"), the existing noise level shall be considered the maximum allowed.

TABLE 4.11-5
MAXIMUM ALLOWABLE RECEIVING NOISE STANDARDS FOR SPECIFIED LAND USES, DBA[a]
(FROM STATIONARY SOURCES)

Receiving Land Use	Cumulative Number of Minutes in 1-Hour Time Period[b]	Maximum Allowable Noise Level Standards (dBA)	
		Daytime 7:00 a.m. to 10:00 p.m.	Nighttime 10:00 p.m. to 7:00 a.m.
Residential, School, Child Care, Health Care, or Nursing Home, and Public Open Space	20 (L_{33}) 10 ($L_{16.7}$) 5 ($L_{8.3}$) 1 ($L_{1.7}$) 0 (L_{max})	60 65 70 75 80	45 50 55 60 65
		Anytime	
Commercial	20 (L_{33}) 10 ($L_{16.7}$) 5 ($L_{8.3}$) 1 ($L_{1.7}$) 0 (L_{max})	65 70 75 80 85	
		Anytime	
Manufacturing, Mining, and Quarrying	20 (L_{33}) 10 ($L_{16.7}$) 5 ($L_{8.3}$) 1 ($L_{1.7}$) 0 (L_{max})	70 75 80 85 90	

NOTES:
[a] These standards are to be further reduced by 5-dBA for simple tone noise, noise consisting primarily of speech or music, or recurring impact noise. If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.
[b] L_x represents the noise level that is exceeded X percent of a given period. L_{max} is the maximum instantaneous noise level.

SOURCE: Oakland Noise Ordinance No. 11895, 1996

Table 4.11-6 presents noise level standards from the noise ordinance that apply to temporary exposure to short- and long-term construction noise. In this context, short-term refers to construction activities lasting less than 10 days at a time, while long-term refers to construction activities lasting greater than 10 days at a time. Per Section 17.120.050 (G) of the Planning Code, the limits in Table 4.11-6 apply to residential and industrial/commercial land uses. In addition, active recreational areas are considered marginally sensitive to noise, with the standards for commercial and industrial land uses applied.

For nighttime construction activities during the hours of 7:00 p.m. to 7:00 a.m. on weekdays and 8:00 p.m. to 9:00 a.m. on weekends and federal holidays, noise level limits received by any land use from construction or demolition are not addressed by standards in Table 4.11-6. Rather, according to the City of Oakland Noise Ordinance, these nighttime construction noise levels shall not exceed the applicable nighttime operational noise level standards in Table 4.11-5. The ordinance further states that if the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.

TABLE 4.11-6
MAXIMUM ALLOWABLE RECEIVING NOISE STANDARDS FOR TEMPORARY CONSTRUCTION OR DEMOLITION ACTIVITIES, DBA

Operation/Receiving Land Use	Daily (Weekday) 7:00 a.m. to 7:00 p.m.	Weekends 9:00 a.m. to 8:00 p.m.
Short-Term Operation (less than 10-days)		
Residential	80	65
Commercial, Industrial	85	70
Long-Term Operation (more than 10-days)		
Residential	65	55
Commercial, Industrial	70	60

NOTES: During the hours of 7:00 p.m. to 7:00 a.m. on weekdays and 8:00 p.m. to 9:00 a.m. on weekends and federal holidays, noise levels received by any land use from construction or demolition shall not exceed the applicable nighttime operational noise level standard (see Table 4.11-8). If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level. Maximum allowable receiving standards are applied in this analysis as the maximum L_{eq}.

SOURCE: Oakland Noise Ordinance No. 11895, 1996

4.11.2.4 City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to reducing impacts related to Noise are listed below. All SCAs would be adopted as enforceable conditions of approval and required, as applicable, to be implemented during construction and operation of future development under the Proposed Project to help ensure less-than-significant impacts related to Noise. The SCAs are incorporated and required as part of the Proposed Project, so they are not listed as mitigation measures.

- **SCA 62: Construction Days/Hours**

  Requirement: The project applicant shall comply with the following restrictions concerning construction days and hours:

  a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m.

  b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday.

  c. No construction is allowed on Sunday or federal holidays.

  Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.

  Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency

nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.

- **SCA 63: Construction Noise**

  Requirement: The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following:

  a. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible.

  b. Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.

  c. Applicant shall use temporary power poles instead of generators where feasible.

  d. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.

  e. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.

- **SCA 64: Extreme Construction Noise.**

  a. Construction Noise Management Plan Required

  Requirement: Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90 dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following:

  i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;

ii. Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;

iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;

iv. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and

v. Monitor the effectiveness of noise attenuation measures by taking noise measurements.

b. Public Notification Required

Requirement: The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.

- **SCA 65: Project-Specific Construction Noise Reduction Measures**

  Requirement: The project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction noise impacts on [ENTER ADJACENT SENSITIVE RECEPTOR OR BUSINESS]. The project applicant shall implement the approved Plan during construction.

- **SCA 66: Construction Noise Complaints**

  Requirement: The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include:

  a. Designation of an on-site construction complaint and enforcement manager for the project;

  b. A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit;

  c. Protocols for receiving, responding to, and tracking received complaints; and

  d. Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.

- **SCA 67: Exposure to Community Noise**

  Requirement: The project applicant shall submit a Noise Reduction Plan prepared by a qualified acoustical engineer for City review and approval that contains noise reduction measures (e.g., sound-rated window, wall, and door assemblies) to achieve an acceptable interior noise level in accordance with the land use compatibility guidelines of the Noise

Element of the Oakland General Plan. The applicant shall implement the approved Plan during construction. To the maximum extent practicable, interior noise levels shall not exceed the following:

a. 45 dBA: Residential activities, civic activities, hotels

b. 50 dBA: Administrative offices; group assembly activities

c. 55 dBA: Commercial activities

d. 65 dBA: Industrial activities

- **SCA 68: Operational Noise**

  Requirement: Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of Chapter 17.120 of the Oakland Planning Code and Chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City.

- **SCA 69: Exposure to Vibration**

  Requirement: The project applicant shall submit a Vibration Reduction Plan prepared by a qualified acoustical consultant for City review and approval that contains vibration reduction measures to reduce groundborne vibration to acceptable levels per Federal Transit Administration (FTA) standards. The applicant shall implement the approved Plan during construction. Potential vibration reduction measures include, but are not limited to, the following:

  a. Isolation of foundation and footings using resilient elements such as rubber bearing pads or springs, such as a "spring isolation" system that consists of resilient spring supports that can support the podium or residential foundations. The specific system shall be selected so that it can properly support the structural loads, and provide adequate filtering of groundborne vibration to the residences above.

  b. Trenching, which involves excavating soil between the railway and the project so that the vibration path is interrupted, thereby reducing the vibration levels before they enter the project's structures. Since the reduction in vibration level is based on a ratio between trench depth and vibration wavelength, additional measurements shall be conducted to determine the vibration wavelengths affecting the project. Based on the resulting measurement findings, an adequate trench depth and, if required, suitable fill shall be identified (such as foamed styrene packing pellets [i.e., Styrofoam] or low-density polyethylene).

- **SCA 70: Vibration Impacts on Adjacent Structures or Vibration-Sensitive Activities**

  Requirement: The project applicant shall submit a Vibration Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities located at [ENTER ADDRESS OF ADJACENT PROPERTY OR VIBRATION SENSITIVE ACTIVITY]. The Vibration Analysis shall identify design means and methods of construction that shall be utilized in order to not exceed the thresholds. The applicant shall implement the recommendations during construction.

4.11.3 Environmental Analysis

4.11.3.1 Significance Criteria

The City of Oakland has established thresholds of significance for CEQA impacts which incorporate those in Appendix G of the *CEQA Guidelines* (City of Oakland, 2020). Adoption of the Proposed Project would have a significant adverse impact related to noise and vibration if it would:

1. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding construction noise (see Table 4.11-6), except if an acoustical analysis is performed that identifies recommended measures to reduce potential impacts.[4]

2. Generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code Section 8.18.020) regarding persistent construction-related noise;

3. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding operational noise (see Table 4.11-5);

4. Generate noise resulting in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or, if under a cumulative scenario where the cumulative increase results in a 5 dBA permanent increase in ambient noise levels in the project vicinity without the project (i.e., the cumulative condition including the project compared to the existing conditions) and a 3 dBA permanent increase is attributable to the project (i.e., the cumulative condition including the project compared to the cumulative baseline condition without the project);

5. Expose persons to interior L_{dn} or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities (and may be extended by local legislative action to include single-family dwellings) per California Noise Insulation Standards (CCR Part 2, Title 24);

6. Expose the project to community noise in conflict with the land use compatibility guidelines of the Oakland General Plan (see Table 4.11-4) after incorporation of all applicable Standard Conditions of Approval;

7. Expose persons to or generate noise levels in excess of applicable standards established by a regulatory agency (e.g., occupational noise standards of the Occupational Safety and Health Administration [OSHA];

8. During either project construction or project operation expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration (FTA) (see Table 4.11-2);

9. Be located within an airport land use plan and would expose people residing or working in the project area to excessive noise levels; or

10. Be located within the vicinity of a private airstrip, and would expose people residing or working in the project area to excessive noise levels.

[4] The acoustical analysis must identify, at a minimum, (a) the types of construction equipment expected to be used and the noise levels typically associated with the construction equipment and (b) the surrounding land uses including any sensitive land uses (e.g., schools and childcare facilities, health care and nursing homes, public open space). If sensitive land uses are present, the acoustical analysis must recommend measures to reduce potential impacts.

4.11.3.2 Approach to Analysis / Methodology

This is a program-level Draft EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Impacts relative to noise and vibration are evaluated using the criteria listed above and based on information included in the City of Oakland General Plan, Map Atlas, existing and future traffic volumes provided by Kittleson Transportation Consultants, and the documents listed in Section 4.11.6, *References – Noise and Vibration*.

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the Proposed Project *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future development under the Proposed Project, this Draft EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas and analyzes the impacts of housing development through the projection period ending in 2030.

Roadside noise levels were calculated for the same roadways analyzed for the Transportation analysis provided to the City of Oakland. The street segments selected for analysis are those forecast to experience the greatest percentage increase in traffic generated by future development under the Proposed Project and are therefore expected to be most directly impacted.

CEQA generally requires the consideration of both the Existing Plus Project condition and Cumulative Plus Project condition when evaluating whether a project would expose existing sensitive receptors to traffic noise that would result in a substantial increase over existing conditions. The analysis in Impact NOI-5 presents the traffic noise increases along roadways within the Plan Area under the "2030 Plus Project" in comparison to both the Existing (2020 Baseline conditions) and the "2030 without Project."

The California Supreme Court's *California Building and Industry Association v. Bay Area Air Quality Management District (CBIA v. BAAQMD*) decision has indicated that the impact of existing environmental conditions on a project's future users or residents are generally not required to be considered in a CEQA evaluation, except when the project may exacerbate existing hazards or existing conditions. [5] CEQA analysis is therefore concerned with a project's impact on the environment, rather than with the environment's impact on a project and its users or residents. Thus, with respect to existing traffic noise and existing rail noise and vibration on proposed sensitive land uses, the City is not required under CEQA to consider the effects of locating new receptors into an area where such noise and vibration levels already exist. It should be noted, however, that *CBIA v. BAAQMD* decision does not preclude jurisdictions like the City from considering these types of impacts during its own planning and development review processes. Consequently, traffic and railroad noise exposure and rail vibration on future sensitive receptors within the Plan Area are considered in this Draft EIR to address criteria 5) and 6) above.

[5] *California Building Industry Association v. Bay Area Air Quality Management District,* S213478. (A135335, A136212; 218 Cal.App.4th 1171; Alameda County Superior Court; RG10548693. Filed December 17, 2015.)

4.11.3.3 Proposed 2045 General Plan Policies, Land Use, and Zoning

Industrial Lands Zoning Changes

Proposed changes to the Planning Code seek to avoid impacts to sensitive receptors in land uses that include, but are not limited to, hospitals, schools, daycare facilities, elderly housing and convalescent facilities. Changes require truck-intensive industrial activities located within 500 feet of any zone that permits residential activities to obtain a special conditional use permit. In addition, any truck-intensive uses within 500 feet of a zone that allows residential activities are subject to additional special performance standards and standard conditions of approval (SCA) related to buffering and landscaping, including a sound wall and/or vegetative buffer to block diesel and other emissions from sensitive receptor locations.

Proposed Planning Code Amendments

Additionally, proposed Planning Code Amendments include a proposal to reduce the allowed intensity of commercial and industrial activities permitted in the Housing and Business Mix (HBX) Commercial Zones, particularly HBX-1, to minimize impacts on the residential uses existing in and nearby these zones.

Environmental Justice Element

There are also new Environmental Justice Element Policy policies and actions that would serve to reduce noise-related land use conflicts.

Policies:

EJ-1.3: Industrial Uses Near Sensitive Land Uses. Ensure that heavy industrial uses are adequately buffered from residential areas, schools and other sensitive land uses. In new developments, require adequate mitigation of air contaminant exposure and vegetative barriers near large stationary and mobile sources of air pollution.

EJ-1.4: Performance Zoning. Develop zoning standards applicable to new industrial and commercial developments in order to minimize or avoid the potential for adverse effects related to noise on adjacent existing residential uses.

Actions:

EJ-A.1: Amend the City's Zoning code to include the following changes:

- Allow greater residential density in less-polluted areas, including existing single-family residential neighborhoods.
- Condition the permitting of heavy industrial businesses within five hundred (500) feet of a zone that permits residential activities.
- Establish special permit criteria for truck-intensive industrial activities located within five hundred (500) feet of any zone that permits residential activities.
- Establish special performance standards and standard conditions of approval for Truck-Intensive Industrial Activities located within five hundred (500) feet of any zone that permits residential activities.
- Amend the permit procedures for nonconforming Truck-Intensive Industrial Activities

- Condition the permitting of commercial kitchen operations designed for online ordering and food delivery.
- Modify the S-19 Health and Safety Protection Combining Zone to prohibit use of diesel generators as the primary source of power within five hundred (500) feet from any Residential, Open Space, or Institutional Zone boundary.

EJ-A.6: Prioritize and implement vegetative buffer projects, including those between industrial land and sensitive land uses, as identified in specific plans and community plans, including EONI and WOCAP.

EJ-A.7: As part of the LUTE update in Phase 2, evaluate residential/industrial conflicts, especially in areas such as West and East Oakland, and evaluate measures, including limiting additional residential development in high pollution areas and ensuring adequate buffering between industrial and residential land uses through land use designations.

EJ-A.8: As part of the LUTE update in Phase 2, explore modifications to truck routes and truck management in partnership with the Port of Oakland and WOIEP.

EJ-A.9: Designate an adequate system of roads connecting port terminals, warehouses, freeways and regional arterials, and other important truck destinations that minimizes impacts to sensitive uses. This system should rely upon arterial streets away from residential neighborhoods.

EJ-A.10: Adopt requirements that new commercial and employment uses that generate truck traffic are located along existing truck routes to the extent feasible and work with project proponents to develop preferred truck routing that avoids sensitive land uses, such as schools, hospitals, elder and childcare facilities, and residences wherever feasible.

EJ-A.12: Work with the Port of Oakland to establish permanent locations for parking and staging of Port-related trucks and cargo equipment, i.e. tractors, chassis, and containers. Such facilities will provide long-term leases to parking operators and truck owner-operators at competitive rates. Such facilities will be at the City or Port logistics center or otherwise not adjacent to Oakland residents.

4.11.3.4 Topics Considered and Determined to Have No Impact

All topics related to noise are analyzed below.

4.11.4 Impacts of the Proposed Project

4.11.4.1 Construction Impacts

Impact NOI-1: Adoption of the Proposed Project would not result in generation of a substantial temporary increase in ambient noise levels in the Plan Area in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Criteria 1 and 2) (*Less than Significant*)

Under the Proposed Project, the primary source of temporary noise within the Plan Area would be from demolition and construction. Construction activities would involve both off-road construction equipment (e.g., excavators, dozers, cranes, etc.) and transport of workers and equipment to and

from construction sites. **Table 4.11-7** shows typical noise levels produced by the types of off-road equipment that would likely be used during future construction areas within the Plan Area. Future development under the Proposed Project could potentially require installation of pile foundations that may utilize impact pile drivers or similar equipment that may be expected to generate high noise levels.

TABLE 4.11-7
REFERENCE CONSTRUCTION EQUIPMENT NOISE LEVELS (50 FEET FROM SOURCE)

Type of Equipment	L_{max}, dBA	Hourly L_{eq}, dBA/Percent Use[1]
Backhoe	80	76/40
Jackhammer	85	78/20
Roller	85	78/20
Compactor	80	73/20
Paver	85	82/50
Crane	85	77/16
Grader	85	81/40
Concrete Mixer Truck	85	81/40
Loader	80	76/40
Air Compressor	80	76/40
Excavator	85	81/40
Pile Driver	101	94/20

NOTES:
[1] Percent used during the given time period (usually an hour – hourly L_{eq}) were obtained from the FHWA Roadway Construction Noise Model User's Guide.

SOURCE: FHWA, 2006.

Construction noise is currently a major source of temporary noise within the Plan Area and would continue to be so regardless of whether the Proposed Project is adopted. Noise levels near individual construction sites under the Proposed Project would not be substantially different from what they would be under the existing City of Oakland General Plan and Planning Code, particularly given the focus on increased density in existing residential zones. Since specific future projects within the Plan Area are unknown at this time, it is conservatively assumed that the construction areas associated with these future projects could be located within 50 feet of sensitive land uses.

Section 17.120.050 of the Oakland Planning Code regarding construction noise (see Table 4.11-6), establishes 80 dBA as a noise standard from daytime construction at residential uses. To quantify construction-related noise exposure at the nearest sensitive land uses, it is assumed that the two loudest pieces of construction equipment would operate within 50 feet of a sensitive receptor. Sensitive receptors located within 50 feet of an excavator or other standard construction equipment producing similar levels of noise could be exposed to a noise level of 85 dBA L_{eq}. If pile driving were required, noise levels of up to 94 dBA could be experienced at receptors within 50 feet. Therefore, the potential would exist for construction activities to result in substantial temporary increase in ambient noise levels in the vicinity of the sensitive receptors in excess of standards established in the noise ordinance. This would be a significant impact.

However, SCAs 62, 63, 64, 65, and 66 identified above would address these potentially significant construction noise impacts. SCA 62 limits construction operation to the hours from 7:00 am to 7:00 pm, Monday through Friday, except as allowed on a case-by-case basis, and further limits extreme noise-generating activities, mirroring Noise Ordinance requirements. SCA 63 requires projects to institute a noise reduction program, including the use of best available noise control techniques on machinery; includes stipulations for impact tools such as jack hammers; ensures that stationary sources are muffled and located as far from receptors as possible; and that the noisiest phases of construction are limited to 10 days at a time or fewer. Again, this SCA specifically reinforces Noise Ordinance requirements. SCA 64 requires site-specific noise attenuation measures for pile driving and other extreme sources of construction noise. SCA 65 requires site specific attenuation measures to protect adjacent sensitive receptors and SCA 66 establishes procedures for responding to and tracking complaints received pertaining to construction noise. Compliance with these SCA's will ensure that construction noise resulting from future development under the Proposed Project does not violate the City's Noise Ordinance, reducing this potential impact to less than significant.

Mitigation: None required.

Summary

With adherence to SCAs 62, 63, 64, 65, and 66, future development under the Proposed Project would result in a less than significant impact on ambient noise levels in the Plan Area.

Impact NOI-2: Adoption of the Proposed Project would not result in exposure of persons to or generation of excessive groundborne vibration levels. (Criterion 8) (*Less than Significant*)

Future construction activities under the Proposed Project have the potential to expose sensitive land uses within the Plan Area to groundborne vibration. Construction activities would occur in a variety of locations throughout the Plan Area, which may require activities or use of off-road equipment known to generate some degree of vibration. Construction activities that generate excessive vibration, such as blasting, would not be expected to occur from future development under the Proposed Project.

Receptors sensitive to vibration include structures (especially older masonry structures), people (especially residents, the elderly, and the sick), and equipment (e.g., magnetic resonance imaging equipment, high resolution lithographic, optical and electron microscopes). Regarding the potential effects of groundborne vibration to people, except for long-term occupational exposure, vibration levels rarely affect human health.

Since specific future projects under the Proposed Project are unknown at this time, it is conservatively assumed that the construction areas associated with these future projects could be located within 50 feet of sensitive land uses. The primary vibration-generating activities associated with adoption of the Proposed Project would occur during grading, placement of underground utilities, and construction of foundations. **Table 4.11-8** shows the typical vibration levels produced by construction equipment at various distances. The most substantial source of

groundborne vibrations associated with housing development construction would be the use of pile drivers, if required, for residential tower foundations.

TABLE 4.11-8
VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV (in/sec)[a]	
	At 25 Feet (Reference)	At 50 feet
Large Bulldozer	0.089	0.35
Auger Drill Rig	0.089	0.35
Loaded Trucks	0.076	0.30
Jackhammer	0.035	0.14
Pile Driver	0.64	0.23

NOTES:

[a] Vibration amplitudes for construction equipment assume normal propagation conditions and were calculated using the following formula: PPV (equip) = PPV (ref) x (25/D)1.1 where:

- PPV (equip) = the peak particle velocity in in/sec of the equipment adjusted for the distance
- PPV (ref) = the reference vibration level in in/sec from pp. 31–33 and Table 18 of the Caltrans Vibration Guidance Manual, as well as Table 12-2 of the FTA's Noise and Vibration Guidance Manual
- D = the distance from the equipment to the receiver

SOURCES: Caltrans, *Transportation and Construction Vibration Guidance Manual*, April 2020, pp. 29–34, http://www.dot.ca.gov/hq/env/noise/publications.htm, accessed on August 29, 2022; FTA, *Transit Noise and Vibration Impact Assessment Manual*, September 2018, https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf, accessed August 29, 2022.

According to the Caltrans' *Transportation and Construction Vibration Guidance Manual,* the building damage threshold for historic and some older buildings is 0.25 PPV (in/sec) (Caltrans, 2020). As indicated in Table 4.11-8, construction activities at distances of 25 feet or further from the nearest existing buildings could exceed 0.25 PPV threshold. However, SCA 70 identified above would address these potentially significant construction vibration impacts by requiring project applicants to prepare a Vibration Analysis that identifies design means and methods to avoid damaging structures and/or substantially interfering with activities. With adherence to the City's SCA, this potential impact would be less than significant.

Mitigation: None required.

Summary

With adherence to SCA 70, future development under the Proposed Project would result in a less than significant impact related to excessive groundborne vibration levels.

Impact NOI-3: Adoption of the Proposed Project would not expose persons to noise levels in excess of applicable standards established by a regulatory agency (e.g., occupational noise standards of the Occupational Safety and Health Administration (OSHA)). (Criterion 7) (*Less than Significant*)

Construction activities, heavy machinery, and industrial processes can generate high noise levels in their immediate vicinity. When not properly protected, employees that work in loud environments

can suffer hearing loss from excessive noise exposure. The Proposed Project, including Proposed Project-generated traffic, would not facilitate development of new land uses that would involve substantial operational noise generation that could expose workers to interior noise levels in excess of OSHA standards. However, construction associated with the development of future project under the Proposed Project would result in high noise levels. Applicable businesses (including construction contractors) within the State of California are required to comply with the California OSHA noise exposure standards to avoid health risks associated with loud work environments. In addition, Oakland has established its own, more restrictive noise exposure standards in Chapter 17.120 of the Planning Code. Construction activities would be required to adhere to these regulations, reducing potential impacts related to occupational noise to less than significant.

Mitigation: None required.

Summary

With adherence to California OSHA noise exposure standards and the Oakland Planning Code restrictive noise exposure standards, future development under the Proposed Project would result in a less than significant impact related to exposure to noise levels.

4.11.4.2 Operational Impacts

Impact NOI-4: Adoption of the Proposed Project would not result in generation of a substantial permanent increase in ambient noise levels in the Plan Area in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Criteria 3 and 6) (*Less than Significant*)

The Proposed Project does not support the development of automotive, industrial, or other uses that would generate substantial noise. Still, new housing development would generate noise from heating, ventilating, and air conditioning mechanical equipment; back-up diesel generators, if required for tower structures; and from mechanical garage doors. For mid- and high-rise buildings, this equipment will typically be located several stories above sidewalk level. The resulting noise at sidewalk level will have attenuated substantially and is not expected result in a significant impact.

New air conditioning units associated with new residential development would be expected to increase noise exposure at existing nearby noise-sensitive uses. At the present time, the type, size, and the location of any new mechanical equipment that may be associated with future development under the Proposed Project is unknown. However, as described above, Section 17.120.050 of the Oakland Planning Code establishes maximum noise levels at the nearest neighboring residential properties as well as other noise sensitive land uses (see Table 4.11-5). The City's SCA 68 reinforces the Noise Ordinance requirements. Furthermore, the mechanical equipment would be standardized for noise reduction, and noise generation would not be expected to exceed the City's established thresholds. Adherence to existing regulations together with implementation of SCA 68 would reduce the potential impact from noise generation to a level that is less than significant.

Mitigation: None required.

Summary

With adherence to SCA 68 and other regulatory compliance, future development under the Proposed Project would result in a less than significant impact related substantial permanent increase in ambient noise levels.

Impact NOI-5: Adoption of the Proposed Project would not generate noise resulting in a 5-dBA permanent increase in ambient noise levels in the Plan Area above existing noise levels. (Criterion 4) (*Less than Significant*)

Future development under Proposed Project is expected to affect the community noise environment mainly by generating additional traffic. Noise levels were determined for this analysis using the Federal Highway Administration (FHWA) Traffic Noise Prediction Model and the roadway segment analysis conducted for 2020 Baseline conditions and "2030 Plus Project" conditions (see **Appendix D**).

Traffic noise level impact significance is determined by a two-step process. First, a comparison is made of the increase in noise levels—in this case the 2030 Plus Project less the 2020 Baseline—to an incremental 5 dBA threshold established by the City of Oakland. If the roadside noise level increase exceeds this incremental threshold, a cumulative noise impact would be identified.

The second step of the cumulative roadside noise analysis (if a cumulative noise impact is predicted) is to evaluate if the contribution of the project to roadside noise levels is cumulatively considerable. This second step (if necessary) involves assessing whether the Proposed Project contribution to roadside noise levels (i.e., the difference between cumulative conditions and cumulative plus Project conditions) would exceed the 3 dBA incremental contribution threshold established by the City of Oakland.

The cumulative increase in traffic noise at buildout of the Proposed Project is projected to be 5 dBA or greater along one of the 65 roadway segments modeled for this Draft EIR: MacArthur Boulevard between Hollis Street and Grand Avenue. Therefore, a significant cumulative noise increase would occur along this roadway.

The cumulative future noise environment includes more noise than would be created solely by the Proposed Project development. The next step in the analysis is to determine whether the Proposed Project would contribute considerably to this 5 dBA increase. Therefore, MacArthur Boulevard modeled in the "2030 Plus Project" scenario was then compared to a "2030 without Project" scenario to determine if the contribution of the Proposed Project would be cumulatively considerable, an increase of 3 dBA or more. As **Table 4.11-9** shows, the increase over the 2030 without Phase 1 GPU scenario would be 1.5 dBA along MacArthur Boulevard. Therefore, because the increase attributable to development under the proposed Phase 1 GPU alone would be less than 3 dBA, it would not contribute considerably to this projected cumulative roadway noise impact and the impact under CEQA is less than significant.

Mitigation: None required.

Summary

Adoption of the Proposed Project would result in a less than significant impact related to generation of a permanent increase in ambient noise levels in the Plan Area.

TABLE 4.11-9
MODELED WEEKDAY P.M. TRAFFIC NOISE LEVELS

Roadway Segment	Existing	2030 without Proposed Project	2030 with Proposed Project	2030 with GPU Difference from existing dBA	Significant Increase?
I-80 Between Bay Bridge and W Grand Avenue	81.1	81.7	81.7	0.6	No
I-880 Between W Grand Avenue and Adeline Street	80.2	80.1	80.1	-0.1	No
I-880 Between Adeline Street and I-980	80.9	81.0	81.0	0.1	No
I-880 Between I-980 and Webster Street	79.6	80.0	80.0	0.4	No
I-880 Between Webster Street and Embarcadero	83.4	83.6	83.6	0.2	No
I-880 Between Embarcadero and Kennedy Street	85.8	85.9	86.0	0.2	No
I-880 Between Kennedy Street and Hegenberger Road	85.7	86.0	86.0	0.3	No
I-880 Between Hegenberger Road and 105th Avenue	85.7	85.8	85.8	0.1	No
I-880 HOV Between Hegenberger Road and 105th Avenue	89.6	87.8	87.8	-1.8	No
I-580 Between Ashby Avenue and 40th Street	81.7	82.0	82.0	0.3	No
I-580 Between Mandela Pkwy and I-980	79.8	80.3	80.3	0.5	No
I-580 Between I-980 and Grand Avenue	80.6	81.1	81.1	0.5	No
I-580 Between Grand Avenue and 13th Street	81.1	81.6	81.6	0.5	No
I-580 Between 13th Street and 35th Street	80.7	81.4	81.4	0.7	No
I-580 Between SR 13 and 98th Avenue	83.1	83.6	83.6	0.5	No
I-980 Between I-880 and I-580	82.1	82.4	82.5	0.4	No
SR 24 Between I-580 and Broadway	82.5	83.1	83.1	0.6	No
SR 24 Between Broadway and SR -13	82.8	83.3	83.3	0.5	No
SR 24 Between SR-13 and Camino Pablo	83.1	83.7	83.7	0.6	No
SR 13 Between SR -24 and Moraga Avenue	79.6	80.1	80.1	0.5	No
SR 13 Between Moraga Avenue and Lincoln Avenue	79.1	79.7	79.8	0.7	No
SR 13 Between Lincoln Avenue and I-580	78.7	79.4	79.4	0.7	No
International Boulevard Between 1st Avenue and 42nd Avenue	67.6	67.7	67.8	0.2	No
International Boulevard Between 42nd Avenue and Seminary Avenue	63.8	64.0	64.0	0.2	No
International Boulevard Between Seminary Avenue and 86th Avenue	66.5	66.6	66.7	0.2	No
International Boulevard Between 86th Avenue and Durant Avenue	66.2	66.6	66.6	0.4	No
Doolittle Drive Between Hegenberger Road and Harbor Bay Pkwy	73.3	73.7	73.7	0.4	No
San Pablo Avenue Between 67th and 53rd Street	66.3	64.7	64.6	-1.7	No

TABLE 4.11-9 (CONTINUED)
MODELED WEEKDAY P.M. TRAFFIC NOISE LEVELS

Roadway Segment	Existing	2030 without Proposed Project	2030 with Proposed Project	2030 with GPU Difference from existing dBA	Significant Increase?
42nd Avenue Between I-880 and International Boulevard	68.3	69.1	69.2	0.9	No
E 14th Street Between Mandela Pkwy and Magnolia Street	60.0	60.7	60.7	0.7	No
E 14th Street Between Magnolia Street and Brush Street	62.6	62.4	62.6	0.0	No
14th Street Between Brush Street and Clay Street	59.7	60.3	60.4	0.7	No
14th Street Between Clay Street and Webster Street	59.0	59.4	59.4	0.4	No
14th Street Between Webster Street and Lakeside Dr	65.6	66.1	66.1	0.5	No
1st Avenue Between International Boulevard and E 18th Street	66.4	66.5	66.5	0.1	No
3rd Avenue Between E 18th Street and Park Boulevard	52.5	54.7	54.7	2.2	No
42nd Avenue Between San Leandro and International Boulevard	67.9	68.7	68.7	0.8	No
73rd Avenue Between International Boulevard and Simson Street	69.5	70.0	70.0	0.5	No
Adeline Street Between 3rd Street and W Grand Avenue	60.8	61.6	61.6	0.8	No
Airport Drive Between Doolittle Drive and Neil Armstrong Way	76.1	77.5	77.5	1.6	No
Broadway Between 5th Street and Keith Avenue	64.3	67.8	68.0	3.7	No
E 18th Street Between 1st Avenue and 3rd Avenue	66.4	66.6	66.6	0.2	No
MacArthur Boulevard Between Hollis Street and Grand Avenue	61.9	66.7	67.0	**5.1**	**Yes**
Proposed Project Contribution Considerable?		*66.7*	*67.0*	***0.3***	***No***
MacArthur Boulevard Between Grand Avenue and Park Boulevard	58.1	60.3	60.4	2.3	No
MacArthur Boulevard Between Park Boulevard and Oakland Avenue	60.9	63.0	63.1	2.2	No
Edgewater Drive Between Hegenberger Road and Garretson Point Trail	65.2	65.3	65.4	0.2	No
Fruitvale Avenue Between Lyman Road and Blanding Avenue	65.6	65.9	65.9	0.3	No
Harrison Street Between W Grand Avenue and MacArthur Boulevard	66.6	67.3	67.3	0.7	No
Hegenberger Road Between International Boulevard and Doolittle Drive	72.5	73.5	73.5	1.0	No
High Street Between Tidewater Avenue and Brookdale Avenue	66.0	66.2	66.2	0.2	No
Hillmont Drive Between Overdale Avenue and Simson Street	52.1	54.3	53.8	1.7	No
Lakeshore Drive Between 1st Avenue and E 18th Street	62.3	62.9	63.0	0.8	No
Martin Luther King Jr. Way Between 47th Street and 62nd Street	69.3	69.3	69.3	0.0	No
Middle Harbor Road Between Adeline Street and Maritime Street	65.6	66.2	66.2	0.6	No

TABLE 4.11-9 (CONTINUED)
MODELED WEEKDAY P.M. TRAFFIC NOISE LEVELS

Roadway Segment	Existing	2030 without Proposed Project	2030 with Proposed Project	2030 with GPU Difference from existing dBA	Significant Increase?
Oakland Avenue Between W Grand Avenue and W MacArthur Avenue	60.5	60.9	60.9	0.4	No
Park Boulevard Between International Boulevard and Mountain Boulevard	66.5	66.9	66.9	0.4	No
Webster Street Between 6th Street and Embarcadero West	61.2	61.7	61.7	0.5	No
Webster Posey Tube Between Marina Village Parkway and Embarcadero West	71.9	72.7	72.7	0.8	No
Telegraph Avenue Between 16th Street and 66th Street	63.9	63.4	63.3	-0.6	No
W Grand Avenue Between Bay Place and Park View Terrace	65.5	66.1	66.1	0.6	No
W Grand Avenue Between Euclid Avenue and MacArthur Boulevard	65.8	66.2	66.2	0.4	No
Foothill Boulevard Between 24th Avenue and Irving Avenue	63.4	65.1	65.2	1.8	No
Foothill Boulevard Between Mitchell Street and 28th Street	63.2	64.9	65.0	1.8	No
Foothill Boulevard Between Rosedale Avenue and 41st Street	64.6	66.1	66.3	1.7	No

SOURCE: Kittleson Transportation Consultants, 2022, ESA, 2022.

Impact NOI-6: Adoption of the Proposed Project would not expose persons to interior Ldn or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories, and long-term care facilities (and may be extended by local legislative action to include single-family dwellings) per California Noise Insulation Standards (CCR Part 2, Title 24). (Criterion 5) (*Less than Significant for this non-CEQA impact*)

As discussed above, the California Supreme Court decision has indicated that the impact of existing environmental conditions on a project's future users or residents are generally not required to be considered in a CEQA evaluation, except when the project may exacerbate existing hazards or existing conditions.[6] CEQA analysis is concerned with a project's impact on the environment, rather than with the environment's impact on a project and its users or residents. However, this document nevertheless analyzes potential effects of the environment on the Proposed Project to provide information to the public and decision-makers. Where a potential significant effect of the environment on the Proposed Project is identified, the document, as appropriate, identifies City SCA and/or project specific non-CEQA recommendations to address these issues.

6 *California Building Industry Association v. Bay Area Air Quality Management District,* S213478. (A135335, A136212; 218 Cal.App.4th 1171; Alameda County Superior Court; RG10548693. Filed December 17, 2015.)

Multi-family residential development in mid- and high-rise buildings throughout the Plan Area is expected to make up the greatest share of future development under the Proposed Project. Many of the new buildings would be developed in areas where the existing exterior community noise environment exceeds the General Plan's "normally acceptable" threshold of 65 dBA for residential uses. Residential uses, motels, and other uses such as dormitories and nursing homes, are required to have interior noise levels no greater than 45 dBA, per California's Noise Insulation Standards (CCR Part 2, Title 24).

To achieve the indoor noise standards, many new buildings with residential uses would need to incorporate noise reduction measures that have the effect of reducing noise levels by more than 20 dB from exterior levels. To ensure that new development achieves the State standard, the General Plan identifies an action to "continue to use the building-permit application process to enforce the California Noise Insulation Standards regulating the maximum allowable interior noise level in new multi-unit buildings." This action is put into effect by SCA 67, Exposure to Community Noise, which mandates noise reduction measures be incorporated into project design to achieve an acceptable interior noise level. Compliance with SCA 67 would reduce this non-CEQA impact to a less than significant level.

Mitigation: None required.

Summary

With adherence to SCA 67 and other regulatory compliance, future development under the Proposed Project would result in a less than significant impact related to exposure to interior noise.

Impact NOI-7: Adoption of the Proposed Project would not expose people in the Plan Area to community noise in conflict with the land use compatibility guidelines of the Oakland General Plan. (Criterion 6) (*Less than Significant for this non-CEQA impact*)

As discussed above, the California Supreme Court decision has indicated that the impact of existing environmental conditions on a project's future users or residents are generally not required to be considered in a CEQA evaluation, except when the project may exacerbate existing hazards or existing conditions.[7] CEQA analysis is concerned with a project's impact on the environment, rather than with the environment's impact on a project and its users or residents. However, this document nevertheless analyzes potential effects of the environment on the Proposed Project to provide information to the public and decision-makers. Where a potential significant effect of the environment on the Proposed Project is identified, the document, as appropriate, identifies City SCA and/or project specific non-CEQA recommendations to address these issues.

Future development under the Proposed Project is expected to occur primarily in the form of mid- and high-rise multi-family buildings. Future development would result in an increase in traffic on

[7] *California Building Industry Association v. Bay Area Air Quality Management District,* S213478. (A135335, A136212; 218 Cal.App.4th 1171; Alameda County Superior Court; RG10548693. Filed December 17, 2015.)

roadways, which would increase community noise levels. As described above, the existing community noise environment in much of the Plan Area is above "normally acceptable" conditions for residential development, as defined in the General Plan.

According to Oakland's land use compatibility guidelines shown in Table 4.11-4, residential uses, schools, libraries, churches, hospitals, and nursing homes are compatible with noise levels up to 60 dBA and conditionally compatible with noise levels up to 70 dBA. As shown in Table 4.11-9, noise levels above 70 dBA are projected to be limited to within 50 feet of roadway centerlines on about half of the roadway segments studied. This means that development of residential uses along many roadways could experience future exterior noise levels above 70 dBA, a condition considered "normally unacceptable," as well as portions that could experience "conditionally acceptable" noise levels. Altogether, it is reasonable to conclude that many housing sites would experience community noise levels resulting from traffic above those which the General Plan considers "normally acceptable."

The conclusion that community noise levels would exceed General Plan guidelines at some housing sites must be qualified by several factors. First, the noise modeling does not account for the noise reduction likely to be provided by intervening structures between the subject building and the noise source. In a densely developed urban environment which will become more developed over the course of the projection period, some acoustical shielding of roadway noise will occur. Additionally, land use compatibility standards for residential uses in Table 4.11-4 were developed assuming a minimal exterior to interior noise reduction of 15 dBA with standard building materials. For example, the exterior noise exposure for residential uses is 60 dBA which effectively correlates to an interior noise level of 45 dBA. The more critical noise environment for residents is indoors, where daily activities most sensitive to noise take place. As described in more detail under Impact NOI-6, acceptable indoor noise levels would be ensured through compliance with the City's SCA 67, Exposure to Community Noise.

Railroad operations are another source of noise in the portion of the Plan Area south of I-880 near the Union Pacific /Amtrak railroad. According to the Oakland General Plan's Noise Element, a typical train traveling at 25 mph may produce noise levels in excess of 95 dBA at a distance of 100 feet from the tracks, while train horns may approach 110 dBA. As described above, "line sources" such as noise from vehicles or trains attenuate at a rate between 3 dB and 4.5 dB for each doubling of distance from the reference measurement. Conservatively assuming a 3-dB reduction for each doubling of distance, noise from trains would be reduced to 70 dB at a distance of about 800 feet, while train horns would be heard at above 70 dB for up to 1,300 feet.

To conclude, many parts of the Plan Area that may be locations of future residential development under the Proposed Project experience noise levels in excess of the General Plan's land use compatibility guidelines, and Proposed Project-related traffic would marginally contribute to increased noise levels. However, housing would be developed in the context of a community noise environment that currently exceeds standards in much of the Plan Area. In addition, the City of Oakland's General Plan and Noise Ordinance provide a strong policy framework for minimizing noise impacts in new development. The Noise Element's Action 3.1 requires that new multi-unit buildings meet State insulation standards regulating the maximum allowable interior noise level.

SCA 67 requires that noise reduction in the form of sound-rated assemblies (windows, exterior doors, and walls) and/or other measures is incorporated into project design, and that a qualified acoustical consultant confirm that quality control was exercised and that interior noise standards were achieved during performance testing before a Certificate of Occupancy is approved. SCAs 69 and 70 ensure that noise and vibration from construction and operations are minimized. Existing General Plan policies specifically focused on land use compatibility include Policies W1.3 (reducing land use conflicts); N5.2 (buffering residential areas); and N11.6 (alleviating public nuisances). Adherence to these existing policies and SCAs would ensure that the noise environment in the Plan Area does not increase in a manner that worsens existing land use compatibility or exposes noise-sensitive land uses to "unacceptable" noise levels. Any potential non-CEQA noise impacts are thus reduced to a less than significant level.

Mitigation: None required.

Summary

With adherence to SCA 67, 69, and 70, as well as other regulatory compliance, future development under the Proposed Project would result in a less than significant impact related to community noise.

Impact NOI-8: Adoption of the Proposed Project would not expose persons to or generate groundborne vibration that exceeds criteria established by the Federal Transit Administration (FTA). (Criterion 8) (*Less than Significant*)

The FTA has established impact criteria for groundborne vibration from transit vehicles, as shown in **Table 4.11-10**. The City of Oakland has determined that these criteria are appropriately applied to both transit- and non-transit-related sources of vibration.

TABLE 4.11-10
FTA GROUNDBORNE VIBRATION IMPACT CRITERIA

Land Use Category	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category I: Buildings where vibration would interfere with interior operations	65 VdB[4]	65 VdB[4]	65 VdB[4]
Category II: Residences and buildings where people normally sleep	72 VdB	75 VdB	80 VdB
Category III: Institutional land uses with primarily daytime use	75 VdB	78 VdB	83 VdB

NOTES:
1 More than 70 vibration events of the same source per day.
2 Between 30 and 70 vibration events of the same source per day.
3 Less than 30 vibration events of the same source per day.
4 This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration sensitive manufacturing or research should always require detailed evaluation to define the acceptable vibration levels.

SOURCE: FTA, 2018

Both the Bay Area Rapid Transit (BART) system and the Union Pacific freight rail line and Amtrak run along at-grade tracks in some portions of the Plan Area. Passenger trains run daily while freight train traffic is variable and occurs during both day and night. Railroad operations represent an occasional source of vibration as determined by FTA standards (see Table 4.11-10). A study of freight rail operations along another northern California corridor found the expected impact of trains to be 78 vibration decibels (VdB) at 50 feet from the tracks, 75 VdB at 70 feet, 72 VdB at 100 feet from the tracks, and 65 VdB at 225 feet from the tracks (Northcoast Railroad Authority, 2009). The City's SCA 69 requires that any new development adjacent to an active rail line prepare a Vibration Reduction Plan and incorporate vibration-reducing methods if necessary. With adherence to the City's existing SCA, this potential impact would be less than significant.

Mitigation: None required.

Summary

With adherence to SCA 69, future development under the Proposed Project would result in a less than significant impact related to operational groundborne vibration.

Impact NOI-9: Adoption of the Proposed Project would not result in new housing located within an airport land use plan that could expose people residing in the Plan Area to excessive noise levels. (Criterion 9) (*Less than Significant*)

Future residential development under the Proposed Project may be located within the Airport Influence Area of the Oakland International Airport (OIA). OIA operations generate noise that is demonstrated in the noise contours developed for its Airport Land Use Compatibility Plan and presented in Figure 4.11-3. As shown in the figure, existing noise levels surrounding the airport often exceed 65 CNEL/DNL, which is considered a threshold for a generally acceptable level of noise when outdoors.

As discussed in Impact NOI-6, above, the existing community noise environment in much of the Plan Area is above "normally acceptable" conditions for residential development. Policy 1, Action 1.3 of the City's General Plan Noise Element directs the City to continue working with the Alameda County Community Development Agency (in its role as the County's airport land use commission) and with the Port of Oakland to ensure consistency with the County's airport land-use plan of the City's various master-planning documents, zoning ordinance and land-use development proposals near Oakland's airport.

According to Oakland's land use compatibility guidelines, shown in Table 4.11-4, residential uses, schools, libraries, churches, hospitals, and nursing homes are compatible with noise levels up to 60 dBA and conditionally compatible with noise levels up to 70 dBA. As shown in Figure 4.11-3, only a small portion of Bay Farm Island exists within the 60 CNEL noise contour for OIA operations which lies in the City of Alameda. All future development under the Proposed Project would be located outside of the 60 CNEL noise contour for OIA operations and the potential impact of exposure of people residing in the Plan Area to excessive noise levels from airport operations would be less than significant.

Mitigation: None required.

Summary

With adherence to the Noise Element of the City's General Plan, the Proposed Project would result in a less than significant impact to an airport land use plan.

4.11.5 Cumulative Impacts

This section presents an analysis of the cumulative effects of future development under the Proposed Project in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to noise could occur if the incremental impacts of the Proposed Project combined with the incremental impacts of one or more of the cumulative projects would cause a cumulatively considerable impact related to noise. This analysis then considers whether the incremental contribution of the Proposed Project to this cumulative impact would be considerable. Both conditions must apply for a project's cumulative effects to be significant.

Impact NOI-10: Adoption of the Proposed Project, combined with cumulative development, would not result in significant cumulative impacts to Noise. (*Less than Significant*)

Geographic Context

The geographic context for the analysis of cumulative noise impacts is cumulative development in the City of Oakland, in combination with cumulative development in neighboring jurisdictions.

Cumulative Impacts – Construction

The discussion of cumulative construction-related noise and vibration impacts assesses whether future development under the Proposed Project, in conjunction with overall citywide growth and other cumulative projects, would significantly affect the roadway noise and, if so, whether the Proposed Project's contribution to the cumulative impact would be considerable.

Development that could occur with implementation of the Proposed Project and cumulative development could be constructed contemporaneously and could result in construction noise levels higher than those of development of under the Proposed Project alone at some receptor locations.

As discussed in Impact NOI-1, above, sensitive receptors located within 50 feet of an excavator or other construction equipment producing similar levels of noise could be exposed to a noise level of 82 dBA L_{eq}. The City of Oakland has established and enforces noise standards for construction activity for both daytime and nighttime hours. Further, SCAs 62, 63, 64, 65, and 66 identified above would address these potentially significant construction noise impacts of all other cumulative construction projects. Compliance with these SCA's will ensure that construction noise resulting from future development under the Proposed Project and other cumulative development does not violate the City's Noise Ordinance, reducing this potential impact to less than significant. Therefore, while the potential exists for construction projects

under the Proposed Project and other foreseeable development to occur simultaneously and in proximity to one another, construction equipment operations would operate within the constraints of Municipal Code and impacts associated with future construction activities conflicting with local noise standards would be less than significant.

With regard to the potential for a cumulative vibration-related damage impact to occur, because vibration impacts are based on instantaneous PPV levels, worst-case groundborne vibration levels from construction are generally determined by whichever individual piece of equipment generates the highest vibration levels. Unlike the analysis for average noise levels, in which noise levels of multiple pieces of equipment can be combined to generate a maximum combined noise level, instantaneous peak vibration levels do not combine in this way. Vibration from multiple construction sites, even if they are located close to one another, would not combine to raise the maximum PPV. Further, SCA 70 identified above would address the potentially significant construction vibration impacts of other cumulative project by requiring project applicants to prepare a Vibration Analysis that identifies design means and methods to avoid damaging structures and/or substantially interfering with activities. For these reasons, vibration impacts resulting from construction of future development under the Proposed Project would not combine with vibration effects from cumulative projects in the vicinity. Therefore, cumulative groundborne vibration impacts related to potential damage effects and interference with vibration-sensitive equipment would be less than significant.

Construction activities of other cumulative development would also use heavy machinery, and industrial processes can generate high noise levels that could expose employees that work in loud environments can suffer hearing loss from excessive noise exposure. The Proposed Project would not facilitate development of new land uses that would involve substantial operational noise generation that could expose workers to interior noise levels in excess of OSHA standards. However, construction associated with the development of future projects under the Proposed Project would result in high noise levels. Applicable businesses (including construction contractors) within the State of California are required to comply with the California OSHA noise exposure standards to avoid health risks associated with loud work environments and these requirements also apply to other cumulative development projects. In addition, Oakland has established its own, more restrictive noise exposure standards as Chapter 17.120 of the Planning Code. Construction activities would be required to adhere to these regulations, reducing potential impacts related to occupational noise to less than significant.

Cumulative Impacts –Operations

The discussion of cumulative operational noise impacts assesses whether future development under the Proposed Project, in conjunction with overall citywide growth and other cumulative projects, would significantly affect the roadway noise and, if so, whether the Proposed Project's contribution to the cumulative impact would be considerable. The operational analysis of the Proposed Project condition is largely a cumulative analysis in that the transportation modeling also includes the citywide and regional changes in housing units and employment that would occur through the projection period ending in 2030 regardless of adoption of the Proposed Project. Thus, the operational noise impacts of the Proposed Project presented in Impact NOI-5 considers the changes in travel demand projected to occur through 2030 due to land use growth,

and the cumulative transportation and infrastructure projects anticipated to be completed in 2030. Construction and operational noise impacts of the Proposed Project presented in Impacts NOI-1 through NOI-4 and NOI-6 through NOI-9 also consider the changes in cumulative land use growth projected to occur through 2030.

Mitigation: None required.

Summary

With adherence to the aforementioned SCAs and other regulatory compliance, adoption of the Proposed Project would result in a less than significant cumulative impact with respect to noise.

4.11.6 References – Noise and Vibration

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4.12 Population and Housing

This section describes existing conditions and potential environmental effects of the Proposed Project pertaining to population, housing, and employment. The section discusses relevant existing environmental conditions of the Plan Area, changes in population, households and employments over time, regulations pertinent to this section, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts to the physical environment that could result from implementation of the Proposed Project and its associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that would reduce potential impacts to this environmental topic are identified; both existing and proposed updated/new General Plan policies and SCAs are considered.

This section relies in part on data provided by the Association of Bay Area Governments' (ABAG) and Metropolitan Transit Commission's (MTC) *Plan Bay Area 2050* and *Plan Bay Area 2040*; the Economic Trends and Prospects Baseline Analysis for Oakland General Plan, 2022; the Department of Finance; the U.S. Census Bureau; and the 2021 Alameda County Assessor's parcel records. It should be noted that many of these datasets represent estimates that show trends. Coupled with the volatile nature of population change in Oakland from 2020 to 2021, minor discrepancies in numbers are anticipated.

For the purposes of a consistent analysis throughout the Draft EIR, existing and future population conditions were estimated with an attempt to reconcile existing housing and land use conditions (derived from the 2021 County Assessor's data) with limitations of the Alameda Countywide travel model (see Section 4.15, *Transportation and Circulation*). The Alameda Countywide travel model had defined a 2020 base year land use database (estimated prior to 2020) and 2040 land use forecast based on the Plan Bay Area 2040 Regional Transportation Plan. The travel model uses transportation analysis zones (TAZs), the spatial unit at which transportation calculations take place. TAZs are used to organize and store spatial data that are used as inputs to the travel model. To more accurately reflect existing housing units in the model, the 2020 base year housing quantities in each TAZ were updated based on more current information from the 2021 County Assessor's data. Thus, for ease of comparison, and to ensure that Draft EIR analysis consistently uses the same metrics of change, existing and buildout (2030) conditions presented in Table 3-6 in Chapter 3, *Project Description*, and described and presented below in Table 4.12-7 represent a reconciliation between 2020 and 2021 data for a 2020 baseline. The existing and buildout estimates presented in these tables are referred to herein as the "Project Description" population estimates.

The section also incorporates relevant information from the General Plan Update Map Atlas prepared in support of the Proposed Project (see Appendix A). No scoping comments related to population and housing were received in response to the NOP (Notice of Preparation) of this Draft EIR.

4.12.1 Environmental Setting

4.12.1.1 Population and Housing Terminology

Definitions of terms used in the characterization of baseline conditions, regulatory framework, and impact analysis for population and housing are provided below. Definitions are from the U.S. Census Bureau.

Housing Unit: A house, an apartment or other group of rooms, or a single room when it is occupied or intended for occupancy as separate living quarters; that is, when the occupants do not live with any other persons in the structure and there is direct access from the outside or through a common hall. Housing units may be vacant or occupied.

Household: Consists of all the people who occupy a housing unit.

Cost Burden: Paying more than 30 percent of their income for housing and having difficulty affording necessities such as food, clothing, transportation, and medical care. People who are extremely cost burdened pay more than 50 percent of their income for housing.

Jobs: Number of people working in a specified area.

Employed Residents: People who, during the reference week, (a) did any work at all (for at least 1 hour) as paid employees; worked in their own businesses, professions, or on their own farms; or worked 15 hours or more as unpaid workers in an enterprise operated by a family member or (b) were not working, but who had a job or business from which they were temporarily absent because of vacation, illness, bad weather, childcare problems, maternity or paternity leave, labor-management dispute, job training, or other family or personal reasons whether or not they were paid for the time off or were seeking other jobs. Employed residents live within the stated area, but may not work within the stated area.

4.12.1.2 City of Oakland and Region

The City of Oakland is one of 100 communities within 9 counties that form the greater Bay Area region, and one of 14 incorporated cities and 6 unincorporated communities in Alameda County. ABAG and MTC are jointly responsible for regional growth planning in the Bay Area. As described in *Plan Bay Area 2050*, the region's employment, housing, and population are projected to continue to grow through 2050, despite economic fluctuations resulting from the COVID-19 pandemic and the subsequent economic slowdown. Alameda County is expected to have the second greatest share of housing and job growth after Santa Clara County.[1]

4.12.1.3 Population

According to the U.S. Census, Oakland had a population of 440,646 as of 2020 and was the eighth largest city in California. ABAG-MTC has also provided estimates of population growth from the California Department of Finance (DOF) indexed to the population in the year 1990 for Oakland and surrounding regions and estimates the population at approximately 433,700 in 2020; this estimate correlates closely with the Project Description's baseline 2020 population estimate of 433,395 people, as shown in Table 4.12-7. Oakland's population represents approximately

[1] Association of Bay Area Governments & the Metropolitan Transportation Commission (MTC), 2021. Plan Bay Area 2050, October 21.

26 percent of the total population of Alameda County and 5.7 percent of the nine-county Bay Area. Prior to 1980, Oakland experienced three decades of population decline. Beginning around 1990, the Bay Area became a focal point of significant economic development and investment in the technology sector. By the late 1990s, Oakland became an attractive target for investment and, in part, a respite from higher rents and home prices in other parts of the Bay Area. By the early 2000s, significant growth without significant regional housing production resulted in severe constraints on housing throughout the region. The 2008-2009 Great Recession and the foreclosure crisis saw a brief decline in housing demand, with catastrophic impacts for affected residents, but population growth picked up throughout the economic recovery and has continued to date.

Historically, both Alameda County and the Bay Area have generally experienced a faster average annual rate of growth than the City of Oakland. This has shifted in recent years, however, as the City's rate of population growth began to outpace the County and the region from 2010 to 2020. Oakland's 2020 population represents an increase by over 50,000 from 390,724 in 2010, making Oakland one of the top 10 cities in the State in terms of overall population growth between 2010 and 2020.

Table 4.12-1 summarizes the population trends for the City of Oakland, Alameda County, and the Bay Area from 1990 to 2030. By 2040, the Bay Area's population is projected to increase to 9.49 million and by 2050, 10.33 million at a rate of approximately one percent average annual growth.[2] Oakland is projected to experience significant increase in population between 2020 and 2030, at a greater average annual rate compared to Alameda County and the Bay Area. Oakland's population is projected to reach 694,268 by 2050.

TABLE 4.12-1
POPULATION GROWTH TRENDS FOR OAKLAND AND SURROUNDING REGIONS

	City of Oakland			Alameda County			Bay Area[4]		
Year	Population	Net Change	Average Annual % Growth[1]	Population	Net Change	Average Annual % Growth[1]	Population	Net Change	Average Annual % Growth[1]
1990	372,242			1,276,702			6,020,147		
2000[2]	399,566	27,324	0.71%	1,443,929	167,227	1.24%	6,784,348	764,201	1.27%
2010[2]	390,274	-9,292	-0.24%	1,510,271	66,342	0.45%	7,150,739	366,391	0.54%
2020[2]	440,646	50,372	1.22%	1,682,353	172,082	1.08%	7,765,640	614,901	0.82%
2021[3]	433,797	-6,849	-1.55%	1,648,556	-33,797	-2.01%	7,582,622	-183,018	-2.36%
2030[5]	554,325	113,679	2.32%	1,868,635	186,282	1.26%	8,689,440	923,800	1.37%

NOTES
1 "Average Annual Percent Growth" is compounded growth rate over the previous 10 years. Between 2020 and 2021, percent change is calculated.
2 1990, 2000, 2010, and 2020 population estimates derived from U.S. Decennial Census.
3 2021 population estimates derived from American Community Survey 2021 1-Year Estimates. This data year is intended to provide a comparison for the Project Description, which reconciles 2020 and 2021 data. Please see the introduction for more information.
4 Bay Area estimates sum Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano County, and Sonoma county population data. 2030 projections use Plan Bay Area 2040 estimates for these counties for the year 2030.
5 2030 data is derived from Plan Bay Area 2040 projections (2017). Net change and average annual percent growth is taken for the period between 2020 and 2030.

SOURCE: See Notes above

2 Association of Bay Area Governments & the Metropolitan Transportation Commission (MTC), 2021. Draft Forecasting and Modeling Report, Plan Bay Area 2050, October 21.

Racial and Ethnic Diversity

Oakland remains one of the most ethnically diverse cities in the country. The U.S. Census estimates that as of 2020 the City of Oakland's population was classified as:

- 27.3 percent White
- 28.8 percent Hispanic or Latino
- 20.8 percent Black or African American
- 15.9 percent Asian
- 0.6 percent Native Hawaiian and Other Pacific Islander
- 6.3 percent Other or Multiple Races
- 0.3 percent American Indian and Alaskan Native

The City's population trends demonstrate a major decline in Black or African American residents between 2000 and 2020 at approximately 34.7 percent. This is also observed in Alameda County but with a less severe decline of 24.5 percent. The share of Hispanic or Latino residents increased significantly in both Oakland and Alameda County, with an increase of 45 and 43.8 percent respectively. While the share of Asian residents in Oakland only increased 15.8 percent between 2000 and 2020, this figure increased 84.7 percent in Alameda County. Supporting race and ethnicity data are presented in **Table 4.12-2**.

4.12.1.4 Housing

Between 1990 and 2000, the number of households in Oakland increased from 144,521 to 150,787, as shown in **Table 4.12-3**. Since 2000, strong regional housing demand, fewer remaining locations for development in the suburbs, renewed interest in center city living particularly in proximity to employment centers, and a relatively affordable land supply with favorable land use policies contributed to renewed housing development in Oakland.

The decade after 2000, the City experienced a significant increase in residential construction; from approximately 157,505 total housing units in 2000 to 169,710 total units in 2010. After the Great Recession, the construction rate slowed. In 2020, the number of housing units experienced a similar boom of almost 10,000 new units. The number of households also increased significantly compared to the previous three decades, from 153,791 in 2010 to 167,909 in 2020.

Household sizes are generally a function of socioeconomic factors as well as housing unit characteristics. New, smaller units tend to accommodate smaller households, with larger, older, and more affordable units accommodating larger households. As shown in Table 4.12-3, the City's average household size is less than the region as a whole. Since 1990, the City has seen an average of between 2.49 and 2.61 persons per household, while the Bay Area region has seen an average of between 2.59 and 2.74 persons per household.

In 2021, Oakland had an estimated 170,266 households, comprising approximately 29 percent of Alameda County households. Significant growth in Oakland households is projected to continue, increasing to 211,790 by 2030. Approximately 668,370 households are projected for Alameda County by 2030 and 4 million Bay Area households by 2050.

TABLE 4.12-2
RACE AND ETHNICITY: OAKLAND AND ALAMEDA COUNTY, 2000-2020

	2000[1]		2010[1]		2020[1]		2021[2]		Change 2000 – 2020	
	Number	%	Number	%	Number	%	Number	%	Population	%
Oakland										
White*	93,953	23.52%	101,308	25.93%	120,187	27.28%	122,904	28.33%	26,234	27.92%
Black or African American*	140,139	35.08%	106,637	27.29%	91,561	20.78%	88,276	20.35%	-48,578	-34.66%
American Indian and Alaskan Native*	1,471	0.37%	1,214	0.31%	1,371	0.31%	1,247	0.29%	-100	-6.80%
Asian*	60,393	15.12%	65,127	16.67%	69,906	15.86%	70,356	16.22%	9,513	15.75%
Native Hawaiian and Other Pacific Islander*	1,866	0.47%	2,081	0.53%	2,668	0.61%	1,070	0.25%	802	42.98%
Hispanic or Latino	87,467	21.89%	99,068	25.35%	126,843	28.79%	117,226	27.02%	39,376	45.02%
Other or Multiple races*	12,807	3.21%	15,289	3.91%	28,110	6.38%	32,718	7.54%	15,303	119.49%
Total	**399,484**	**100.00%**	**390,724**	**100.00%**	**440,646**	**100.00%**	**433,797**	100.00%	**41,162**	**10.30%**
Alameda County										
White*	591,095	40.94%	514,559	34.07%	472,277	28.07%	465,932	28.26%	-118,818	-20.10%
Black or African American*	211,124	14.62%	184,126	12.19%	159,499	9.48%	157,963	9.58%	-51,625	-24.45%
American Indian and Alaskan Native*	5,306	0.37%	4,189	0.28%	4,131	0.25%	4,380	0.27%	-1,175	-22.14%
Asian*	292,673	20.27%	390,524	25.86%	540,511	32.13%	535,054	32.46%	247,838	84.68%
Native Hawaiian and Other Pacific Islander*	8,458	0.59%	11,931	0.79%	13,209	0.79%	12,880	0.78%	4,751	56.17%
Hispanic or Latino	273,910	18.97%	339,889	22.51%	393,749	23.40%	369,668	22.42%	119,839	43.75%
Other or Multiple races*	61,175	4.24%	65,053	4.31%	98,977	5.88%	102,679	6.23%	37,802	61.79%
Total	**1,443,741**	**100%**	**1,510,271**	**100%**	**1,682,353**	**100.00%**	**1,648,556**	100.00%	**238,612**	**16.53%**

NOTES

* Non-Hispanic or Latino

[1] 1990, 2000, 2010, and 2020 race/ethnicity estimates derived from U.S. Decennial Census.

[2] 2021 race/ethnicity estimates derived from American Community Survey 2021 1-Year Estimates. This data year is intended to provide a comparison for the Project Description, which reconciles 2020 and 2021 data. Please see the introduction for more information.

SOURCES: See Notes above

TABLE 4.12-3
HOUSING UNITS AND HOUSEHOLDS IN OAKLAND AND SURROUNDING REGION

	Oakland			Alameda County		
Year	Total Housing Units	Households[1]	Persons per Household	Total Housing Units	Households	Persons per Household
1990[2]	154,737	144,521	2.52	504,109	479,518	2.59
2000[2]	157,505	150,787	2.61	540,183	523,366	2.71
2010[2]	169,710	153,791	2.49	582,549	545,138	2.70
2020[2]	178,469	167,909	–	621,958	591,636	–
2021[3]	186,660	170,266	2.52	629,159	589,180	2.74
2030[4]	–	211,790	–	–	668,370	–

NOTES
1 Households are defined as an occupied residential unit
2 Housing units and households for 1990, 2000, 2010, and 2020 are derived from the Decennial Census
3 Housing units and households for 2021 are taken from the 2021 American Community Survey 1-year estimates. This data year is intended to provide a comparison for the Project Description, which reconciles 2020 and 2021 data. Please see the introduction for more information.
4 City-level data for 2030 is derived from Plan Bay Area 2040 (from 2017) and remains the most current citywide projection.

SOURCE: See Notes above.

Housing Cost

Housing prices have increased throughout Oakland and the region in recent years as the economy attracted new residents to the Bay Area and drove rapid population growth. The demand and price pressure have exerted a strong effect on housing prices in Oakland, proportional to both Alameda County and the Bay Area. Median rent values have risen dramatically in Oakland between 2010 and 2019 from $926 to $1,345.[4] In Alameda County, median rents increased over $600 in this same time from $1,106 to $1,692. In the Bay Area, between 2010 and 2019, median rent increased approximately $650 from $1,196 to $1,849.

Home values have experienced a similar boom over the past 10 years. In Oakland, typical home value as designated by the Zillow Home Value Index was approximately $371,045 in 2010. This value increased to $845,670 by 2020. Alameda County and Bay Area values are both slightly higher, increasing over the same time period from $447,593 to $951,381 and $531,581 to $1,077,333 respectively.[3]

Significant increases in housing costs that outpace increases in incomes have resulted in increasingly cost-burdened population in Oakland relative to the region. In 2010, 55 percent of renters in Oakland were cost-burdened, while 31 percent of renters were severely burdened. Both cost-burden and severe cost-burden decreased slightly to 51 and 27 percent respectively in 2019. Homeowners have experienced a similar level of burden, with 49 percent of the population cost-burdened and 23 percent severely cost-burdened in 2010. These values decreased in 2019 to 33 and 14 percent for burden and severe burden.

3 ABAG Housing Needs Data Workbook, Oakland

Oakland residents of color are more likely to experience cost-burden relative to White, non-Hispanic residents.[4] For example, over half of Black or African American, Non-Hispanic; 46 percent of Hispanic or Latino residents; 41 percent Asian/API, Non-Hispanic residents; and 37 percent of American Indian or Alaskan Native, Non-Hispanic Oakland residents spent 30 percent to over 50 percent of their income on housing. This is compared to only 30 percent of White, Non-Hispanic residents spending the same amount.

4.12.1.5 Employment

Employment trends in Oakland demonstrated a steady increase between 2000 and 2010 increasing from 174,743 to 183,285 employed residents. Despite the economic recession, employment experienced an identical average annual growth rate at 0.49 percent for both Oakland and Alameda County during this decade. From 2010 to 2020 there was a greater increase in average annual growth at 2.29 percent in Oakland, with employed residents reaching 225,325. This growth was higher than that for Alameda County over the same time period which was 2.12 percent, though both geographies experienced robust growth, as detailed in **Table 4.12-4**. These trends demonstrate greater emphasis on the growth potential of Oakland's central location for economic development and employment opportunities. In 2017, Plan Bay Area 2040 projected a total 267,165 employed residents by 2030.

TABLE 4.12-4
EMPLOYMENT TRENDS IN OAKLAND AND ALAMEDA COUNTY

	Oakland			Alameda County		
Year	Employed Residents	Net Change	Average Annual % Growth[1]	Employed Residents	Net Change	Average Annual % Growth[1]
2000[2]	174,743			682,833		
2010[3]	183,285	8,542	0.48%	716,257	33,424	0.48%
2020[3]	225,325	42,040	2.09%	867,923	151,666	1.94%
2021[4]	222,304	-3,021	-1.34%	838,546	-29,377	-3.38%
2030[5]	267,165	41,840	1.72%	959,745	91,822	1.36%

NOTES
1 Average Annual Percent Growth" is compounded growth rate over the previous 10 years. Between 2020 and 2021, average annual percent growth is calculated.
2 2000 data derived from 2000 Decennial Census
3 2010 and 2020 data derived from 5-year American Community Survey, 2006-2010 and 2016-2020.
4 2021 data derived from 1-year American Community Survey, 2021.
5 City and county level data for 2030 is derived from Plan Bay Area 2040 (from 2017) and remains the most current citywide projection. Net change and annual percent growth is for the 2020 to 2030 period.

SOURCE: See Notes above

Jobs-housing balance, or more precisely, jobs to employed residents balance, can influence travel demand and commute patterns. A ratio of 1.0 means that the number of jobs equals number of employed residents, whereas a ratio greater than 1.0 indicates a net in-commute and less than 1.0 indicates a net out-commute. Actual in-commuting and out-commuting is influenced by many other factors, including job skills match, desired housing type match, and household locational preferences. Oakland demonstrates a 1.05 ratio for jobs to employed residents in 2020 as shown in **Table 4.12-5**, **Oakland Jobs/Employed Residents Balance**, **2020-2030**. However, housing

supply and employed residents is expected to increase at a faster pace than jobs, resulting in a jobs-employed residents ratio of 0.95 by 2030.

TABLE 4.12-5
OAKLAND JOBS/EMPLOYED RESIDENTS BALANCE, 2020-2030

	2020	2030	Percent Change
Jobs[1]	236,206	255,057	7.98%
Employed Residents[2]	225,325	267,165	18.57%
Jobs/Employed Residents	1.05	0.95	-9.52%

NOTES:
1 Existing jobs based on 2020 ACTC model. 2030 jobs based on Plan Bay Area 2040 projections.
2 Existing employed residents derived from 2016-2020 5-year American Community Survey. 222,304 employed residents were estimated from 2021 1-year ACS projections. 2030 employed residents based on Plan Bay Area 2040 projections.
3 Employment growth of approximately 18,851 jobs during the projection period is considered as background and is not part of the Proposed Project.

SOURCE: See notes above.

4.12.2 Regulatory Setting

4.12.2.1 Federal

There are no federal regulations, plans, or policies applicable to population, employment, and housing issues relevant to the Proposed Project.

4.12.2.2 State

California Government Code

Housing Element Law (Article 10.6)

California Planning Law requires each city and county to adopt a housing element as part of its general plan (Government Code Sections 65580–65590). Government Code Section 65583 explains as follows.

> *The housing element shall consist of an identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, financial resources, and scheduled programs for the preservation, improvement, and development of housing. The housing element shall identify adequate sites for housing, including rental housing, factory-built housing, mobile homes, and emergency shelters, and shall make adequate provision for the existing and projected needs of all economic segments of the community.*

The California Department of Housing and Community Development (State HCD) is responsible for assigning quantified regional housing shares to the various councils of government for allocation to the individual cities and counties within their region. State HCD is also responsible for reviewing and certifying the adequacy of the housing elements adopted by the cities and counties. ABAG is responsible for determining the regional housing needs of the individual cities in the Bay Area through the Regional Housing Needs Allocation (RHNA) process. Unlike other elements of a general plan, the housing element must be updated on a regular 8-year schedule (referred to as a housing element cycle). ABAG's current housing element cycle is in effect until

2023, and the next cycle will be from 2023 to 2031. In May 2021, ABAG approved the 2023–2031 Draft RHNA Plan. On December 16, 2021, the ABAG Executive Board adopted the Final Regional Housing Needs Allocation.

California Government Code Section 65863 was established to make sure that housing elements identify sufficient sites to accommodate the jurisdiction's RHNA or include programs to ensure that sites will be available throughout the planning period. Under the "No Net Loss" requirements, per Section 65583.2, a jurisdiction may not reduce residential density or allow development at a lower residential density unless the jurisdiction makes findings supported by substantial evidence that the reduction is consistent with the general plan and there are remaining sites identified in the housing element adequate to meet the jurisdiction's outstanding RHNA.

California Relocation Law, Public Resources Code Section 7260 et seq.

The California Relocation Law requires the fair and equitable treatment of persons displaced as a direct result of programs or projects undertaken by a public entity. The law requires agencies to prepare a relocation plan, provide relocation payments, and identify substitute housing opportunities for any resident that is to be displaced by a public project.

Housing Crisis Act of 2019 (SB 330)

The Housing Crisis Act prohibits local agencies from enacting new laws or taking actions that would reduce the legal limit on new housing developments within the jurisdiction's borders or delay new housing by administrative or other regulatory barriers. The also law creates a Preliminary Application process aimed at expediting the review and approval for housing developments. SB 330 applies to residential and mixed-use projects with at least two-thirds residential units and transitional or supportive housing projects.

The Housing Crisis Act additionally contains restrictions on the approval of housing development that would result in reduction of housing units or impact protected units. Under this provision, the city is prohibited from approving a housing development project that will require the demolition of one or more residential dwelling units unless the project will create at least as many residential dwelling units as will be demolished. The city is also prohibited from approving a housing development project that will require the demolition of occupied or vacant protected units unless the project satisfies all of the following requirements:

- The proposed development replaces all existing or demolished protected units, where replacement is defined as providing deed restricted units of equivalent size to the existing protected units to be made available at affordable rent or affordable housing cost to persons in the same or lower income category as those households in occupancy.
- The proposed development includes at least as many residential dwelling units as the greatest number of residential dwelling units that existed on the project site within the last five years
- Existing occupants are allowed to occupy their units until six months before the start of construction.
- Existing occupants are allowed to return at their prior rental rate if the demolition does not proceed.

- If the protected unit was occupied by a lower income households; the developer agrees to provide relocation benefits and a right of first refusal.

Protected units are defined to include (i) residential dwelling units that are or were subject to a recorded regulatory agreement restricting rents to lower income households; (ii) residential dwelling units that are or were subject to any form of rent control; (iii) residential dwelling units that are or were rented by lower income households within the past five years; and (iv) residential dwelling units that were withdrawn from rent or lease pursuant to the Ellis Act.

Sustainable Communities and Climate Protection Act of 2008 (Chapter 728, Statutes of 2008)

The Sustainable Communities and Climate Protection Act of 2008, otherwise known as Senate Bill (SB) 375, requires the integration of land use, housing, and transportation planning to achieve regional greenhouse gas (GHG) emission reductions, adopted by the California Air Resources Board. SB 375 requires Metropolitan Planning Organizations (MPOs) to develop a Sustainable Communities Strategy (SCS)—a new element of the regional transportation plan (RTP)—to plan for achieving these GHG reduction targets. The SCS must demonstrate the attainment of the regional GHG emissions reduction targets while accommodating the full projected population of the region (see Section 4.7, *Greenhouse Gas Emissions*).

4.12.2.3 Regional

Regional Housing Needs Allocation and SB 375

As noted above, the RHNA process is mandated by State Housing Law and is a precursor to the periodic process of updating local housing elements of the general plan. The State determines what the total housing need will be in the region for the planning period, and ABAG distributes that need among local jurisdictions in the Bay Area, initiating each jurisdiction's housing element update. **Table 4.12-6** shows the 2023-2031 RHNA by income level for the City of Oakland and the region. Based on its allocation, the City of Oakland is required to identify sites sufficient to accommodate 26,251 new housing units at the specified levels of affordability.

TABLE 4.12-6
OAKLAND REGIONAL HOUSING NEEDS ASSESSMENT, 2023-2031

Income Level[1]	Income Range	Needed Units	Percent of Needed Units
Very-Low-Income (0-50% AMI)	<$46,287	6,511	24.8%
Extremely-Low-Income (<30% AM part of Very-Low-Income in previous row)[2]	<$27,772	3,256	-
Low-Income (51-80% AMI)	$27,773-$74,059	3,750	14.3%
Moderate-Income (81-120% AMI)	$74,059-111,089	4,457	17.0%
Above-Moderate-Income (>120% AMI)	>$111,090	11,533	43.9%
Total		**26,251**	**100.0%**

NOTES:
1 Income levels were determined by county median household income based on 2014-2018 American Community Survey data (Table B19013). The median income in Alameda County during this period was $92,574.
2 Extremely-low-income housing need is assumed to be 50 percent of very-low-income housing need.
3 AMI refers to area median income.

SOURCE: ABAG, Final RHNA Plan, December 2021

Plan Bay Area 2050

As required by Senate Bill 375, all metropolitan regions in California must complete an SCS (as part of a Regional Transportation Plan). In the Bay Area, the MTC and ABAG are jointly responsible for developing and adopting an SCS that integrates transportation, land use, and housing to meet greenhouse gas reduction targets set by the California Air Resources Board (CARB). Plan Bay Area 2050, adopted in 2021, serves as the SCS for the Bay Area; this plan projects household and employment growth in the Bay Area through 2050, provides a roadmap for accommodating expected growth, and connects this growth to a transportation investment strategy that strives to move the Bay Area toward key regional goals for the environment, economy, and social equity. As defined by the plan, Priority Development Areas (PDAs) are areas where new development will support the needs of residents and workers in a pedestrian-friendly environment served by transit (shown in Figure 3-3). Plan Bay Area 2050 is advisory; adherence by each jurisdiction is not compulsory. Each city or county covered by the plan retains discretion over the land-use decisions, and Plan Bay Area 2050 provides guidance that cities and counties can use in making those decisions, particularly in light of the strategy for allocating transportation funding set forth in the plan.

Plan Bay Area 2050 predicts that approximately 315,000 jobs will be added in Alameda County and 1.4 million jobs will be added in the Bay Area region by 2050. Households in Alameda County are anticipated to grow by approximately 295,000 and by 1.37 million in the region. Job growth and household growth in Alameda County would equate to roughly 22 percent of regional growth.

4.12.2.4 Local Plans, Ordinances and Policies

Tenant Protections

Oakland has a range of tenant protections in place that seek to reduce displacement pressures. These include the Tenant Protection Ordinance (TPO), the Oakland Rent Adjustment Ordinance, rent ceilings, the Just Cause for Eviction Ordinance, the Ellis Act Ordinance, and the Uniform Relocation Ordinance.

Tenant Protection Ordinance

The TPO (Chapter 8.22, Article V of the Oakland Municipal Code) recognizes tenants' right to live in safe, dignified, harassment-free homes. The TPO deters and makes unlawful harassment by property owners and their agents, including property managers, recognizing that such harassment can frequently force tenants from their homes. The ordinance provides tenants strong legal recourse in the event of such prohibited harassment.

Rent Adjustment Ordinance

The Rent Adjustment Ordinance (Chapter 8.22, Article I of the Oakland Municipal Code) limits rent increases on covered units (most units built before 1983) based on a formula tied to increases in the Consumer Price Index. In 2022, the City Council adopted an amendment to change the formula used to calculate the annual allowable rent increase to 60 percent of the change in CPI, or 3 percent, whichever is lower. The Rent Adjustment Program (RAP), a division of Oakland Department of Housing and Community Development, will continue to enforce the Rent

Adjustment Ordinance. Rent ceilings also only allow rent to be increased every 12 months after a tenant's move in date or 12 months after the last rent increase. Tenants must receive written notice 30 days prior, or 60 days prior for increases greater than 10 percent. The total rent increase not exceed the total of three times the allowable CPI increase, and may not be greater than the lower of 10% or 5% plus the percent change in cost of living.

Just Cause for Eviction Ordinance

Just Cause for Eviction protections are enforced by the Rent Adjustment Program (RAP) and are contained within Chapter 8.22, Article II of the Oakland Municipal Code. The ordinance requires and defines just cause for an eviction. Particularly relevant to the Proposed Project, construction of new housing is not just cause for eviction.

Ellis Act Ordinance

The Ellis Act is a statewide law that permits property owners to terminate tenancy when withdrawing residential units from the rental market. Although the City cannot prohibit Ellis Act evictions, it has adopted the Ellis Act Ordinance (Chapter 8.22, Article III of the Oakland Municipal Code) to set specific requirements that must be followed when removing a property to discourage violations of the Act and prevent the displacement of renters. This includes filing withdrawal notices with the Oakland Rent Adjustment Program, and the provision of relocation assistance.

Tenant Relocation Ordinance

The Uniform Residential Tenant Relocation Ordinance (Ord. No. 13468; Chapter 8.22, Article VII of the Oakland Municipal Code) establishes a uniform schedule of relocation payments which are now extended to tenants evicted when the owner or qualifying relative moves in and for other "no tenant fault" evictions. The Uniform Relocation Ordinance requires owners to provide relocation payments to tenants displaced by code compliance activities, owner or relative move-ins, Ellis Act activity, and condominium conversions. The owner must file a Property Owner Certification Prior to Move-Out Negotiations with the Rent Adjustment Program prior to entering into Move-Out Negotiations. Tenants have an option or right to return to their rental unit after certain no-fault evictions, such as code compliance evictions after the repairs are completed or Ellis evictions if the units are re-rented.

Tenant Move Out Agreement Ordinance

The purposes of the Tenant Move Out Agreement Ordinance (Chapter 8.22, Article VI of the Oakland Municipal Code) are to improve the fairness and transparency of move out negotiations and move out agreements, to ensure that tenants who enter into move out negotiations or move out agreements are aware of their rights, to prevent property owners from contracting around the legal rights and remedies available to tenants under existing law, and to equip the city with useful tools for monitoring the impacts of move out agreements on Oakland's residents and housing market. Under the Tenant Move-Out Agreement Ordinance, a tenant has the following rights when considering a Move-Out Agreement:

- ***The right not to accept*** - A tenant is not required to enter into a Move-Out Agreement or engage in Move-Out Negotiations, and the landlord may not retaliate against a tenant for not accepting the offer. Offering payments to a tenant to vacate more than once in six (6) months

after the tenant has notified the owner in writing that the tenant refuses to enter into a Move-Out Agreement or engage in Move-Out Negotiations constitutes harassment under the Tenant Protection Ordinance (O.M.C. 8.22.600, et seq.)

- ***The right to consult an attorney*** - A tenant has the right to consult an attorney before entering into a Move-Out Agreement or engaging in Move-Out Negotiations.
- ***The right to rescind*** - A tenant may rescind the Move-Out Agreement at any time during the twenty-five (25) days after the agreement has been signed by both the landlord and tenant, unless the parties agree in writing to a shorter period of no less than fifteen (15) days. During this period, the tenant may rescind the agreement as long as the tenant has not moved out, and the decision to rescind is unanimous among the tenants who are parties to the Move-Out Agreement.
- ***Extended right to rescind if the Move-Out Agreement does not comply with the Ordinance*** - A Move-Out Agreement can be rescinded within six months if it does not meet the specifications required under the ordinance.

City of Oakland General Plan

2023-2031 Housing Element

The 2023-2031 Housing Element Update presents the City of Oakland's strategy to address Oakland's housing needs, including systemic housing inequity, through the protection, preservation, and production of homes. Goals, policies, and actions related to planned housing growth and avoiding displacement of people and housing include the following:

Goals

1. Protect Oakland Residents from Displacement and Prevent Homelessness
2. Preserve and Improve Existing Affordable Housing Stock
3. Close the Gap Between Affordable and Market-Rate Housing Production by Expanding Affordable Housing Opportunities
4. Address Homelessness and Expand Resources for the Unhoused
5. Promote Neighborhood Stability and Health

Policies

Policy 1.1: Tenant Protections and Anti-Displacement

Action 1.1.1: Continue to Implement the Rent Adjustment Program (RAP).

Action 1.1.2: Enforce Just Cause for Eviction measures.

Action 1.1.3: Enforce and strengthen Ellis Act Ordinance protections.

Action 1.1.4: Implement tenant relocation measures.

Action 1.1.5: Implement a right to counsel in Rent Adjustment Program proceedings.

Action 1.1.6: Enhance housing related legal services.

Action 1.1.7: Expand the City's ability to enforce rent control to maintain affordability.

Action 1.1.8: Monitor neighborhood displacement risk factors.

Action 1.1.9: Implement a rental housing registry.

Action 1.1.10: City Enforcement of the Tenant Protection Ordinance (TPO).

Action 1.1.11: Enforce the tenant right to return and protections from coercive buyouts.

Action 1.1.12: Provide a local preference in affordable housing projects.

Action 1.1.13: Negotiate for appropriate community benefits during development agreement approvals for major entitlements and use of City land.

Action 1.1.14: Protect Oakland residents from displacement and becoming homeless.

Policy 2.2: Preserve the Affordability of Existing Homes

Action 2.2.1: Continue to implement resale controls on assisted housing.

Action 2.2.3: Enforce residential demolition and conversion restrictions for residential hotels.

Action 2.2.4: Limit condominium conversions.

Action 2.2.5: Extend local replacement unit provisions.

Action 2.2.6: Reduce short-term home purchases/sales (i.e., "house flipping") to ensure affordability and prevent displacement.

Action 2.2.8: Investigate a Tenant/Community Opportunity to Purchase Act.

Policy 3.1: Facilitate Production of Deeply Affordable Housing[4]

Action 3.1.1: Develop a project-based rental or operating subsidy program for extremely-low-income residents.

Action 3.1.2: Align and target Oakland Housing Authority Section 8 Vouchers for permanent supportive housing and extremely-low-income units.

Policy 3.2: Create a More Diverse Mix of Homes to Meet Community Needs

Action 3.2.1: Develop zoning standards to encourage missing middle and multi-unit housing types in currently single-family-dominated neighborhoods, including flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and ADUs.

Action 3.2.3: Promote flexibility in adaptive reuse to increase the housing stock.

Policy 3.3: Expand Resources for the Construction of Affordable Homes

Action 3.3.3: City of Oakland Rental Assistance Program.

Action 3.3.4: Development of permanent housing affordable to extremely-low-income (ELI) households on public land.

Action 3.3.5: Implement an affordable housing overlay.

[4] Deeply Affordable housing for persons at 30% area median income or below.

Action 3.3.12: Continue the Acquisition and Conversion to Affordable Housing (ACAH) Program.

Policy 3.4: Reform Zoning and Land Use to Address Community Priorities

Action 3.4.1: Revise development standards, including allowable building heights, densities, open space and setbacks requirement.

Policy 3.5: Explore Innovative and Alternative Housing Models

Action 3.5.1: Support community land trusts and other shared equity models.

Policy 3.8: Convert Vacant Land and Units to Housing

Action 3.8.4: Continue the Oakland Community Buying Program and support scattered site acquisition efforts.

Policy 5.2: Promote Resilient and Sustainable Development

Action 5.2.2: Promote infill, transit-oriented development (TOD), and mixed-use development.

Action 5.2.8. Encourage new affordable housing in higher resource neighborhoods.

Land Use and Transportation Element (LUTE)

The Oakland General Plan Land Use and Transportation Element (LUTE) contains the following policies that are relevant to the Plan Area:

Policy D1.1: Defining Characteristics of Downtown. The characteristics that make downtown Oakland unique, including its strong core area; proximity to destinations such as the Jack London waterfront, Lake Merritt, historic areas, cultural, arts, and entertainment activities; and housing stock, should be enhanced and used to strengthen the downtown as a local and regional asset.

Policy D1.3: Planning for Chinatown. The unique character of Chinatown, as a center for Asian-American culture, a regional destination point, and a district with a mixed housing type residential component, should be supported and encouraged.

Policy D1.4: Planning for Old Oakland. Old Oakland should be respected and promoted as a significant historic resource and character defining element, with Washington Street as its core. Residential development in Old Oakland should be of mixed housing type, with ground-floor retail where feasible.

Policy D1.5: Planning for the Gateway District. New development and rehabilitation in the Gateway district should contribute to greater neighborhood cohesion and identity, emphasizing mixed housing type and urban density residential development.

Policy D1.7: The Gold Coast should be recognized and conserved as an established neighborhood providing urban density housing in a unique urban setting.

Policy D10.1: Encouraging Housing. Housing in the downtown should be encouraged as a vital component of a 24-hour community presence.

Policy D10.2: Locating Housing. Housing in the downtown should be encouraged in identifiable districts, within walking distance of the 12th Street, 19th Street, City Center,

and Lake Merritt BART stations to encourage transit use, and in other locations where compatible with surrounding uses.

Policy D10.3: Framework for Housing Densities. Downtown residential areas should generally be within the Urban Density Residential and Central Business District density range where not otherwise specified. The height and bulk should reflect existing and desired district character, the overall city skyline, and the existence of historic structures or areas.

Policy D10.4: Providing Housing for a Range of Needs. Housing in the downtown should not be geared toward any one housing market, but rather should be promoted for a range of incomes, ownership options, household types, household sizes, and needs.

Policy D10.5: Designing Housing. Housing in the downtown should be safe and attractive, of high quality design, and respect the downtown's distinct neighborhoods and its history.

Policy D10.6: Creating Infill Housing. Infill housing that respects surrounding development and the streetscape should be encouraged in the downtown to strengthen or create distinct districts.

Policy D10.7: Developing Live-Work Spaces. Locational and performance criteria should be developed for live-work developments.

Policy D13.2: Providing Parking. An adequate quantity of car, bicycle, and truck parking, which has been designed to enhance the pedestrian environment, should be provided to encourage housing development and the economic vitality of commercial, office, entertainment, and mixed use areas.

Policy W9.2: Encouraging Mixed Land Uses Along the Estuary. Mixed land uses should be encouraged in areas where the integration of housing with other compatible uses will add to the overall environmental, social, and economic vitality of the waterfront, and will create a safe environment.

Policy W10.4: The character of this area should be mixed use. Higher density housing, single use housing, and live/work lofts and units are appropriate within the area and developments. Mixed use should be sensitive to the surrounding character and design of existing buildings as well as the desire to have the shoreline fully accessible to the public.

Policy W12.2: Defining Fruitvale Waterfront Land Uses. This area should allow for the current use of existing industry and manufacturing uses as well as residential use; however, the area should be promoted for uses that better utilize the waterfront's unique position in the City. Depending on the level of intensity, uses that can benefit from close proximity to the airport and business park may be appropriate. Commercial businesses, recreation, and housing should be able to coexist in this area with appropriate buffering measures.

Policy N3.1: Facilitating Housing Construction. Facilitating the construction of housing units should be considered a high priority for the City of Oakland.

Policy N3.5: Encouraging Housing Development. The City should actively encourage development of housing in designated mixed housing type and urban housing areas through regulatory and fiscal incentives, assistance in identifying parcels that are appropriate for new development, and other measures.

Policy N3.6*: *Encouraging Retention of Dwellings. The city strongly encourages the moving of dwellings which might otherwise be demolished onto vacant lots where appropriate and economically feasible.

Policy N4.2: Advocating for Affordable Housing. The City encourages local non-profit organizations, affordable housing proponents, the business community, the real estate industry, and other local policy makers to join in efforts to advocate for the provision of affordable housing in communities throughout the Bay Area region.

Policy N5.3: Supporting Live-Work Development. The city should support and encourage residents desiring to live and work at the same location where neither the residential use nor the work occupation adversely affects nearby properties or the character of the surrounding area.

Policy N6.1: Mixing Housing Types. The City will generally be supportive of a mix of projects that provide a variety of housing types, unit sizes, and lot sizes which are available to households with a range of incomes.

Policy N6.2: Increased Home Ownership. Housing developments that increase home ownership opportunities for households of all incomes are desirable.

Policy N8.1: Developing Transit Villages. "Transit Village" areas should consist of attached multi-story development on properties near or adjacent to BART stations or other well-used or high volume transit facilities, such as light rail, train, ferry stations. or multiple-bus transfer locations. While residential units should be encouraged as part of any transit village, other uses may be included where they will not negatively affect the residential living environment.

Policy N12.1*: *Developing Public Service Facilities. The development of public facilities and staffing of safety-related services, such as fire stations, should be sequenced and timed to provide a balance between land use and population growth, and public services at all times.

4.12.2.5 City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to reducing impacts related to Population and Housing are listed below. All SCAs would be adopted as enforceable conditions of approval and required, as applicable, to be implemented during construction and operation of future development under the Proposed Project to help ensure less-than-significant impacts related to Population and Housing. The SCAs are incorporated and required as part of the Proposed Project, so they are not listed as mitigation measures.

- **SCA 71: Jobs/Housing Impact Fee**

  Requirement: The project applicant shall comply with the requirements of the City of Oakland Jobs/Housing Impact Fee Ordinance (Chapter 15.68 of the Oakland Municipal Code).

- **SCA 72: Affordable Housing Impact Fee**

  Requirement: The project applicant shall comply with the requirements of the City of Oakland Affordable Housing Impact Fee Ordinance (Chapter 15.72 of the Oakland Municipal Code).

- **SCA 73: Capital Improvements Impact Fee**

  Requirement: The project applicant shall comply with the requirements of the City of Oakland Capital Improvements Fee Ordinance (Chapter 15.74 of the Oakland Municipal Code).

- **SCA 79: Transportation Impact Fee**

  Requirement: The project applicant shall comply with the requirements of the City of Oakland Transportation Impact Fee Ordinance (Chapter 15.74 of the Oakland Municipal Code).

- **SCA 92: Residential Tenants**

  Requirement: The property owner shall comply with all applicable laws and requirements concerning residential tenants, including but not limited to, the City's Rent Adjustment Ordinance (OMC Chap. 8.22, Article I), Just Cause Eviction Ordinance (OMC Chap. 8.22, Articles II & III), Tenant Protection Ordinance (OMC Chap. 8.22, Article V) and Code Compliance Relocation Ordinance (OMC Chap. 15.60). Existing and former tenants temporarily or permanently evicted, displaced or relocated due to the project or City action related to the project may be entitled to protections and benefits, including, but not limited to, relocation payments and the right to return to previous units. The property owner may be required to submit evidence of compliance with applicable tenant protection laws upon request of the City. For more information, please contact the Oakland Housing Assistance Center: 250 Frank H. Ogawa Plaza, 6th Floor, Oakland, California, 94612; (510) 238-6182.

4.12.3 Environmental Analysis

4.12.3.1 Significance Criteria

The City of Oakland has established thresholds of significance for CEQA impacts, which incorporate those in Appendix G of the *CEQA Guidelines* (City of Oakland, 2020). The Proposed Project would have a significant adverse impact related to land use and planning if it would:

The project would have a significant impact on the environment if it would:

1. Induce substantial population growth in a manner not contemplated in the General Plan, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extensions of roads or other infrastructure), such that additional infrastructure is required but the impacts of such were not previously considered or analyzed;
2. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element; or
3. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element.

4.12.3.2 Approach to Analysis / Methodology

This is a program-level EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Impacts relative to land use and planning are evaluated using the

criteria listed above and based on information included in the City of Oakland General Plan, Map Atlas, and the documents listed in Section 4.10.6, *References – Population and Housing.*

Using U.S. Census data, Department of Finance data, data from transit analysis zones (TAZ), and ABAG projections; the increases in population, housing, and employment that would result from adoption and development under the Proposed Project were quantified and evaluated for potential physical environmental impacts that could result from possible displacement of housing, people, businesses, and jobs, and on the inducement of population and employment growth in the Plan Area and surrounding areas. This buildout is shown in **Table 4.12-7**. A ratio of 2.5 persons per household is used to estimate population, consistent with existing (2020) DOF estimates.

TABLE 4.12-7
OAKLAND GROWTH PROJECTIONS FOR 2030

	Existing Baseline (2020)	Proposed Project *Buildout Program* (ending in 2030)	2030 Conditions with the Proposed Project
Housing Units	178,904	41,458	215,178
Households[1]	169,959	39,377	209,336
Population[2]	433,395	100,411	533,806
Jobs[3]	236,206	18,851	255,057

NOTES:
1 Assumes an average of 5 percent vacancy rate, based on the City's projections.
2 Assumes an average of 2.5 persons per household aside from 2 percent of households assumed to be group quarters, based on the City's projections.
3 Employment growth of approximately 18,851 jobs during the projection period (as derived from the ACTC model) is considered as background and is not part of the Proposed Project.

SOURCE: Kittelson and Associates, 2022; Dyett & Bhatia, 2022.

As described above, the project description estimates attempt to reconcile existing housing and land use conditions (derived from 2021 Assessors data) with limitations of the Alameda Countywide travel model and represent a reconciliation between 2020 and 2021 data for a 2020 baseline.

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the Proposed Project *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future development under the Proposed Project, this EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas and analyzes the impacts of housing development through the projection period ending in 2030.

4.12.3.3 Proposed 2045 General Plan Policies, Land Use and Zoning

Land Use

The Proposed Project includes several zoning designation changes to implement actions in the housing plan related to increased housing density and height in key areas. Height changes, zoning changes, and land use changes are shown in **Figures 3-12**, **3-13**, and **3-15**, respectively. Please

see Section 4.10, Land Use and Planning, for a summary of proposed land use and zoning changes, and the expected housing unit increase resulting from these changes in each area of the City.

4.12.4 Impacts of the Project

Impact POP-1: Adoption of the Proposed Project would not induce substantial population growth in a manner not contemplated in the General Plan, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extensions of roads or other infrastructure), such that additional infrastructure is required but the impacts of such were not previously considered or analyzed. (Criterion 1) (*Less than Significant*)

Construction Impacts

Construction of future development under the Proposed Project would directly, but temporarily, increase construction employment. Given the standard nature of the construction anticipated, the demand for construction employment would likely be met within the existing and future labor market in the City of Oakland, in Alameda County, or within the Bay Area. Neither a substantial quantity of specialized labor nor construction workers from outside the region would be expected to be induced to relocate temporarily or to commute long distances.

Construction of future development under the Proposed Project could also stimulate production of associated products and services, which could also result in indirect and temporary jobs growth. However, this impact would not be substantial in terms of the local or Bay Area economy, due to the size of the construction and its temporary nature, and the potential for direct or indirect population growth is less than significant.

Operational Impacts

As described in the *Environmental Setting* and *Regulatory Setting* sections above, Plan Bay Area 2050 plays an important part in connecting housing, the economy, transportation, and the environment. RHNA's near-term focus sets the stage for early implementation of Plan Bay Area 2050's envisioned growth pattern. The City of Oakland has a RHNA obligation of 26,251 new units, which is a significant increase from RHNA allocations of previous housing cycles. No net loss requirements (Government Code Section 65863) require that adequate sites are maintained throughout the planning period to accommodate the remaining RHNA by income category.

To ensure that sufficient capacity exists throughout the planning period, State HCD recommends that jurisdictions create a buffer of at least 15 percent more capacity than required or estimated projected capacity at less than the maximum density to allow for some reductions in density at a project level. To meet "no net loss" requirements, an additional minimum of a 15 percent buffer beyond the RHNA is assumed in each income category in the 2023-2031 Housing Element. The Proposed Project includes land use and zoning changes to facilitate housing in higher resource areas, consistent with State guidance to affirmatively further fair housing. No direct employment opportunities would result from the 2023-2031 Housing Element or the Proposed Project.

As described above, the maximum feasible housing development that the City has projected can reasonably be expected to occur under the Proposed Project through the projection period ending in 2030 is the Proposed Project Buildout Program (see Table 4.12-7, above). According to the

Buildout Program, in the projection period, the City would add up to 41,458 new residential units, accommodating growth of up to approximately 100,400 new residents (or approximately 39,377 households) As shown in Table 4.12-7, there were approximately 169,959 households in Oakland in the baseline year. Addition of 39,377 households would result in 209,336 households, slightly more modest than Plan Bay Area 2040's 2030 projections of 211,790 households (Table 4.12-3), indicating that growth due to the adoption of and development under the Proposed Project is consistent with planned growth in the future.

As noted in Chapter 3, *Project Description*, the Housing Element's housing sites inventory, part of the Buildout Program, is a State-mandated requirement to ensure that the City's RHNA can be accommodated. In other words, the housing sites inventory demonstrates that there is enough land zoned at appropriate densities to accommodate the RHNA allocation. Growth in non-residential uses would occur as already contemplated in and consistent with adopted plans and the environmental documents prepared for those plans. Therefore, the growth facilitated by the Proposed Project would be accommodative of projected growth rather than inducing new growth.

Development under the Proposed Project land use and zoning changes, including increased density and height, is anticipated to develop mainly in mixed use or infill areas with sufficient access to transit, including around BART or rail stops, near the ferry, or within a half mile of a corridor where buses serve the area with high- or medium-frequency (ranging from 11 to over 20 buses an hour at stops along routes). This type of infill development is designed to focus on redevelopment and revitalization of areas already served by infrastructure and would not require extensions of roads or other infrastructure. Housing Action Plan policies and actions also reflect strategic infill or transit-oriented locations for housing: Policy 3.2 seeks to promote a diverse mix of housing types in existing residential neighborhoods, implemented by zoning changes described in Action 3.2.1. Policy 3.8 aims to promote development of vacant land within the City. Policy 5.1 promotes sustainable housing development, and Action 5.2.2 and 5.2.7 promote infill, transit-oriented development, and mixed-use development, particularly in higher opportunity neighborhoods.

Compliance with existing LUTE Policy N.12.1 would ensure that public facilities, services, and infrastructure maintain a level of service that supports a high quality of life for all residents. This ensures that infrastructure expansion would be commensurate with the level of planned population increase and would not indirectly induce population growth.

Mitigation: None required.

Summary

The Proposed Project would not induce substantial unplanned population growth, either directly or indirectly, and this impact is considered less than significant.

Impact POP-2: Adoption of the Proposed Project would not displace substantial numbers of housing or people, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element. (Criterion 2) (*Less than Significant*)

The Proposed Project *Buildout Program* relies on the Housing Sites Inventory prepared as a part of the 2023-2031 Housing Element Update process. The inventory is comprised of sites where development is already underway or approved (known as "pipeline projects") and other opportunity sites where additional development could occur and are most likely to develop during the projection period ending in 2030. Future housing development on sites newly made available by the proposed rezoning efforts is difficult to project, and thus not considered as part of this inventory. Non-vacant opportunity sites include those with an existing use that is likely to discontinue during the projection period; those with expressed developer interest; and those generally underutilized or developed with low intensity, such as underperforming strip commercial uses, warehouses, sites with mixed-use potential, and sites located in specific plans that encourage higher density development.

Construction Impacts

Construction of future development under the Proposed Project could temporarily or permanently displace housing or people. While future development under the Proposed Project could occur on parcels with existing residential development resulting in the potential for temporary residential displacement, all units would be replaced. In addition, LUTE Policy N3.6 strongly encourages the moving of dwellings which might otherwise be demolished onto vacant lots where appropriate and economically feasible, and Housing Action Plan actions 1.1.10 and 1.1.4 enforce the tenant right to return and implement tenant relocation measures. As described above, the City's existing ordinances, including the Just Cause for Eviction Ordinance and Tenant Move Out Ordinance, also provide tenant protections against displacement. Demolition and construction of new housing would not be considered a just cause for eviction, and developers would be required to reach voluntary moveout agreements and comply with all ordinance requirements, including tenant right to return at the same basic rent as when the building is returned to the rental market. The Ellis Act Ordinance establishes a timeline of requirements that include 120 days for moveout, notices of interest of re-renting for tenants, notices of entitlement to extensions for elderly or disabled tenants living in the building a year, and required relocation assistance.

No existing housing is assumed or anticipated to be changed to a non-residential use. However, any potential loss of housing resulting from development under the Proposed Project would be offset by the large number of new housing units that would be facilitated by the Proposed Project. As described in Impact POP-1 and Chapter 3, *Project Description*, to meet "no net loss" requirements the Proposed Project Buildout Program includes over 130 percent of the RHNA including a minimum 15 percent buffer beyond the RHNA assumed in each income category. Compliance with LUTE Policy N3.6 and Housing Action Plan Actions 1.1.10 and 1.1.4 would reduce potential impacts related to direct or indirect displacement of housing or people to less than significant.

Operational Impacts

Potential indirect displacement could occur if development under the Proposed Project would result in physical or socioeconomic changes (e.g., gentrification) in the Plan Area. While regional job growth and lack of housing construction in the Bay Area overall can cause indirect

displacement, this would only be considered a physical impact under CEQA criteria if it were to necessitate the construction of replacement housing elsewhere. Regardless, the Proposed Project also includes a substantial number of policies and actions to address the threat of indirect displacement. These include Policy 1.1, Tenant Protections and Anti-Displacement; implemented by actions 1.1.1 through 1.1.12 that reinforce a series of tenant protection measures such as rent adjustment programs (1.1.1), Just Cause for Eviction measures (1.1.2), Ellis Act Ordinance protection strengthening (1.1.3), right to counseling (1.1.4), expanded rent control in limited areas (1.1.6), monitoring of displacement risk factors (1.1.7), creation of a rental housing registry (1.1.8), expansion of the Tenant Protection Ordinance (1.1.9), local preference for affordable housing projects (1.1.11), and community benefit negotiation at time of major entitlement agreement (1.1.12). Policy 2.2 seeks to preserve the affordability of existing homes, and actions 2.2.1, 2.2.3through 2.2.6, and 2.2.8 implement resale controls on assisted housing (2.2.1), enforce conversion restrictions (2.2.3), limit condo conversions (2.2.4), extend local replacement unit provisions (2.2.5), reduce short term home purchases (2.2.6), and explore a Tenant/ Community Opportunity to Purchase Act (2.2.8).

City renter protection ordinances, including the Tenant Protection Ordinance, Rent Adjustment Ordinance, Ellis Act Ordinance, and Tenant Relocation Ordinance, also protect against direct and indirect displacement. For example, the TPO deters and makes harassment by property owners, which can cause displacement pressure, unlawful and provides legal redress if harassment occurs. The Rent Adjustment Ordinance limits increases on covered uses and eases increasing rent pressure that may occur due to gentrification. The Ellis Act Ordnance sets specific requirements that must be followed when removing a property to prevent renter displacement. Finally, the Tenant Relocation Ordinance requires owners to provide relocation payments to tenants displaced by code compliance activities, owner or relative move-ins, Ellis Act activity, and condominium conversions.

In addition to LUTE Policy N3.6; the potential unit capacity in the sites inventory, housing buffer, and other land use and zoning changes (including the Affordable Housing Overlay Zone, height increases, Downtown zoning changes, and upzoning/missing middle zoning changes); proposed policies listed above would avoid any potential adverse effects related to the displacement of housing and people as a result of the future development in the Plan Area. In addition, compliance with the City's renter protection ordinances and SCA-71, Jobs/Housing Impact Fee; and SCA-72, Affordable Housing Impact Fee, would also help to minimize any potential adverse effects related to the displacement of housing and people.

Mitigation: None required.

Summary

The potential removal of housing units due to the Proposed Project would not be considered substantial in the context of total citywide housing units and would not displace substantial numbers of housing or people, necessitating construction and development of housing in excess of the expected extensive net increase in housing units assumed in the Proposed Project *Buildout Program*. Compliance with existing LUTE policy, Housing Action Plan policies, and SCAs would limit the potential for displacement impacts associated with implementation of the

Proposed Project and reasonably foreseeable development expected to occur in the Plan Area until 2030 would be less than significant.

4.12.5 Cumulative Impacts

Impact POP-3: Adoption and development under the Proposed Project individually and in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects would not induce substantial population growth in a manner not contemplated in the General Plan, either directly by facilitating new housing or businesses, or indirectly through infrastructure improvements, such that additional infrastructure is required but the impacts of such were not previously considered or analyzed. (*Less than Significant*)

Geographic Context

The geographic context for the cumulative impacts associated with population and housing is the nine-county ABAG region. Future development in this portion of Alameda County, including growth anticipated under the Proposed Project, would not induce substantial unplanned population growth in the area as future development would have to be consistent with the general plans and zoning codes of local jurisdictions in the area, each of which is allocated their own RHNA number to plan for as part of the 6th housing cycle, and therefore growth would not be unplanned. In addition, future development in the ABAG region, including growth anticipated under the Proposed Project, would not result in the displacement substantial numbers of existing people or housing as future development would be required to follow existing State law governing relocation of residents. Therefore, future development in the ABAG region or Alameda County would not have a significant cumulative impact with respect to population and housing.

Adoption and development under the Proposed Project would facilitate urban infill development and the intensification of activity in an area already well-served by existing transportation/transit systems and other infrastructure and utilities. Development under the Proposed Project would not require construction or extension of new roads, utilities, and other infrastructure that might stimulate population growth in previously undeveloped areas. Adoption and development under the Proposed Project could require on-site infrastructure improvements to accommodate new development to higher densities and for new uses. The infrastructure improvements would be specific to the development sites and would not induce substantial additional population growth in the county or region, and therefore are a less than significant impact.

Mitigation: None required.

Summary

Due to: (a) the role of the Proposed Project in facilitating housing development consistent with requirements under State law; (b) the appropriate magnitude of population and housing growth within the cumulative, regional context, and (c) the location of housing sites in existing neighborhoods and transit corridors already well-served by infrastructure, the adoption of and development under the Proposed Project would have a less-than significant-impact in inducing substantial population growth in a manner not contemplated by the General Plan, either directly

by facilitating development of housing or businesses, or indirectly through infrastructure improvements.

4.12.6 References – Population and Housing

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4.13 Public Services

This section describes conditions and potential environmental effects of the Proposed Project pertaining to public services. The section discusses relevant existing environmental conditions of the Plan Area and regulations pertinent to this section, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts to the physical environment that could result from implementation of the Proposed Project and its associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that would reduce potential impacts to this environmental topic are identified; both existing and proposed updated/new General Plan policies and SCAs are considered. This section incorporates relevant information from the General Plan Update Map Atlas (see Appendix A) prepared in support of the Proposed Project. No scoping comments related to public services were received in response to the NOP (Notice of Preparation) for this Draft EIR.

4.13.1 Environmental Setting

4.13.1.1 Fire Protection and Emergency Response

Oakland Fire Department

The Oakland Fire Department (OFD) provides fire protection services and emergency medical services throughout the City of Oakland. The OFD is comprised of an Office of the Fire Chief, a Fiscal and Administration Services Division, A Field Operations Bureau, a Medical Services Division, an Emergency Management Services Division, a Fire Prevention Bureau, and a Support Services Bureau (City of Oakland, 2022a).

The OFD provides fire suppression, emergency medical services, technical rescue, hazardous materials mitigation, disaster response, code enforcement, fire investigations, and public education. The OFD currently maintains 25 fire stations with 6 Divisions throughout the Plan Area (see **Figure 4.13-1**). In the 2020-2021 fiscal year, OFD employed 435 full-time equivalent firefighters and officers and 85 civilians. During 2021, the OFD had 53,351 emergency responses, 3,210 fires extinguished, and 8,432 inspections (City of Oakland, 2021a). As of March 2021, the total response time (90 percent of the time) was 8 minutes and 26 seconds (City of Oakland, 2021b).

OFD is planning a series of fire station remodels and new construction projects using Measure KK Bond funds. At least three fire stations will be remodeled including Station 10 (172 Santa Clara Avenue), Station 12 (822 Alice Street), and Station 16 (3600 13th Avenue). These remodels will renovate dormitory quarters and make associated upgrades that will require firefighters to relocate to another fire station while the work is being completed. In addition to the three remodel projects, OFD has identified two stations that will be demolished and re-constructed at yet-to-be-finalized new locations in their respective fire districts. The two stations that will be shut down and re-constructed elsewhere are Station 4 (1235 International Boulevard) and Station 29 (1016 66th Avenue) (City of Oakland, 2022b). The City proposes to relocate Station 29 one block away at 905 66th Avenue and the new station is estimated to be fully designed and constructed by the end of 2025 (City of Oakland, 2022c).

There are two Accredited Centers of Excellence (ACE) for Emergency Medical Dispatch in Alameda County, one of which is the Oakland Fire Department Dispatch Center (FDC) (EMS, 2022). The FDC is in downtown Oakland and is a critical component of emergency coordination and response. The FDC receives around 60,000 emergency calls for service annually, most of which are medical emergencies. All Fire Dispatchers are trained Emergency Medical Dispatchers and may be required to give callers CPR or other medical instructions (City of Oakland, 2022a).

4.13.1.2 Police Service

Oakland Police Department

The Oakland Police Department (OPD) provides police services for the City of Oakland. The OPD staffing as of 2021 included 734 full-time equivalent officers and 325 civilians across 3 police stations (City of Oakland, 2021a) (see Figure 4.13-1). The City of Oakland is divided into five geographic areas which are known as "Police Areas." The OPD patrol and special operations are organized into Bureau of Field Operations One (which oversees Police Areas 1 and 2) and Bureau of Field Operations Two (which oversees Police areas 3, 4, and 5). Through these divisions, OPD provides day-to-day police services, including response to emergency and non-emergency calls, preliminary investigations and evidence collection, community-oriented problem solving, and crime-fighting efforts (City of Oakland, 2022d).

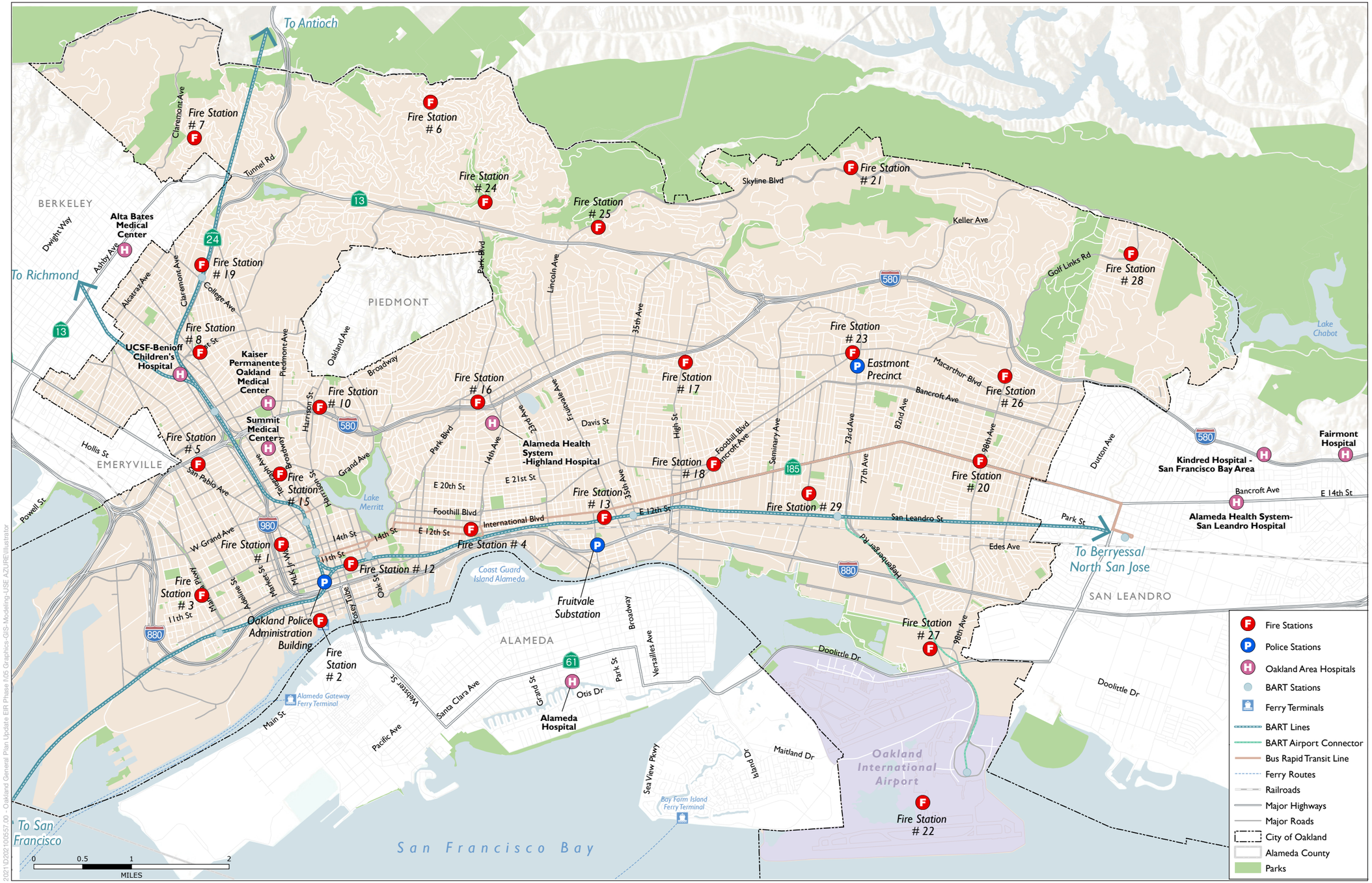
OPD currently operates the Police Administration building downtown at 455 7th Street. Additionally, the OPD has two police stations, one located in Fruitvale and one located in the southeastern part of the City in Eastmont. In February 2022, the Oakland City Council passed a resolution to move the Police headquarters to the Coliseum area and develop the present site with housing, retail, and other uses.

Incoming calls to the OPD are prioritized based on the nature of the call. Calls for police services are ranked as follows: Priority 1 refers to imminent danger, death, serious injury, felonies in progress, or serious public health hazards; Priority 2 refers to disputes with potential for violence, misdemeanor crimes in progress, stolen vehicle reports, and similar matters; and Priority 3 refers to reports of incidents that do not present danger to life or property. In 2018, the OPD median response time for citywide Priority 1 calls was 7 minutes 48 seconds and Priority 2 calls was 70 minutes and 20 seconds (OPD, 2019). In 2021, the OPD had 274,862 dispatched calls (City of Oakland, 2021a).

4.13.1.3 Public Schools

Oakland Unified School District

The Plan Area is served by the Oakland Unified School District (OUSD). The OUSD operates 77 schools, including 51 elementary schools, 11 middle schools, and 15 high schools distributed throughout the Plan Area (see **Figure 4.13-2**). The figure does not reflect the very recent (February 2022) school closures announced by the OUSD. Additionally, there are a number of charter schools located throughout the Plan Area. While many of the charter schools within Oakland are OUSD authorized, charter schools authorized by Alameda County, Alameda Unified, and California Board of Education are also located within the Plan Area.



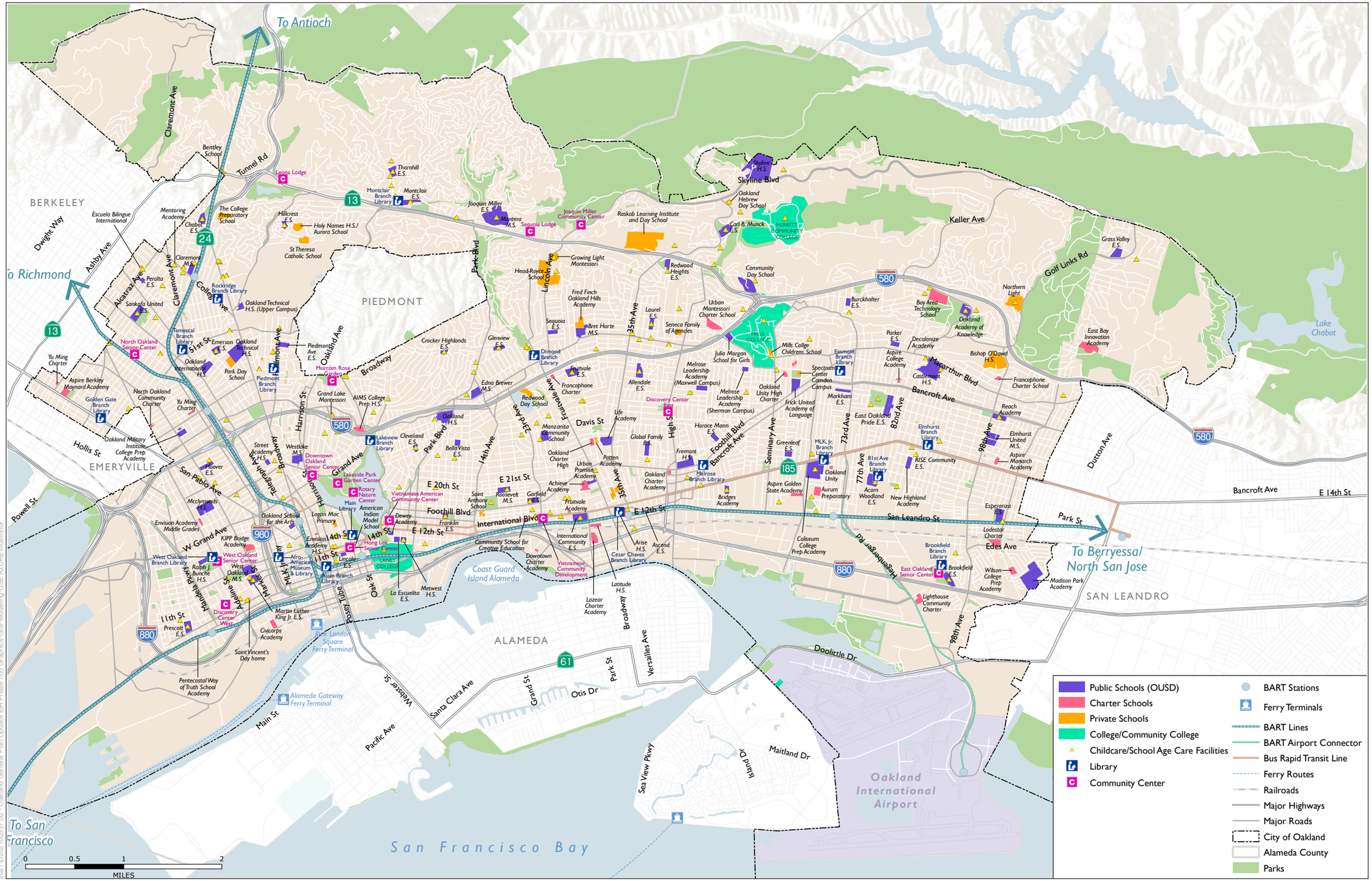
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SOURCE: Dyett & Bhatia, 2022

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Figure 4.13-1
Emergency Services

ESA



SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 4.13-2
Educational and Institutional Resources

ESA

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During the 2021-2022 school year, OUSD school facilities had a total enrollment of 34,566 students spanning grades TK-12. This does not include students in County and District Authorized Charter Schools. Total enrollment in OUSD schools and authorized charter schools for the 2021 to 2022 school year was 46,600 students (CDE, 2022). The staffing levels for the 2021-2022 school year were 2,389 teachers and 1,888 other school staff (137 principals, assistant principals, and early childhood education site administrators as well as 1,751 school support staff) (OUSD, 2022c).

Student enrollment in OUSD district run schools and programs as well as County and District-Authorized charter schools has been on the decline over the past couple of years with a five-year peak enrollment of 53,118 students during the 2018-2019 school year (CDE, 2022). Currently, many of the OUSD schools are under-enrolled, located in areas where few students live, or both and OUSD operates too many district-run schools for the number of students they serve (OUSD, 2022a). In 2012, OUSD closed the Lakeview Elementary, Marshall Elementary, Maxwell Park Elementary, and Santa Fe Elementary Schools. In 2019, Roots Middle School was closed (OUSD, 2019). Additionally, there are plans to close or consolidate a number of other OUSD schools over the next few years.

Related to facilities, the school district's most significant challenge is the physical condition of the classroom facilities. Most are in need of substantial capital investments, estimated at approximately 1.5 billion dollars, to provide ongoing improvement to support a Full-Service Community School District that serves children, youth, and their families. According to the 2016 School Facility Fee Justification Report, these conditions eventually will impact the available capacity. Specifically, the District has determined that additional investments in capital facility projects are needed to address current and future requirements in three key areas:

- Full-Service Community School Support
- Seismic Safety Enhancements
- Modernizations & Facility Upgrades

This condition exists regardless of the availability of classrooms to house students (including new development students), as substantial capital investment is required in the classroom facilities. The District's justification for collecting fees on future residential and commercial/industrial development detailed in the 2016 School Facility Fee Justification Report includes the need for capital investment for existing facilities (OUSD, 2016).

As authorized by California Government Code Sections 65995 and 65996, OUSD collects school impact fees from developers of new residential building space. The impact fee revenue is used together with other OUSD funds (e.g., State grants, general obligation bonds) to complete capital improvements. The amount of the fee (currently $3.48 per square foot of new residential space and $0.56 per square foot of commercial/industrial development) is established through OUSD's Developer Fee Justification Study which was last updated in 2016 (OUSD, 2016).

4.13.1.4 Libraries

Oakland Public Library

The Oakland Public Library (OPL) system consists of 18 libraries distributed across Oakland, primarily located in the flatlands plus one in the Oakland hills (see Figure 4.13-2). Oakland Public Library gets funding primarily from the General Fund (about 13 million dollars), Measure Q (about 16 million dollars), and Measure D (about 10 million dollars), as well as small amounts from grants and donations. Measure Q expires in 2024 which will cause a deficit if it is not reauthorized by the voters in that time. Measure D is a new parcel tax that was authorized by voters in June 2018 and generated enough money to eliminate the existing operating deficit (City of Oakland, 2019).

The OPL does not currently have any performance standards that are tied to levels of demand. OPL existing staff levels are generally adequate for current demand for library services; however, OPL facilities can be inconsistent in quality, and some facilities are insufficient for optimal public service due to space limitations and heavy use. Many of these facilities are over 50 years old and some are over 100 years old, including the Main Library which has surpassed its operational life expectancy (City of Oakland, 2019). The City's Capital Improvements Program for fiscal year 2021-2023 includes funding for improvements to various OPL branches and the design for a new Piedmont Ave branch at the former OUSD Child Development Center site at the corner of Glen Avenue and Echo Avenue (City of Oakland, 2021c).

4.13.2 Regulatory Setting

4.13.2.1 Federal

National Fire Protection Association 1710

National Fire Protection Association (NFPA) 1710 is the Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments. NFPA developed NFPA 1710 as an industry standard for the deployment of fire suppression operations to ensure safe and effective fire service operations. The Standard stipulates that the first fire engine should arrive to 90 percent of emergency calls within a range of 6:15 and 6:45 minutes. It is recognized that the NFPA 1710 Standard is the optimal nationally.

4.13.2.2 State

California Fire Code

The California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the State of California. The Fire Code includes regulations regarding fire-resistance-rated construction,

fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, and fire safety during construction and demolition.

California Occupational Safety and Health Administration

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment" the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance and use of all firefighting and emergency medical equipment.

Senate Bill 50

The Leroy F. Greene School Facilities Act of 1998, or Senate Bill 50 (SB 50), authorizes school districts to levy developer fees to finance the construction or reconstruction of school facilities, and restricts the ability of local agencies to deny project approvals on the basis that public school facilities (classrooms, auditoriums, etc.) are inadequate. School impact fees are collected at the time when building permits are issued. Payment of school fees is required by SB 50 for all new residential development projects and is considered full and complete mitigation of any school impacts. School impact fees are payments to offset capital cost impacts associated with new developments, which result primarily from costs of additional school facilities, related furnishings and equipment, and projected capital maintenance requirements. As such, agencies cannot require additional mitigation for any impacts on school facilities or due to the inadequacy of school facilities. Indirect impacts related to school attendance or construction of new facilities must still be considered under CEQA (e.g., indirect impacts on transportation and circulation, air quality, noise).

4.13.2.3 Local Plans, Ordinances and Policies

City of Oakland General Plan

The City of Oakland General Plan serves as the guiding document for the City's planning and future development. It includes goals, policies, and implementation measures that reflect the community priorities, values, and vision. The Land Use and Transportation Element (LUTE) and the Safety Element of the General Plan includes the following policies related to public services.

The following objectives and policies within the Neighborhoods section of the LUTE apply citywide and are relevant to the Proposed Project:

> **Objective N12:** Provide adequate infrastructure to meet the needs of Oakland's growing community.
>
> > ***Policy N12.1:*** The development of public facilities and staffing of safety-related services, such as fire stations, should be sequenced and timed to provide a balance between land use and population growth, and public services at all times.
> >
> > ***Policy N12.2:*** Adequate public school capacity should be available to meet the needs of Oakland's growing community. The City and the Oakland Unified School District (OUSD) should work together to establish a continuing procedure for coordinating

residential and commercial development and exploring the imposition of mutually agreed upon reasonable and feasible strategies to provide for adequate school capacity. The City and OUSD should jointly consider, where feasible and appropriate, funding mechanisms such as assessment districts, redevelopment Agency funding (AB 1290), uses of surplus City-owned land, bond issues, and adjacent or shared use of land or school facilities with recreation, libraries, childcare and other public uses.

The current Safety Element of the Oakland General Plan describes various existing policies and actions regarding public services that apply to the Proposed Project. However, in concert with this Proposed Project, the Safety Element is being updated. The updated policies are provided below in Section 4.13.4, *Proposed 2045 General Plan Policies, Public Services.*

Oakland Municipal Code

Oakland Municipal Code Chapter 15.74, *Transportation and Capital Improvement Fees*, establishes Citywide transportation and capital improvements impact fees in the City of Oakland to assure that development projects pay their fair share to compensate for the increased demand for transportation and capital improvements infrastructure generated by development projects within the City. Funds deposited into the Capital Improvements Impact Fee Fund are used to pay for projects that are required for fire, police, library, parks and recreation, or storm drain services.

Oakland Municipal Code Chapter 15.12 contains the Oakland Fire Code. The Oakland Fire Code was updated in 2016 to adopt the most recent California Fire Code and includes amendments to the California Fire Code specific to the City of Oakland in response to local climatic, geological, or topographical conditions. The Fire Prevention Bureau within the OFD assists the Fire Chief in the administration and enforcement of the provisions of the Oakland Fire Code. The Fire Prevention Bureau provides plan checking services that assure the incorporation of proper life safety standards, as well as code compliance, in all new construction in the City and oversees inspection services related to compliance with the State and local fire codes.

4.13.2.4 City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to reducing impacts related to Public Services are listed below. All SCAs would be adopted as enforceable conditions of approval and required, as applicable, to be implemented during construction and operation of future development under the Proposed Project to help ensure less-than-significant impacts related to Public Services.

- **SCA 3: Compliance with Other Requirements**

  Requirement: The project applicant shall comply with all applicable federal, State, regional, and local laws/codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City's Bureau of Building, Fire Marshal, and Public Works Department. Compliance with other applicable requirements may require changes to the approved use and/or plans. These changes shall be processed in accordance with the procedures contained in SCA #4 (Minor and Major Changes).

- **SCA 46: Fire Safety Phasing Plan** (see Section 4.8, *Hazards and Hazardous Materials*)

- **SCA 47: Designated Very High Fire Severity Zone – Vegetation Management** (see Section 4.8, *Hazards and Hazardous Materials*)

- **SCA 73: Capital Improvements Impact Fee**

  Requirement: The project applicant shall comply with the requirements of the City of Oakland Capital Improvements Fee Ordinance (Chapter 15.74 of the Oakland Municipal Code).

4.13.3 Environmental Analysis

4.13.3.1 Significance Criteria

The City of Oakland has established thresholds of significance for CEQA impacts, which incorporate those in Appendix G of the *CEQA Guidelines* (City of Oakland, 2020). Adoption of the Proposed Project would have a significant adverse impact related to public services if it would:

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

   - Fire protection;
   - Police protection;
   - Schools;
   - Parks; or
   - Other public facilities.

4.13.3.2 Approach to Analysis / Methodology

This is a program-level Draft EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Impacts relative to public services are evaluated using the criteria listed above and based on information included in the City of Oakland General Plan, Map Atlas and the documents listed in Section 4.13.6, *References – Public Services*.

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future development under the Proposed Project, this Draft EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas and analyzes the impacts of housing development through the projection period ending in 2030.

For purposes of the impact analysis, it is assumed that any projects developed as a result of the Proposed Project's adoption would be designed to comply with the most up-to-date building and fire codes and would include fire safety measures and equipment, including but not limited to, use of fire retardant building materials, inclusion of emergency water infrastructure (fire hydrants and

sprinkler systems), installation of smoke detectors and fire extinguishers, installation of emergency response notification systems, and provision of adequate emergency access ways for emergency vehicles. Project fire safety plans would be subject to review and approval by the OFD.

4.13.3.3 Proposed 2045 General Plan Policies, Land Use, and Zoning

Safety Element

The following policies and actions pertaining to public services are proposed as a part of the Safety Element Update in the Proposed Project.

Policies:

***SAF-2.1: Structural Fires*.** Continue, enhance, or implement programs that seek to reduce the risk of structural fires. Prioritize programs in frontline communities at highest seismic and fire risk.

SAF-2.2: Vegetation and Urban Forest Management Plan. Manage vegetation and the urban forest to reduce combustible load, erosion, and other risks exacerbated by climate change.

- Adopt and fully implement a Vegetation Management Plan for high-fire risk areas. Continue to update and enforce the Oakland Fire Code to require building owners in high-risk areas to maintain defensible space and implement fire prevention measures. As part of the Vegetation Management Plan, build partnerships with and consult indigenous groups on sacred burning and other traditional fire suppression techniques.
- Implement the Urban Forest Master Plan, a comprehensive, area-wide urban canopy and vegetation plan that identifies locations where trees can be added and maintained, such as parks, streets, and rights-of-way. As a follow-up action, proactively address soil sequestration of carbon and water in frontline communities most affected by wildfire and other climate risks.

SAF-2.3: Development in the Very High Fire Hazard Severity Zone (VHFHSZ). Prioritize development in areas with existing adequate road networks, evacuation routes, and water infrastructure. Require any new development in the Very High Fire Hazard Severity Zone to prepare a Fire Protection Plan that minimizes risks by:

- Assessing site-specific characteristics such as topography, slope, vegetation type, wind patterns etc.
- Siting and designing development to avoid hazardous locations (e.g. through fire breaks) to the extent feasible.
- Incorporating fuel modification and brush clearance techniques in accordance with applicable fire safety requirements and carried out in a manner which reduces impacts to environmentally sensitive habitat to the maximum feasible extent.
- Using fire-resistant building materials and design features, consistent with the adopted Municipal Code and Fire and Building Code standards.
- Using fire-retardant, native plant species in landscaping.

- Complying with established standards and specifications for fuel modification, defensible space, access, and water facilities.
- Banning generators and fuel storage (e.g., for generators) in VHFHSZ.
- Requiring street improvements to comply with minimum fire road access standards.
- Disallowing new subdivisions in areas with less than two evacuation routes (as shown in Figure SAF-1d), unless a development were to be able to provide additional connections to ameliorate this condition.

SAF-2.6: Agency Coordination. Continue to participate not only in general mutual-aid agreements but also in agreements with adjoining jurisdictions and other public agencies for cooperative response to fires, including multi-jurisdictional programs and task forces.

SAF-8.1: Emergency Response. Maintain and enhance the City's capacity for emergency response, fire prevention, and firefighting.

SAF-8.2: Emergency Services Review. Continue to engage the Police and Fire departments in the development review process to ensure that projects are designed and operated in a manner that minimizes the potential for public safety and fire hazards and maximizes the potential for responsive police and fire services.

SAF-8.3: Hazard and Management Plans. Maintain and update as necessary the Oakland Emergency Operations Plan and Annex of Emergency Support Functions, which describes how the City will prepare for, prevent, respond to, recover from and mitigate the effects of all types of hazard and threats.

SAF-8.5: Cohesive Evacuation Routes Network. Maintain and enhance a cohesive and network of evacuation routes.

- Maintain adequate capacity along evacuation routes through methods such as limiting street parking where capacity may be needed.
- Maintain a higher level of tree and vegetation maintenance along evacuation routes.

SAF-8.7: Local Hazard Mitigation Plan. To comply with federal and state law, follow and annually update the Oakland Local Hazard Mitigation Plan. Use the LHMP to guide mitigating actions to protect the whole community and environment from natural and humanmade hazards.

SAF-8.10: Public Facilities for Resilience & Relief. Prioritize capital improvements and maintenance of public facilities such as libraries, senior centers, cultural centers, parks, and recreation centers to ensure that they can function as essential service facilities, respite centers, and local assistance centers providing emergency social and medical services in times of distress (cooling and clean air stations, food and vaccine distribution, testing centers, evacuation/disaster shelters, etc.), and as neighborhood hubs that empower communities to build resilience. Clean energy microgrids should be prioritized at all community-serving facilities that are deemed critical during emergency events. In alignment with the ECAP, a minimum of three resilience hubs will be constructed in frontline communities by 2030. The City will continue pursuing resources to increase the number of resilience hubs beyond the minimum required, and to ensure that all frontline community members have access to a resilience hub.

SAF-8.11: Critical Facilities Locations. Locate critical facilities, such as hospitals and health care facilities, emergency shelters, fire stations, police stations, emergency command centers, and other emergency service facilities and utilities so as to minimize exposure to flooding, seismic, geologic, wildfire, and other hazards, except those facilities that provide frontline access, such as fire stations in areas of fire hazard. If critical facilities must be located in hazard zones, require building construction and materials that minimize hazard, safe access for emergency response vehicles, visible street signs, and adequate infrastructure for emergency scenarios, such as backup power and water supplies.

SAF-8-12: Facilities and Climate Impacts. Consider climate impacts, risk, and uncertainty in designing and evaluating capital improvement program design and adjust infrastructure design standards and project locations to address asset- and site-specific vulnerabilities.

SAF-8.16: Priority Route Coordination. Partner with Caltrans and neighboring jurisdictions on measures to protect critical evacuation routes and work with local agencies to develop contingency plans that address disconnected routes and explore roadway improvements that can provide better emergency access under emergency evacuation scenarios. Work with emergency response teams and transit providers to identify and support Oakland residents without access to transportation in the event of an emergency.

Actions:

SAF-A.7: Undertake a program to reduce fire load in VHFHSZ, such as through removal of non-native, highly combustible trees such as eucalyptus in fire susceptible areas. Consider methods—such as establishment of a progressive special vegetation management zone fees—to provide ongoing revenue for additional efforts for vegetation management.

SAF-A.8: Adopt and amend as needed updated versions of the California building and fire codes and local housing code so that optimal fire-protection standards are used in construction and renovation projects. Projects in Very High Fire Hazard Severity zones and the Wildland Urban Interface are required to include higher fire-rated construction.

SAF-A.9: Continue to review development proposals to ensure that they incorporate required and appropriate fire-mitigation measures, including adequate provisions for occupant evacuation, and access by fire-fighting personnel and equipment.

SAF-A.10: Compile a list of high-rise and high-occupancy buildings which are deemed due to their age or construction materials to be particularly susceptible to fire hazards, and determine an expeditious timeline for the fire safety inspection of all such structures. Prioritize areas and financial assistance for fire safety retrofits based on racial equity and vulnerability criteria.

SAF-A.11: Continue to conduct periodic fire-safety inspections of commercial, multi-family, and institutional buildings. Prioritize inspections among areas at high risk and high vulnerability, including lower-income households, areas with greater percentages of mobility-impaired residents, families with small children, and older adults.

SAF-A.32: As part of the LUTE update, project future emergency service needs for planned land uses and evaluate capital improvement and staffing plans accordingly.

SAF-A.33: Periodically assess the need for new or relocated fire stations, facilities, programs, and technologies.

SAF-A.34: Strive to meet a goal of responding to fires and other emergencies within seven minutes of notification 90 percent of the time.

SAF-A.35: Continue to participate in multi-jurisdictional programs and task forces, such as the Hills Emergency Forum and Diablo FireSafe Council, that work to reduce the threat of wildfires.

SAF-A.36: Implement at least three resilience hubs, including in West Oakland, East Oakland, and at the Lincoln Square Recreation Center.

SAF-A.37: Identify ways the City can help support decentralized community facilities to serve residents unable to travel to centralized resilience hubs.

SAF-A.38: In partnership with OakDOT, the Human Services Department, AC Transit, healthcare, and other community organizations, explore organization of a network to transport those without vehicles to these centralized resilience hubs during times of emergency. As part of the LUTE update in Phase 2, explore use of electrified buses as "mobile resilience centers".

SAF-A.39: Establish neighborhood-level communication networks to inform residents of the location and directions to the nearest cooling center and coordinate transportation to these centers for limited-mobility residents during extreme heat events.

SAF-A.40: Evaluate capital improvement projects in the Infrastructure and Facilities Element and LUTE in Phase 2 using climate impacts, risk, and uncertainty. Evaluate CIP projects as part of short- and long-term CIP reports.

Environmental Justice

The following policies in the Proposed Project's Environmental Justice Element relate to public services:

EJ-6.1: Public Facilities Distribution. Ensure the equitable distribution of beneficial public, civic, and cultural facilities and places for public gatherings, prioritizing new facilities and creative spaces in traditionally underserved areas.

EJ-6.2: Childcare Facilities. As part of land planning efforts, ensure appropriate land use designations, zoning, and incentives to facilitate additional affordable and high-quality childcare facilities in areas without sufficient access, as shown in Figure EJ-20.

EJ-6.3: Healthcare Facilities. As part of land planning efforts, ensure appropriate land use designations and zoning to facilitate additional healthcare facilities in areas without sufficient access, as shown in Figure EJ-21.

EJ-6.4: Facilities Maintenance. Maintain and improve existing civic and public facilities to ensure safer, more attractive facilities that are responsive to community needs. Prioritize equitable capital improvements and maintenance projects, and investments in public and community-driven social infrastructure in EJ Communities.

EJ-6.5: Public Service Coordination. Coordinate with the planning efforts of agencies providing public education, public health services, community centers, library services,

justice services, flood protection, energy, and technology and communications services, as appropriate. Maintain interagency coordination agreements with neighboring jurisdictions and partner agencies that provide urban public facilities and services within the City/County to ensure effective and efficient service delivery.

EJ-7.2: Accessible Neighborhoods. Encourage active modes of transportation and transit accessibility by supporting neighborhoods that provide access to a range of daily goods, services, and recreational resources within comfortable walking or biking distance. Encourage transit providers to prioritize, establish and maintain routes to jobs, shopping, schools, parks and healthcare facilities that are convenient to EJ Communities.

4.13.3.4 Topics Considered and Determined to Have No Impact

All public services topics are analyzed below except for Recreational Resources (Criterion 1.iv), which is analyzed in Section 4.14, *Recreation*.

4.13.4 Impacts of the Project

Impact PUB-1: Adoption of the Proposed Project would not result in substantial adverse physical impacts associated with the provision of or need for new or physically altered fire protection and emergency medical response services facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection. (Criterion 1.i) (*Less than Significant*)

Future development under the Proposed Project would increase land use intensity and overall density throughout the Plan Area. Housing development anticipated with adoption of the Proposed Project could add up to 41,458 housing units and accommodate growth of up to approximately 39,377 households and 100,411 residents.[1] While no specific development proposals are directly associated with the Proposed Project, theoretical development and associated population increase would result in an increase in demand for fire protection and emergency medical response services from the OFD.

The increase in population associated with future development under the Proposed Project would be expected to generate the typical range of service calls, including fire, emergency medical service, and other incidents. New vehicles, equipment or possibly facilities could likely be required to maintain adequate service and response times to serve future development. As discussed in Section 4.13.1.1, *Fire Protection and Emergency Response,* the OFD during the first quarter of 2021 had an average total response time (90 percent of the time) of 8 minutes and 26 seconds (City of Oakland, 2021b). This is above the NDPA 1710 standard range of 6 minutes and 15 seconds to 6 minutes and 30 seconds as well as above the OFD goal of arriving to emergency calls for service within 7 minutes (90 percent of the time). It is likely that an increase in population would worsen this deficit.

General Plan Policy FI-1 calls for the City to maintain and enhance the City's capacity for emergency response, fire prevention and firefighting. Under General Plan Policy N12.1, the development of public facilities for safety-related services, such as fire stations, would be timed

[1] The estimated number of households assumes an average 0.5 percent vacancy rate, based on the City's projections.

to meet the demands from new population growth and development. Therefore, the City's costs to maintain equipment and facilities could also increase. The additional materials costs would likely be gradual as the increase in population associated with development under the Proposed Project would occur incrementally over time allowing OFD to gradually meet the demands of the increasing population. Additionally, development under the Proposed Project would generate new property taxes and other fees commensurate with the development. These revenues would go into the City's General Fund and thus would provide more resources to cover the increased costs for fire services. Safety Element actions SAF-A.32, SAF-A.33, and SAF-A.34 direct the City to project future emergency service needs, periodically assess needs for new or relocated fire stations, and strive to meet a fire response time within seven minutes of notification 90 percent of the time. Action SAF-A.35 continues participation in multi-jurisdictional programs that can work to reduce threat of wildfires and improve response time. Actions SAF A.36-A.39 relate to implementation of a network of resilience hubs and other community facilities to reduce need for additional construction and better serve emergency needs of residents. Finally, Action SAF-A.40 relates to evaluation of capital improvement projects using climate impacts and will inform facilities location and construction. In addition, SCA 73, Capital Improvements Impact Fee, reinforces the City's Capital Improvements Fee Ordinance and would assist in funding expanded services in the Plan Area.

To address the risk of wildfire, Policy SAF-2.1 promotes reducing structural fire risk; SAF-8.12 encourages evaluating facility vulnerabilities to climate risks; SAF-2.2 aims to manage vegetation in high-fire risk areas; and SAF-2.6 encourages agency coordination for cooperative response to fires. SAF-8.7 encourages annual updates of the Local Hazard Mitigation Plan. SAF-8.1, SAF-8.2, SAF-8.3, and seeks to enhance the City's ability to respond to fires and conduct emergency services at maximum responsiveness. Actions SAF-A.7, SAF-A.8, SAF-A.9, SAF-A.10, and SAF-A.11 aim to reduce vegetative and structural based wildfire risks. Proposed Policy SAF-6, Development in the Very High Fire Hazard Severity Zone (VHFHSZ), requires assessing site-specific characteristics; avoiding hazardous fire-prone locations; incorporating fuel modification and brush clearance techniques; using fire-resistant building materials and design features; using fire-retardant, native plant species in landscaping; and complying with established standards and specifications for fuel modification, defensible space, access, and water facilities; banning fuel storage (e.g. for generators as well as generators) in VHFHSZ; and requiring street improvements to comply with minimum fire road access standards. These regulations and policies would be reinforced by SCA 46, Fire Safety Phasing Plan, which requires the preparation of a Fire Safety Phasing Plan that would include fire safety features incorporated into each phase of the proposed project. Additionally, SCA 47, Designated Very High Fire Severity Zone – Vegetation Management, requires the preparation of a Vegetation Management Plan (contents of this plan are discussed in Section 4.8.2, *Regulatory Setting*), as well as specific fire safety measures and the requirement for spark arrestors on mechanized equipment to be followed prior to and during construction activities (also discussed in detail above). SAF-8.10 and SAF-8.11 direct capital improvements towards public facilities and identify local critical facilities under emergencies. Adherence to proposed policies and SCAs would limit the potential for construction activities to result in wildfires.

The increase in development intensity and overall density in the Plan Area would result in an increase in demand for fire protection and emergency medical response services. Additional facilities could be developed in the future as a result of impact fees and other revenues. However, as a matter of information, if and when the construction or expansion of facilities to accommodate additional equipment should become necessary, General Plan policies, Municipal Code regulations, and SCAs would all be required to reduce potential impacts associated with the construction of these facilities. Overall, potential impacts associated with the construction of new fire facilities, should new facilities be required, would be similar to those associated with future development under the Proposed Project. Therefore, the impact related to fire protection and emergency medical response services would be less than significant.

Mitigation: None required.

Summary

With adherence to proposed policies and actions, SCAs 46, 47, and 73, as well as other regulatory compliance; future development under the Proposed Project would result in a less than significant impact related to fire protection and emergency medical response services facilities.

Impact PUB-2: Adoption of the Proposed Project would not result in substantial adverse physical impacts associated with the provision of or need for new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police services. (Criterion 1.ii) (*Less than Significant*)

Future development under the Proposed Project would increase land use intensity and overall density throughout the Plan Area. Housing development anticipated with adoption of the Proposed Project could add up to 41,458 housing units and accommodate growth of up to approximately 39,377 households and 100,411 residents.[2] While no specific development proposals are directly associated with the Proposed Project, theoretical development and associated population increase would result in an increase in demand for police services from the OPD.

As discussed in Section 4.13.1.2, *Police Service,* in 2021 the OPD employed 734 full-time equivalent officers and 325 civilians to serve a City population of 433,823 (US Census, 2022). Based on the City's population at the time, the existing officer to resident ratio was approximately 1.7 officers per 1,000 residents. While there is no adopted officer-to-resident ratio in the City, the increase in population and associated increase in calls for service may likely warrant additional police personnel. Policy SAF-8.1, SAF-8.2, SAF-8.3, and Action SAF-A.32 direct the City to assess the need for future emergency services and evaluate capital improvements accordingly. Additionally, as discussed in Section 4.13.1.2, *Police Service,* in 2018 the OPD had a median response time for citywide Priority 1 calls of 7 minutes and 48 seconds. Although there is no adopted police response time goal in the City, the increase in population and associated increase in calls for service could result in longer response times.

[2] The estimated number of households assumes an average 0.5 percent vacancy rate, based on the City's projections.

Additional facilities, including vehicles and equipment, could be required to provide adequate response times to serve future growth. Under General Plan Policy N12.1, the development of public facilities for safety-related services, such as police stations, would be timed to meet the demands from new population growth and development. Therefore, the City's costs to maintain equipment and facilities as well as to train and equip personnel could also increase. However, the additional equipment costs would likely be gradual as the increase in population would occur incrementally over time allowing OPD to gradually meet the demands of the increasing population. Additionally, development under the Proposed Project would result in substantial generation of new property taxes and other fees. These revenues go into the City's General Fund and thus would provide more resources to cover the increased budget for police services. In addition, SCA 73, Capital Improvements Impact Fee, reinforces the City's Capital Improvements Fee Ordinance and would assist in funding the need for expanded services in the Plan Area.

The increase in development intensity and overall density in the Plan Area would result in an increase in demand for police services. Additional facilities could be developed in the future as a result of impact fees and other revenues. However, as a matter of information, if and when the construction or expansion of facilities to accommodate additional equipment becomes necessary, General Plan policies, Municipal Code regulations, and SCAs would all be required to reduce potential impacts associated with the construction of these facilities. Overall, potential impacts associated with the construction of new police facilities, should new facilities be required, would be similar to those associated with future development under the Proposed Project. Therefore, the impact related to police protection services would be less than significant.

Mitigation: None required.

Summary

With adherence to proposed policies and actions, SCA 73 as well as other regulatory compliance; future development under the Proposed Project would result in a less than significant impact related to police services facilities.

Impact PUB-3: Adoption of the Proposed Project would not result in substantial adverse physical impacts associated with the provision of or need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for schools. (Criterion 1.iii) (*Less than Significant*)

Future development under the Proposed Project would increase land use intensity and overall density throughout the Plan Area. Housing development anticipated with adoption of the Proposed Project could add up to 41,458 housing units and accommodate growth of up to approximately 39,377 households and 100,411 residents.[3] While no specific development proposals are directly associated with the Proposed Project, theoretical development and associated population increase would result in an increase in school-aged children that could be enrolled in OUSD schools.

[3] The estimated number of households assumes an average 0.5 percent vacancy rate, based on the City's projections.

The OUSD Developer Fee Study used an average student generation rate of 0.274 students per residential household for grades K-12. The anticipated 39,377 additional households resulting from the *Buildout Program* (ending in 2030) would generate approximately 10,790 new students for OUSD schools. Students would be able to apply to any school in the district since OUSD is a "choice district" where students are assigned to schools through a lottery based on the school choices indicated on their enrollment application and OUSD placement priorities (OUSD, 2022c).

As mentioned in Section 4.13.1, *Environmental Setting,* student enrollment in OUSD district run schools and programs as well as County and District-Authorized charter schools has been on the decline over the past couple of years with a five-year peak enrollment of 50,231 students during the 2017-2018 school year (CDE, 2022). Additionally, many of the OUSD schools are under-enrolled, located in areas where few students live, or both (OUSD, 2022a). The new students generated under the Proposed Project would be added to the district-wide enrollment of OUSD schools as well as County and District-Authorized charter schools incrementally over time as development occurs and would eventually exceed recent enrollment numbers. Therefore, facility updates to increase capacity would also likely be required. Any expansion of school facilities would be required to undergo environmental review as they are identified. Appropriate measures would be identified and implemented to reduce any construction-related or operational effects of those facilities.

As described in Section 4.13.2, projects developed under the Proposed Project would be required to pay school impact fees in compliance with SB 50. According to California Government Code Section 65996, payment of school impact fees that may be required by a State or local agency constitutes full and complete mitigation of school impacts from development. Therefore, impacts associated with adoption of the Proposed Project would be less than significant.

Mitigation: None required.

Summary

With adherence to SB 50, future development under the Proposed Project would result in a less than significant impact related to school facilities.

Impact PUB-4: Adoption of the Proposed Project would not result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for libraries. (Criterion 1.v) (*Less than Significant*)

Future development under the Proposed Project would increase land use intensity and overall density throughout the Plan Area. Housing development anticipated with adoption of the Proposed Project could add up to 41,458 housing units and accommodate growth of up to approximately 39,377 households and 100,411 residents.[4] While no specific development proposals are directly

[4] The estimated number of households assumes an average 0.5 percent vacancy rate, based on the City's projections.

associated with the Proposed Project, theoretical development and associated population increase would result in an increase in demand for library services from the OPL.

Although OPL does not have any performance standards that are tied to levels of demand, LUTE Policy N2.2 states that provisions of services by civic and institutional uses should be distributed and coordinated to meet the needs of City residents (City of Oakland, 2019). As discussed in Section 4.13.1.4, the only active plan to construct new or expand library facilities is the new Piedmont Library branch, which would be a new, permanent location for the existing temporary Piedmont branch. However, there is community demand for the following: a new Main Library, a new branch in the Hoover-Foster neighborhood, a new branch in the San Antonio neighborhood, a new location for the Tool Lending Library, and new or expanded Asian branch (City of Oakland, 2019). Policies in the Environmental Justice Element, including EJ-6.1 and EJ-6.4 direct the City to ensure equitable distribution and maintenance of community facilities such as libraries, and Policy EJ-6.5 includes interagency coordination agreements with jurisdictions and partner agencies to reduce burden on existing libraries.

Development under the Proposed Project would result in generation of new property taxes and other fees. These revenues would go into the City's General Fund and thus would provide more resources to cover the increased budget for library services. In addition, SCA 73, Capital Improvements Impact Fee, reinforces the City's Capital Improvements Fee Ordinance and would assist in funding the need for expanded services in the City.

The increased demand for libraries would occur incrementally, as development proceeds under the Proposed Project. Some library services such as e-books could serve the increased population remotely online, which could reduce the burden on physical facilities. Additional library facilities are not expected to be required to serve the population associated with future development under the Proposed Project; however, additional facilities could be developed in the future as a result of impact fees and other revenues. If and when the construction or expansion of facilities to accommodate increased library demand becomes necessary, CEQA review, General Plan policies, Municipal Code regulations, and SCAs would all be required to reduce potential impacts associated with the construction of these facilities. Overall, potential impacts associated with the construction of new library facilities, should new facilities be required, would be similar to those associated with future development under the Proposed Project. Therefore, the impact related to libraries would be less than significant.

Mitigation: None required.

Summary

With adherence to proposed policies, SCA 73 as well as other regulatory compliance; future development under the Proposed Project would result in a less than significant impact related to library facilities.

4.13.5 Cumulative Impacts

This section presents an analysis of the cumulative effects of future development under the Proposed Project in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to public services could occur if the incremental impacts of future development under the Proposed Project combined with the incremental impacts of cumulative development would be significant and if the Proposed Project's contribution would be considerable.

Impact PUB-5: Adoption of the Proposed Project, combined with cumulative development, would not result in significant cumulative impacts related to substantial adverse physical impacts associated with the construction of new or physically altered governmental facilities in order to maintain acceptable performance objectives for public services. (*Less than Significant)*

Geographic Context

The geographic context for the analysis of cumulative public services impacts is the cumulative development in the Plan Area.

Cumulative Public Services Impacts

Future development under the Proposed Project and cumulative projects would incrementally increase the demand for fire protection and emergency medical response services, police protection services, public schools, and libraries. As discussed above under Impacts 4.14-1, 4.14-2, and 4.14-4, the Proposed Project would have less than significant impacts with regard to fire protection and emergency medical response services, police protection services, and libraries. Cumulative projects would be subject to the same development regulations, including SCA 73, Capital Improvements Impact Fee, which reinforces the City's Capital Improvements Fee Ordinance and would assist in funding the need for expanded services in the City. If and when the construction or expansion of facilities to accommodate increased public service demand becomes necessary, CEQA review, General Plan policies, Municipal Code regulations, and SCAs would all be required to reduce potential impacts associated with the construction of these facilities. With regard to public schools, similar to future development under the Proposed Project, cumulative projects would be subject to school impact fees in compliance with SB 50, which constitutes full and complete mitigation of school impacts from development.

Mitigation: None required.

Summary

With adherence to proposed policies, SCAs, and regulatory compliance; future development under the Proposed Project, combined with cumulative development, would result in a less than significant impact related to the construction of new or physically altered public facilities.

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4.14 Recreation

This section describes conditions and potential environmental effects of the Proposed Project pertaining to recreation. The section discusses relevant existing environmental conditions of the Plan Area and regulations pertinent to this section, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts to the physical environment that could result from implementation of the Proposed Project and its associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that would reduce potential impacts to this environmental topic are identified; both existing and proposed updated/new General Plan policies and SCAs are considered. This section incorporates relevant information from the General Plan Update Map Atlas (see Appendix A) prepared in support of the Proposed Project. No scoping comments related to recreation resources were received in response to the NOP (Notice of Preparation) of this Draft EIR.

4.14.1 Environmental Setting

4.14.1.1 Environmental Setting

The City of Oakland Parks, Recreation & Youth Development Department manages recreation programs, public parks, and services in the Plan Area.

Parks and Open Space

The City's General Plan Open Space, Conservation, and Recreation Element (OSCAR) identifies ten general categories of parks as defined below (City of Oakland, 1996):

- *Region-serving parks* are large recreation areas with diverse natural and human-made features. They are typically 25 acres or larger and are intended to serve the entire city.
- *Community parks* are large natural and/or landscaped areas which provide both refuge from the urban environment and a place for active recreation. They are typically 5-20 acres and serve a half mile radius in the flatlands or a one-mile radius in the hills. These parks have a service goal of a community park of at least 7.5 acres in every one of ten (non-Port) planning areas.
- *Neighborhood parks* are a scaled-down version of a community park and are typically located in residential areas within walking distance of its primary users. They are typically 2-10 acres and serve a quarter mile radius in the flatlands and a half mile radius in the hills. These parks have a service goal of a neighborhood park of at least 3 acres for every 5,000 Oakland residents.
- *Active mini-parks* are typically located in high density neighborhoods and serve a specific group of people, usually small children. They are typically less than one acre and serve an eighth of a mile radius in the flatlands and a quarter mile radius in the hills.
- *Passive mini-parks* are small landscaped areas located adjacent to or in the center of streets, mostly functioning as aesthetics to enhance the beauty of urban residential neighborhoods. They are typically less than one acre.
- *Linear parks* are intended to provide linear access to a natural feature such as a creek or shoreline or provide a connection between two points, sometimes through joint use of an existing linear feature like a BART line or transmission line right of way. Their size and

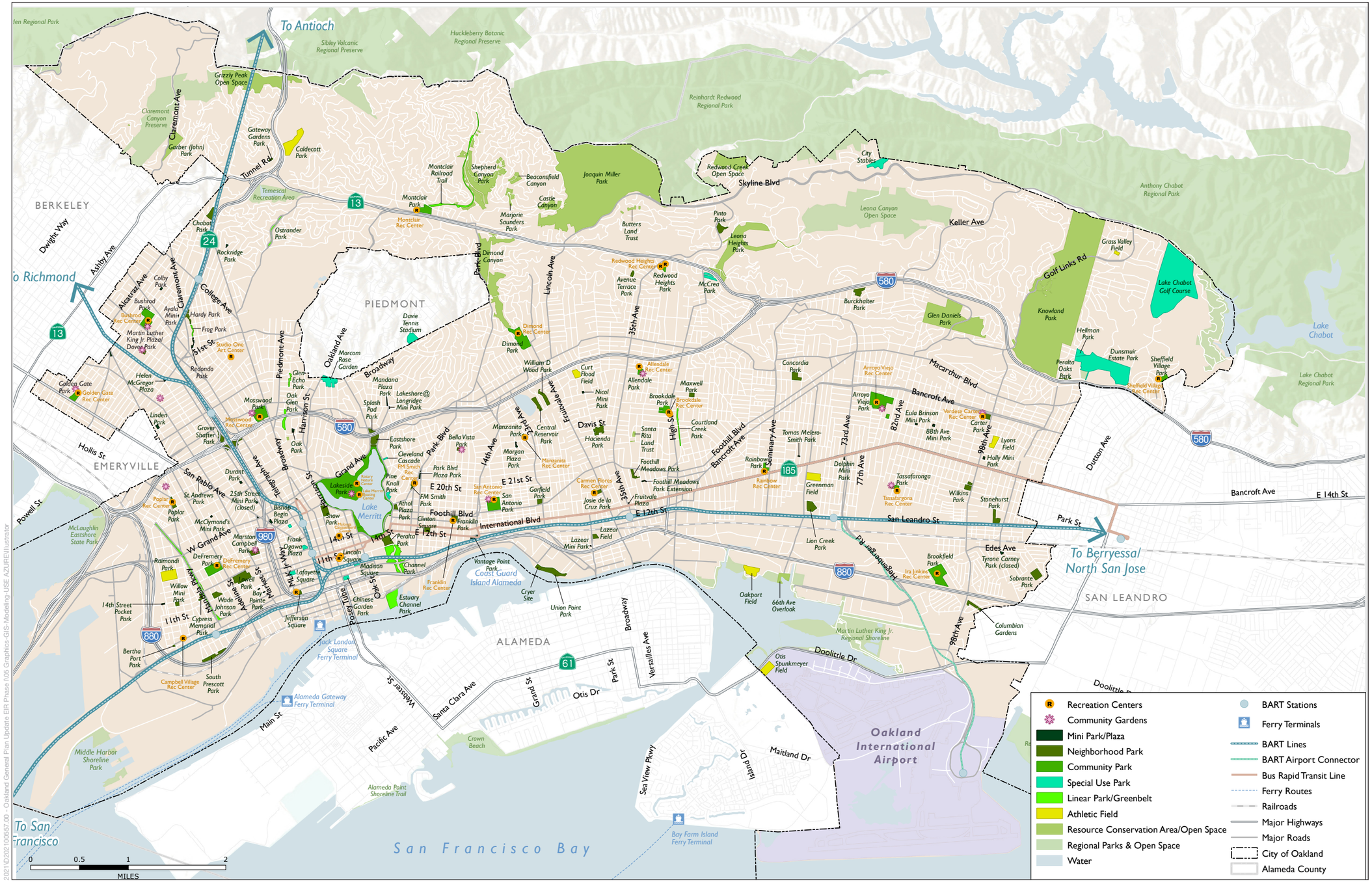
service area vary. These parks are to be provided where possible along creek and shoreline areas and within major means.

- *Special use parks* are areas for specialized or single purpose activities, including golf courses, swimming pools, zoos, ornamental gardens, horse stables, and historic sites. Their size varies and they usually have a citywide service area depending on their activity.
- *Resource conservation areas* are primarily intended to protect the natural environment with their secondary objective being recreational use. They are typically whatever size is required to protect the resource and their service area is variable.
- *Athletic field park/school athletic fields* are large open sites whose primary purpose is to provide a place for high school and league ball games. They are typically 4-15 acres and usually have a service area of one mile. These parks have a service goal of one athletic field complex (capable of supporting soccer, football, and baseball games) for every 20,000 residents.
- *School playgrounds* are located on public school properties and provide recreational facilities and play areas for students. Their size is typically set by the State of California, and they have the same service area as the school. These parks typically have a service foal of one per school, staffed and available to the public during non-school daylight hours.

As of 2022, the City of Oakland has 166 parks totaling 4,927 acres. The median park size is 2.1 acres (Trust Public Land, 2022a). The Oakland Parks, Recreation & Youth Development Department oversees 149 of these parks which represents approximately 3,633 acres (see **Figure 4.14-1**). The East Bay Regional Park District (EBPRD), which acquires and develops regional parks, open spaces and regional trails throughout the East Bay, also provides open space and recreational facilities within Oakland's city limits. The EBRPD accounts for 1,033 acres of land spread across 14 parks within Oakland. This open space within city limits also contributes to the City's parkland acreage goal. The remaining 3 parks and 261 acres are managed by the Port of Oakland (Trust for Public Land, 2022b).

The Oakland hills are almost entirely bordered by and includes some regional parks. The Oakland Hills also include some large resource conservation areas and open spaces. The Oakland flatlands contain a much smaller total area of the City's parkland, with most parks being small neighborhood parks. Lake Merritt is surrounded by substantial community parkland; however, a significant portion of the City population lives within close proximity, resulting in heavy usage of these spaces.

The City of Oakland's OSCAR Element sets a citywide goal of establishing 10 acres of total park land for each 1,000 residents, with 4 of those acres in local-serving parks. The OSCAR recognizes the difficulty in meeting the established goals – which it notes would be impossible without massive redevelopment – especially in built-out urban areas, but states that major gains toward the goal can be made through the expansion of existing parks, improvement of creek and shoreline access, acquisition of vacant parcels, and incorporation of new parks in major redevelopment projects. As of 2022, the City of Oakland has approximately 11.7 acres of parkland per 1,000 residents (Trust for Public Land, 2022b).



SOURCE: Dyett & Bhatia, 2022

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Figure 4.14-1
Parks and Open Space

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The Trust for Public Land (TPL) compiles a ParkScore index which is a national comparison of park systems across the 100 most populated cities in the U.S. This index is published annually and measures park systems according to five categories: access, investment, amenities, acreage, and equity. For 2022, Oakland received an overall score of 55.9 points out of 100 based on an average in these five categories, ranking the Oakland park system 39th (Trust for Public Land, 2022a). In addition, the TPL's ParkScore Index gave Oakland an investment score of 58 out of 100, which reflects the relative financial health of a city's park system and its ability to ensure the park system is maintained at a high level (Trust for Public Land, 2022c).

Specifically, based on the TPL ParkServe database, Oakland—which is the 45th most populous city of the 100 cities in the TPL database—ranks 67th in terms of both park acreage and parkland per 1,000 residents. However, the City ranks 23rd for walkable access, with 89 percent of all residents living within a 10-minute walking distance of a park. As such, the City overall has excellent access to parks and open space, but there are also geographic disparities on the neighborhood level. **Figure 4.14-2** shows that the Oakland hills include and are almost entirely bordered by regional parks, several of which are owned by the East Bay Regional Park District (EBRPD). The Oakland hills also include some large resource conservation areas and open spaces. The Oakland flatlands contain a much smaller total area of the City's parkland, with most parks being small neighborhood parks. Lake Merritt is the exception, as it is surrounded by substantial community parkland; however, it is also surrounded by some of the densest neighborhoods in the City and a significant share of the City population living within proximity, resulting in heavy use of these spaces. As also shown in Figure 4.14-2, recreation centers are geographically well-distributed in general, though two residential areas farther from existing recreation centers include the Caballo Hills and Glen Highlands neighborhoods.

In 2018, the Oakland Parks and Recreation Foundation (OPRF) completed an assessment of 51 community and neighborhood parks (Oakland Parks and Recreation Foundation, 2018). Using 47 rating question, parks were evaluated for broad range of park issues and amenities including safety of play areas, condition of sports fields, park landscaping and hardscape, litter and park cleanliness, restroom availability, homeless encampments, and other factors. Parks were given a score from 0-4 correlating to a letter score using an A-F scale and compared to scores from a 2016 evaluation.[1] Although the City's overall park rating in 2018 was 2.63, a slight improvement over the 2016 rating of 2.55, both scores represent a C+ indicating a need for greater investment. The report also identified the homeless crisis as a significant contributor to overwhelming demands on the park system and impeding parks from serving their intended function.

Additionally, in 2019 the OPRF conducted a citywide report surveying 1,334 Oaklanders about their experiences and perspectives of Oakland's parks. The OPRF found that 95 percent reported at least one barrier to park activation had kept them from fully accessing, enjoying, and using Oakland parks. Notably, in addition to safety concerns, four of the top five barriers to parks were maintenance related, including deteriorated bathroom conditions, encampments, litter, and drug-related litter. More than half of study participants reported poor park maintenance was a barrier to their ability to visit or fully enjoy Oakland's parks (OPRF, 2020).

[1] A=excellent and F=failure

Recreation

The City of Oakland's community facilities provide residents with social, recreational, and educational opportunities. Recreation centers are distributed throughout the Plan Area, with the greatest concentration around densely populated areas like Downtown and Lake Merritt. City amenities include 109 basketball hoops, 18 dog parks, 125 playgrounds, 24 senior/recreation centers, 1 splashpad, 3 cultural arts centers, 3 golf courses, and1 horse stable (Trust for Public Land, 2022a).

The Oakland Parks, Recreation, & Youth Development Department provides additional recreational opportunities through the Dave Tennis Stadium, Rotary Nature Center, and the Lake Merritt Boating Center. The Davis Tennis Stadium has courts open to the public and provides a variety of tennis programs including adult private and group lessons, after-school classes, and spring and summer camp. The Rotary Nature Center is a citywide interpretive center that maintains and protects Lake Merritt, Joaquin Miller Park, and other open spaces. The center handles natural science presentations, environmental education, summer camps for youth, and urban wildlife issues. The Lake Merritt Boating Center provides boating programs at Lake Merritt and the Oakland Estuary (City of Oakland, 2022).

4.14.2 Regulatory Setting

4.14.2.1 State

Quimby Act

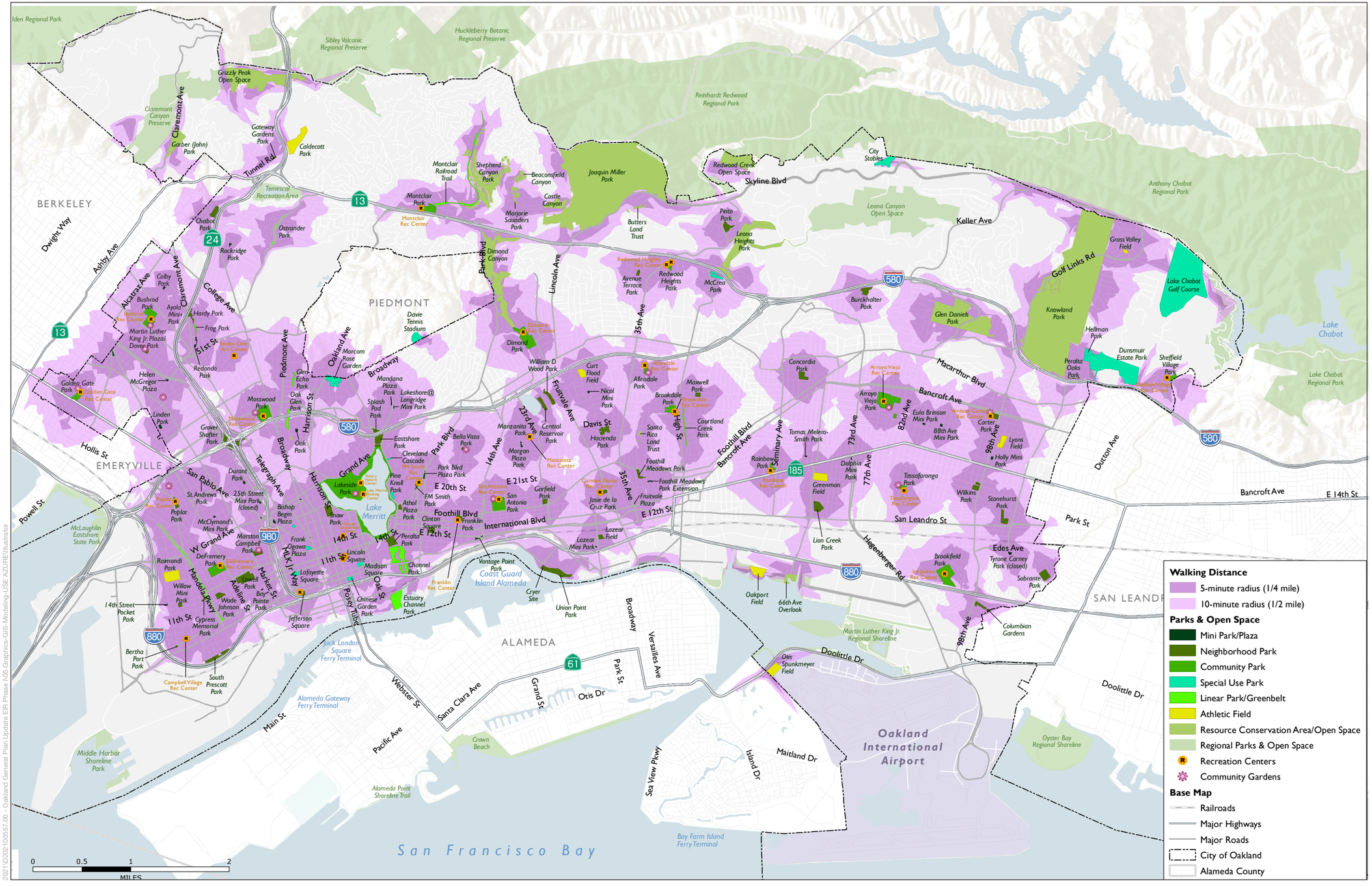
California Government Code Section 66477, Subdivision Map Act, referred to as the Quimby Act, permits local jurisdictions to require the dedication of land and/or the payment of in-lieu fees solely for park and recreation purposes. The dedication of land or in-lieu fees may be required for land or condominium subdivisions. Land dedicated and fees collected pursuant to the Quimby Act may only be used for developing new, or rehabilitating existing, park or recreational facilities. The Quimby Act effectively preserves open space needed to develop parkland and recreational facilities; however, the actual development of parks and other recreational facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development. The City of Oakland does not have a park land dedication requirement pursuant to the Quimby Act. The City instead chose to charge an impact fee for parks and recreation, which is included as part of the City of Oakland Capital Improvements Impact Fee.

4.14.2.2 Local Plans, Ordinances and Policies

City of Oakland General Plan

The City of Oakland General Plan serves as the guiding document for the City's planning and future development. It includes goals, policies, and implementation measures that reflect the community priorities, values, and vision. The OSCAR Element of the General Plan includes the following policies related to recreation (City of Oakland, 1996):

> **Objective OS-2: Urban Parks, Schoolyards, and Gardens.** To maintain an urban park, schoolyard, and garden system which provides open space for outdoor recreation, psychological and physical well-being, and relied from the urban environment.



SOURCE: Dyett & Bhatia, 2022

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Figure 4.14-2
Walkability of Parks, Open Space, and Recreational Facilities, 2021

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Policy OS-2.1: Protection of Park Open Spaces. Manage Oakland's urban parks to protect and enhance their open space character while accommodating a wide range of outdoor recreational activities.

Policy OS-2.5: Urban Park Acquisition Criteria. Increase the amount of urban parkland in the seven flatland planning areas, placing a priority on land with the following characteristics (not in priority order):

a) Land in areas with limited public open space, as identified in the recreation Chapter of OSCAR;

b) Land adjacent to existing parks which has the potential to accommodate park expansion or to link together existing parks;

c) Land with the potential to provide creek or shoreline access;

d) Land with visual or historic significance;

e) Land that can be acquired at no cost or at a reduced cost, or land where matching funds for acquisition are available;

f) Land in areas with dense concentrations of people, especially children; and land in areas with large concentrations of workers or pedestrians;

g) Land that is highly visible from major streets, or that is adjacent to existing public buildings, particularly police and fire stations.

Action OS-2.5.1: Use of City-Owned Sites. Evaluate City-owned property in the flatlands to determine which parcels meet the criteria listed in this policy. These parcels should be identified as possible sites for new or expanded City parks.

Objective OS-3: Institutional and Functional Open Space. To retain major institutional and functional open space areas and enhance their recreational and aesthetic beauty.

Policy OS-3.4: East Bay Municipal Utility District Open Space. Retain East Bay Municipal Utility District (EBMUD) watershed lands and reservoirs as open space and promote their joint use for recreation.

Objective OS-4: Private Open Space. To supplement public open spaces with outdoor open space for private use.

Policy OS-4.1: Provision of Useable Open Space. Continue to require new multi-family development to provide useable outdoor open space for its residents.

Objective OS-5: Linear Parks and Trails. To develop a system of linear parks and trails which (a) links existing parks together; (b) provides safe, convenient access to open space from residential areas and employment centers; (c) provides places to hike, bike, and experience Oakland's scenery; and (d) provides a means of moving from one place to another without an automobile.

Policy OS-5.1: Priorities for Trail Improvement. Improve trail connections within Oakland, emphasizing connections between the flatlands and the hill and shoreline parks; lateral connections between the hill area parks; and trails along the waterfront.

Objective OS-6: Regional Planning. To integrate Oakland's open spaces with a larger system of open spaces serving the entire Bay area, emphasizing the creation and maintenance of a regional greenbelt.

Policy OS-6.1: Intergovernmental Coordination. Coordinate Oakland's open space planning with other agencies, including adjacent cities and counties, the Port of Oakland, and the East Bay Regional Park District.

Objective REC-1: Park Planning and Management. To establish a rational, systematic approach for planning and managing public parks.

Policy REC-1.1: Protection of Park Open Space. Use a variety of measures, including zoning and park classification, to protect the basic function of parks as public open spaces and to evaluate and review future park projects. Under the park classification system outlined in Table 8 (Oakland Park Classification System) and illustrated in Figure 16 (Oakland Parks by Category) as the basis for determining the kinds of facilities that are appropriate in each park.

Policy REC-1.2: No Net Loss of Open Space. Unless overriding consideration exist, allow no net loss of open space within Oakland's urban park system. In other words, the area covered by park buildings or other recreational facilities in the future should be offset in the long-run by acquisition or improvement of an equivalent or larger area of open space. Replacement open space should be of comparable value to the space lost and should generally serve an area identified on Figure 19 (Park Deficient Areas) as having un-met needs.

Policy REC-1.4: Park Improvement or Change in Use. Require an improvement or change in use within a City of Oakland park to be subject to a formal review and approval process. Provide potential park users and local residents with opportunities to participate in this process.

Policy REC-1.5: Park Master Planning. Use master plans as a tool for making long-range decision for park land use, determining needs for capital improvements and funding sources, and soliciting community opinion on how parks should be managed.

Action REC-1.5.3: Open Space Component of Other Plans. Include an open space and parks component in any area plan, neighborhood plan, or redevelopment plan undertaken by the City.

Objective REC-3: Parkland and Park Facilities Deficiencies. To reduce the deficiencies in park acreage and recreational facilities in the most equitable, cost-effective way possible.

Policy REC-3.1: Level of Service Standards. Use the level of service of standards in Table 15 (Level of Service Standards for Oakland Parks) as a means of determining where unmet needs exist and prioritizing future capital investments.

Policy REC-3.2: Systematic Allocation of Funds. Follow a systematic process in allocating park and recreation funds. In general, allocate the greatest expenditures to those areas with the greatest unmet needs and place a priority on projects which maximize reductions in deficiency for the amount of money spent. However, maintain the flexibility to consider such factors as site opportunities, the availability of grants or matching funds, and linkages to other kinds of projects.

Policy REC-3.3: Park Location Factors. Consider a range of factors when locating new parks or recreational facilities, including local recreational needs, projected operating and maintenance costs, budgetary constraints, the need to protect or enhance a historic resource, and site visibility.

Objective REC-4: Maintenance and Rehabilitation. To maintain park facilities so that their ability to meet recreational needs is optimized and to rehabilitate recreational facilities on a regular basis so that they remain useful, attractive, and safe.

Policy REC-4.1: Systematic Maintenance Provisions. Provide for on-going, systematic maintenance of all parks and recreational facilities to prevent deterioration, ensure public safety, and permit continued public use and enjoyment.

Objective REC-5: Park Safety. To improve personal safety and reduce crime in Oakland's parks.

Policy REC-5.4: Civic Responsibility. Promote civic responsibility among residents in the care of Oakland's parks and encourage broad community participation in making parks safer.

Objective REC-10: Funding. To stabilize existing funding sources, develop new funding sources, and effectively manage park expenses.

Policy REC-10.2: Parkland Dedication and Impact Fee. To the extent permitted by law, require recreational needs created by future growth to be offset by resources contributed by that growth. In other words, require mandatory land dedication for large scale residential development and establish a park impact fee for smaller-scale residential development, including individual new dwelling units. Calculate the dedication or fee requirement based on a standard of four acres of local-serving parkland per 1,000 residents.

Action REC-10.2.1: Adoption of Quimby Act Fee. Adopt an ordinance authorizing a Quimby Act parkland dedication and in-lieu/impact fee requirement. Prior to adoption, perform the necessary fiscal studies to determine the dollar amount of park impact fees to be charged for single family and multi-family dwellings. Following adoption, prioritize the expenditure of in-lieu fees collected from new development to ensure that the fees are spent in the appropriate areas.

Policy REC-10.5: Other Local Funding Sources. Promote the use of other local funding sources, including tax increment financing, assessment districts, and general obligation and revenue bonds, to produce the revenue necessary for park improvement and operation.

Oakland Municipal Code

Oakland Municipal Code Chapter 15.74, *Transportation and Capital Improvement Fees*, establishes citywide transportation and capital improvements impact fees in the City of Oakland to assure that development projects pay their fair share to compensate for the increased demand for transportation and capital improvements infrastructure generated by development projects within the City. Funds deposited into the Capital Improvements Impact Fee Fund are used to pay for projects that are required for fire, police, library, parks and recreation, or storm drain services.

City of Oakland Parks and Homeless Services Measure (Measure Q)

In March 2020, City of Oakland voters passed an ordinance that authorizes a 20-year special annual parcel tax to fund parks and recreational facilities, services for unhoused and unsheltered persons, and maintenance of stormwater trash collection systems. Approximately 64 percent of tax revenue could be used for parks, landscape maintenance, and recreational services, and no more than 55 percent can be used to preserve current parks and operational services. Residential parcels are taxed on a per parcel basis with a higher rate for single-family residential parcels. Non-residential parcels are taxed based on parcel frontages and square footage.

4.14.2.3 City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to reducing impacts related to recreation are listed below. All SCAs would be adopted as enforceable conditions of approval and required, as applicable, to be implemented during construction and operation of future development under the Proposed Project to help ensure less-than-significant impacts related to recreation. The SCAs are incorporated and required as part of the Proposed Project, so they are not listed as mitigation measures.

- **SCA 73: Capital Improvements Impact Fee**

  Requirement: The project applicant shall comply with the requirements of the City of Oakland Capital Improvements Fee Ordinance (Chapter 15.74 of the Oakland Municipal Code).

- **SCA 74: Access to Parks and Open Space**

  (The following condition applies to all projects involving new construction adjacent to an existing open space such as parks, lakes, or the shoreline.)

  Requirement: The project applicant shall submit a plan for City review and approval to enhance bicycle and pedestrian access from the project site and adjacent areas to **[INSERT NAME OF EXISTING OPEN SPACE]**. Examples of enhancements may include, but are not limited to, new or improved bikeways, bike parking, traffic control devices, sidewalks, pathways, bulb-outs, and signage. The project sponsor shall install the approved enhancements during construction and prior to completion of the project.

4.14.3 Environmental Analysis

4.14.3.1 Significance Criteria

The City of Oakland has established thresholds of significance for CEQA impacts, which incorporate those in Appendix G of the *CEQA Guidelines* (City of Oakland, 2020). Adoption of the Proposed Project would have a significant adverse impact related to recreation if it would:

1. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

2. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

4.14.3.2 Approach to Analysis / Methodology

This is a program-level Draft EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Impacts relative to recreation are evaluated using the criteria listed above and based on information included in the City of Oakland General Plan, Map Atlas, and the documents listed in Section 4.14.6, *References –Recreation*.

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future development under the Proposed Project, this Draft EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas and analyzes the impacts of housing development through the projection period ending in 2030.

As directed by the Appendix G of the *CEQA Guidelines,* adoption of the Proposed Project could have a significant impact on recreation if: (1) it would require the construction of new or physically altered recreational facilities in order to maintain acceptable levels of service; and (2) the construction or alteration of such facilities would result in a substantial adverse physical impact on the environment.

4.14.3.3 Proposed 2045 General Plan Policies, Land Use and Zoning

The following policy and action pertaining to recreation are proposed as a part of the Safety Element Update in the Proposed Project.

> ***SAF-8.10: Public Facilities for Resilience & Relief.*** Prioritize capital improvements and maintenance of public facilities such as libraries, senior centers, cultural centers, parks, and recreation centers to ensure that they can function as essential service facilities, respite centers, and local assistance centers providing emergency social and medical services in times of distress (cooling and clean air stations, food and vaccine distribution, testing centers, evacuation/disaster shelters, etc.), and as neighborhood hubs that empower communities to build resilience. Clean energy microgrids should be prioritized at all community-serving facilities that are deemed critical during emergency events. In alignment with the ECAP, a minimum of three resilience hubs will be constructed in frontline communities by 2030. The City will continue pursuing resources to increase the number of resilience hubs beyond the minimum required, and to ensure that all frontline community members have access to a resilience hub.
>
> *SAF-A.36:* Implement at least three resilience hubs, including in West Oakland, East Oakland, and Lincoln Square Recreation Center.

The following policy pertaining to recreation are proposed as a part of the Environmental Justice Element in the Proposed Project:

> ***EJ-7.8: Park Distribution.*** As part of park planning efforts, prioritize development of new parks in EJ Communities that are underserved, as identified in Figure EJ-26.

EJ-7.9: Enhancing Access to Parks. Pursue strategies that increase community access to safe, high quality open space, parks and recreational facilities, including increasing access to pedestrian and bicycle amenities around open space or recreational areas; expanding joint use agreements with schools and educational institutions; removing physical barriers to access (ex: fences); and providing a choice of legible routes to and from park areas through the installation of new or improved multi-use shared paths, wayfinding, and signage.

EJ-7.10: Parks Programming. Create high-quality inclusive programming that encourages the use of the park facilities by a variety of users including older adults, youth, and people with disabilities throughout the day and evenings. Opportunities should be taken to incorporate local heritage and culture.

EJ-7.11: Partnerships. Coordinate partnerships Caltrans and the Port to activate and increase access to parks and greenways with community programming and events.

EJ-7.12: Park Safety. Use Crime Prevention Through Environmental Design (CPTED) and other best practices for landscaping, lighting, and other components when designing open space and recreational spaces.

EJ-7.13: Park Maintenance. When evaluating park projects and funds for maintenance—such as routine trash collection, cleaning of restroom facilities, provision of safety lighting, and other operational functions—include equity and presence in EJ Communities as a priority weighted factor.

EJ-7.14: Community Input. Provide ongoing opportunities for public engagement and input into the parks and recreation planning process, including priorities for amenities, facilities, programming, and improvements. Focus engagement efforts in EJ Communities.

4.14.3.4 Topics Considered and Determined to Have No Impact

All topics related to recreation are analyzed below.

4.14.4 Impacts of the Project

Impact REC-1: Adoption of the Proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. (Criterion 1) (*Less than Significant*)

The *Buildout Program*, and the basis for this analysis, estimates adoption of the Proposed Project could add up to 41,458 housing units accommodating growth of up to approximately 39,377 households and 100,411 residents.[2] While no specific development proposals are directly associated with the Proposed Project, theoretical development would result in an increase in population and thus an increased use of existing neighborhood and regional parks, and recreational facilities.

The population increase and resulting use of existing neighborhood and regional parks and recreation facilities would occur over time as individual projects are developed. Future

[2] The estimated number of households assumes an average 0.5 percent vacancy rate, based on the City's projections.

development under the Proposed Project would be subject to the Measure Q annual parcel tax to fund parks and recreational facilities, including landscape maintenance and preserving existing parks and operational services. In addition, future development under the Proposed Project would result in generation of new property taxes and other fees, including transient occupancy tax, business license tax, utility user tax, and sales tax revenues associated with new resident spending. These revenues would go into the City's General Fund and thus could provide more resources to cover the increased operational costs associated with an increased demand for parks and recreation.

As discussed in Section 4.14.1, *Environmental Setting,* the City of Oakland currently has 4,927 acres of parkland available and widespread recreation amenities to meet the recreation needs of Oakland residents. The multiple Resources Conservation areas/Open Spaces as well as Regional Parks & Open Spaces are mainly concentrated in the northern and shoreline areas of Oakland. According to the TPL's ParkScore Index, as of 2022, 89 percent of residents live within a 10-minute walk of a park. In 2018, the OPRF gave an Overall Park Rating score equivalent to a C+. Additionally, in 2019 the OPRF found that, in addition to safety concerns, four of the top five barriers to parks were maintenance related, including deteriorated bathroom conditions, encampments, litter, and drug-related litter.

Existing and new residents associated with future development under the Proposed Project would be expected to use these facilities from time to time. As mentioned above, many parks in the Plan Area were described as being poorly maintained, which can be a barrier to residents fully utilizing and enjoying Oakland's parks. As described in Chapter 3, *Project Description*, the 2023-2031 Housing Element includes updated goals, policies, and programs to comprehensively address the housing crisis and needs of Oaklanders by making quality housing opportunities available to all Oakland residents. Given that, in addition to complying with State mandates, the primary intent of the Proposed Project is to address the housing crisis and given that the homeless crisis has been identified as a significant contributor to the overwhelming demands on the park system, it is possible that adoption of the Proposed Project could have a beneficial effect on City parks and could increase their ability to serve their intended function. Nonetheless, for the purposes of a conservative analysis, it is assumed that the projected increase in population could exacerbate the existing park maintenance issues.

General Plan Policies REC-3.1, 4.1, and proposed policy SAF-8.10 and Action SAF-A.36 require the City to prioritize capital improvements and maintenance of public facilities and rely on a level of service of standards to prioritize where capital improvements are needed. Policy REC 10.2 and SCA 73 support funds needed to improve recreational resources and would reduce the potential for deterioration and related impacts. Future development under the Proposed Project would contribute to the City of Oakland Landscaping and Lighting Assessment District, which funds operation and maintenance for park and recreation facilities through payment of parcel taxes that are assessed based on changes in land use. The Downtown Oakland Specific Plan EIR also includes mitigation that requires the City to update its Capital Improvement Impact fees and/or implement a dedicated impact fee specific to parks and recreation, as well as create a Privately Owned Public Spaces (POPOS) program to further mitigate impacts to parks and recreational facilities (City of Oakland, 2019).

Although proposed amendments to the Planning Code would reduce open space requirements on some housing development, most individual projects would be required to develop open space that would absorb a small portion of the demand for parks and recreational facilities by new residents. The increased demand on existing parks is not anticipated to substantially increase or accelerate the physical deterioration or degradation of existing parks or recreation facilities, as these areas are plentiful and have been planned for recreational use. However, the existing deficiency of park maintenance could be exacerbated. Implementation of the aforementioned existing and proposed general plan and specific plan policies as well as requirement to pay SCA 73 and other fees, would generate funds to improve and maintain recreational resources and would prioritize spending to address the park and recreational needs of future development. Therefore, impacts from the accelerated physical deterioration of parks and recreation resources would be less than significant.

Mitigation: None required.

Summary

With adherence to SCA 73 as well as other regulatory compliance, future development under the Proposed Project would result in a less than significant impact on existing neighborhood and regional parks or other recreational facilities.

Impact REC-2: Adoption of the Proposed Project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. (Criterion 2) (*Less than Significant*)

As described above, future development under the Proposed Project would increase land use intensity and overall density throughout the Plan Area resulting in a residential population increase and associated increased use of existing neighborhood and regional parks, and recreational facilities.

As discussed in Section 4.14.1, *Environmental Setting,* Oakland's OSCAR Element sets a citywide goal of establishing 10 acres of total park land for each 1,000 residents, with 4 of those acres in local-serving parks. The OSCAR recognizes the difficulty in meeting the established goals – which it notes would be impossible without massive redevelopment – especially in built-out urban areas, but states that major gains toward the goal can be made through the expansion of existing parks, improvement of creek and shoreline access, acquisition of vacant parcels, and incorporation of new parks in major redevelopment projects. The City's recreational resources currently provide approximately 11.7 acres of parkland per 1,000 residents exceeding this parkland provision standard (Trust for Public Land, 2022b). The addition of approximately 100,411 residents associated with future development under the Proposed Project would decrease the existing ratio to approximately 9.2 acres of parkland per 1,000 residents, leaving a shortfall of approximately 412 acres. As the residential population of Oakland increases, the construction of new parks and recreation facilities in the Plan Area could potentially be required.

Future development under the Proposed Project would be subject to the City's SCA 73, Capital Improvements Impact Fee, which requires development projects to pay compensation for the increased demand on infrastructure generated by development projects within the Plan Area. These revenues would assist in the funding of new, expanded, or improved facilities (not maintenance or operating costs) including those that may be triggered by new development. In addition, adherence by the OSCAR Element policies listed above would prioritize funding and could facilitate the expansion or construction of new recreational facilities.

Park projects developed as a result of the City's Capital Improvements Fee, funded in part by future development under the Proposed Project, or by other means, would be required to undergo environmental review as they are identified. However, as a matter of information, if and when the construction or expansion of park or recreational facilities becomes necessary; General Plan policies, Planning Code regulations, and SCAs would all be required to reduce potential impacts associated with the construction of these resources. Overall, potential impacts associated with the construction of new parks or recreational facilities, should new facilities be required, would be similar to those associated with future development under the Proposed Project. Therefore, the impact related to recreational resources would be less than significant.

Mitigation: None required.

Summary

With adherence to SCA 73 as well as other regulatory compliance, future development under the Proposed Project would result in a less than significant impact related to the construction or expansion of recreational facilities.

4.14.5 Cumulative Impacts

Impact REC-3: Adoption of the Proposed, combined with cumulative development, would not result in significant cumulative impacts to parks and recreation. (*Less than Significant*)

Geographic Context

The geographic context for the analysis of cumulative recreational impacts is the cumulative development in the City of Oakland.

Cumulative Recreation Impacts

Further development in the Plan Area under the Proposed Project and cumulative projects would incrementally increase the demand for and use of existing parks and recreation facilities. As described in Impacts REC-1 and REC-2, the Proposed Project would have less than significant impacts with regard to recreation. Similar to the Proposed Project, cumulative development would be subject to the City of Oakland's SCAs and Capital Improvements Fee that contribute to long-term parks and recreational facilities planning and capacity improvements. These measures would require improvement fees as well as ensure adequate access to parks and open space. Additionally, the City of Oakland would also be required to ensure compliance with General Plan Policies under the OSCAR Element related to the City's existing and future parks and

recreational needs. Other developments would be required to comply with local jurisdiction General Plan Goals related to the maintenance and demand for parks and recreational facilities.

Conclusion

Implementation of the City's SCA 73 and SCA 74 would contribute to the long-term parks and recreational facilities improvements. Therefore, when considered in the cumulative context, the Proposed Project's parks and recreation-related impacts would not be cumulatively considerable. Cumulative impacts related to parks and recreation would be less than significant.

Mitigation: None required.

Summary

With adherence to proposed policies, SCAs, and regulatory compliance; future development under the Proposed Project, combined with cumulative development, would result in a less than significant impact related to parks and recreation.

4.14.6 References – Recreation

City of Oakland, 1996. *Open Space, Conservation, and Recreation (OSCAR) Element*, June 1996. Accessed September 1, 2022.

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City of Oakland, 2020. *City of Oakland CEQA Thresholds of Significance Guidelines*, December 16, 2020.

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Trust for Public Land, 2022a. *2022 ParkScore Index.* Available: https://parkserve.tpl.org/mapping/pdfs/Oakland_CA.pdf. Accessed August 29, 2022.

Trust for Public Land, 2022b. *2022 City Park Facts.* Available: https://www.tpl.org/2022-city-park-facts. Accessed August 29, 2022.

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4.15 Transportation and Circulation

This section describes conditions and potential environmental effects of the Proposed Project pertaining to the transportation and circulation. The section discusses relevant existing environmental conditions of the Plan Area and regulations pertinent to this section, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts to the physical environment that could result from implementation of the Proposed Project and its associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that would reduce potential impacts to this environmental topic are identified; both existing and proposed updated/new General Plan policies and SCAs are considered. A review of evacuation routes and evacuation plans is presented separately in Sections 4.8, *Hazards and Hazardous Materials*; and 4.18, *Wildfire*.

This section incorporates relevant information from the General Plan Update Map Atlas prepared in support of the Proposed Project (see Appendix A). Scoping comments related to transportation and circulation were received from AC Transit, Alameda CTC and BART in response to the NOP (Notice of Preparation) of this Draft EIR.

AC Transit commented that the City should prioritize housing development along major transit corridors to maximize the benefits of frequent transit service. Additionally, AC Transit commented that the City should expand and strengthen Transportation Demand Management (TDM) requirements and consider anti-displacement policies. AC Transit also highlighted the recently built TEMPO BRT line, which provides a connection to underserved communities. Lastly, AC Transit recommended referring to the Equitable Climate Action Plan, 2020 and Major Corridors Study, 2016 for transit improvements.

Alameda CTC commented that the Proposed Project will generate at least 100 p.m. peak hour trips over existing conditions, and therefore Alameda CTC's CMP Land Use Analysis Program requires the City to conduct a transportation impact analysis of the Proposed Project. Alameda CTC listed the roadways on its Metropolitan Transportation System (MTS) that are likely to be impacted due to the Proposed Project and evaluation criteria. Additionally, Alameda CTC commented that the EIR should address the potential impacts of the Proposed Project on walking, biking and transit use, especially potential impacts on the Countywide High Injury Network of streets identified as a part of the Countywide Active Transportation Plan. This analysis does not relate to CEQA thresholds and is therefore provided for informational purposes in Appendix D to this Draft EIR.

BART commented that it is supportive of new infill development projects, especially near BART stations. BART referred to its 2005 Transit-Oriented Development (TOD) policy, which states that – "promoting high quality, more intensive development on and near BART-owned property, [BART] can increase ridership, support long-term system capacity and generate new revenues for transit." BART commented that both Project and Cumulative impacts on BART service and station capacity should be analyzed. An increase in peak hour ridership could result in a decrease in the performance or safety of BART facilities. This analysis does not relate to CEQA thresholds and is therefore provided for informational purposes in Appendix D.

4.15.1 Environmental Setting

The City of Oakland is at the crossroads of a significant portion of the Bay Area's transportation network. Four interstates (I-80, I-880, I-980, I-580) pass through the City. All Bay Area Rapid Transit (BART) lines traverse the City, serving eight stations. The City is also served by Amtrak, San Francisco Bay Ferry, and Alameda Contra-Costa Transit (AC Transit).

Oakland is the third most populous city in the Bay Area, and the eighth largest in the State; it is also the fastest growing of the State's dozen largest cities, with its population growing nearly 12 percent since 2010. Oakland International Airport connects the City and the region to the rest of the world. The Port of Oakland is the fifth busiest container ports in the nation, with 99 percent of the containerized goods in Northern California flowing through the port.

4.15.1.1 Existing Street Network

The Plan Area's existing street network connects neighborhoods, services, and employment centers both locally and regionally. Streets also support adjacent land uses and travel by bus, walking, and bicycling. The existing street network is classified as follows:

Functional Classification

Freeways

The freeways within the Plan Area consist of Interstates 80, 880, 580, and 980, along with State Routes 24 and 13. These freeways are owned and maintained by the California Department of Transportation ("Caltrans") and provide regional connectivity to and through the City. Freeways are limited-access routes with no direct access to adjacent land uses.

I-80 is a major transcontinental freeway spanning between California and New Jersey. In the Bay Area, it serves San Francisco and East Bay destinations in Alameda, Contra Costa and Solano Counties. I-80 is connected to West Oakland by freeway ramps that terminate at the West Grand Avenue/I-880 Frontage Road interchange. I-80 carries approximately 225,000 vehicles daily between the San Francisco-Oakland Bay Bridge and West Grand Avenue.

I-880 serves west Alameda County and Santa Clara County connecting I-80 in the City to Interstate 280 (I-280) in San Jose through cities such as Hayward, Fremont, and Milpitas. I-880 connects to west I-80 at the Bay Bridge Toll Plaza. Interchange ramps connect I-880 to Union, Adeline, and Market streets. I-880 carries approximately 195,000 vehicles daily between Hegenberger Road and 105th Avenue.

I-580 is a major east-west freeway connecting the Bay Area and the Central Valley. In Oakland, it connects I-80 in West Oakland to San Leandro. Trucks exceeding 4.5 tons (9,000 pounds) are restricted from using I-580 in the City between Grand Avenue and the Oakland/San Leandro border. The restriction was implemented when I-580 was constructed in the 1960s at the request of the cities of Oakland, Piedmont, San Leandro, and Alameda County. I-580 carries 168,000 vehicles per day between Grand Avenue and 13th Avenue.

I-980 runs between I-580 and I-880. North of I-580, it continues as State Route 24 to Contra Costa County via the Caldecott Tunnel. I-980 carries approximately 100,000 vehicles daily just south of I-580.

SR 24 is an eight-lane freeway that connects the East Bay area with central and east Contra Costa County. SR 24 extends from I-980 to I-680 through the Caldecott tunnel and carries approximately 150,000 vehicles daily just west of the Caldecott Tunnel.

SR 13 runs along the Oakland Hills, connecting I-580 in Oakland to SR 24 in Berkeley. It carries approximately 70,000 vehicles per day between SR 24 and Moraga Avenue.

Major Arterial and Minor Arterial Streets

The City has designated arterial streets that provide mobility for longer-distance travel by transit, driving, and bicycling. Major arterial streets carry higher traffic volumes than minor arterial streets. Major arterial and minor arterial streets often support adjacent commercial or community-serving land uses. Some arterial streets are under Caltrans' jurisdiction, while the remainder are owned and maintained by the City.

Figure 4.15-1 shows the street network throughout the Plan Area by roadway classification. **Table 4.15-1** provides the list of freeway segments and major arterial streets segments along with information on ownership and average daily traffic volumes (ADT) from 2019 to reflect pre-Covid conditions The projections for the Proposed Project conditions were estimated using the Alameda CTC Countywide Travel Demand Model and are anticipated to increase traffic volumes by six percent on select roadways. MacArthur Boulevard (five percent increase annually) and 3rd Avenue (two percent increase annually) have the highest percentage increase in traffic volumes. Similarly, the freeways are expected to see a five percent increase in traffic volumes, with I-80 between the San Francisco-Oakland Bay Bridge and West Grand Avenue expected to see the highest increase of 21,800 vehicles per day (10 percent increase).

Collector and Local Streets

Collector and local streets prioritize access to adjacent land uses. Local streets provide circulation within neighborhoods, while collector streets provide for connections between neighborhoods. Collector and local streets have low traffic volumes and low posted speed limits.

TABLE 4.15-1
EXISTING AND PROJECTED ADT VOLUME FOR MAJOR ROADWAYS

#	Roadway	Limits	Functional Classification	Ownership	Data Year	ADT	Projected 2030 ADT
1	I-80	Between Bay Bridge and W Grand Avenue	Interstate/Other Freeway	Caltrans	2019	227,000	248,800
2	I-880	Between W Grand Avenue and Adeline Street	Interstate/Other Freeway	Caltrans	2019	95,000	94,800
3	I-880	Between Adeline Street and I-980	Interstate/Other Freeway	Caltrans	2019	109,000	111,300
4	I-880	Between I-980 and Webster Street	Interstate/Other Freeway	Caltrans	2019	81,000	83,400
5	I-880	Between Webster Street and Embarcadero	Interstate/Other Freeway	Caltrans	2019	176,000	175,500
6	I-880	Between Embarcadero and Kennedy Street	Interstate/Other Freeway	Caltrans	2019	194,000	196,800
7	I-880	Between Kennedy Street and Hegenberger Road	Interstate/Other Freeway	Caltrans	2019	197,000	200,200
8	I-880	Between Hegenberger Road and 105th Avenue	Interstate/Other Freeway	Caltrans	2019	195,000	188,500
8	I-880 HOV	Between Hegenberger Road and 105th Avenue	Interstate/Other Freeway	Caltrans	2019	195,000	208,900
9	I-580	Between Ashby Avenue and 40th Street	Interstate/Other Freeway	Caltrans	2019	217,000	226,700
10	I-580	Between Mandela Pkwy and I-980	Interstate/Other Freeway	Caltrans	2019	148,000	160,900
11	I-580	Between I-980 and Grand Avenue	Interstate/Other Freeway	Caltrans	2019	154,000	169,400
12	I-580	Between Grand Avenue and 13th Avenue	Interstate/Other Freeway	Caltrans	2019	168,000	182,000
13	I-580	Between 13th Street and 35th Avenue	Interstate/Other Freeway	Caltrans	2019	143,000	158,300
14	I-580	Between SR 13 and 98th Avenue	Interstate/Other Freeway	Caltrans	2019	153,000	171,500
15	I-980	Between I-880 and I-580	Interstate/Other Freeway	Caltrans	2019	103,000	106,400
16	SR 24	Between I-580 and Broadway	Interstate/Other Freeway	Caltrans	2019	127,000	130,200
17	SR 24	Between Broadway and SR 13	Interstate/Other Freeway	Caltrans	2019	140,000	147,900
18	SR 24	Between SR 13 and Camino Pablo	Interstate/Other Freeway	Caltrans	2019	142,000	153,100
19	SR 13	Between SR 24 and Moraga Avenue	Interstate/Other Freeway	Caltrans	2019	71,000	75,700
20	SR 13	Between Moraga Avenue and Lincoln Avenue	Interstate/Other Freeway	Caltrans	2019	59,000	64,100
21	SR 13	Between Lincoln Avenue and I-580	Interstate/Other Freeway	Caltrans	2019	53,000	57,000
22	International Boulevard	Between 1st Avenue and 42nd Avenue	Major Arterial	City of Oakland	2013	12,680	13,500

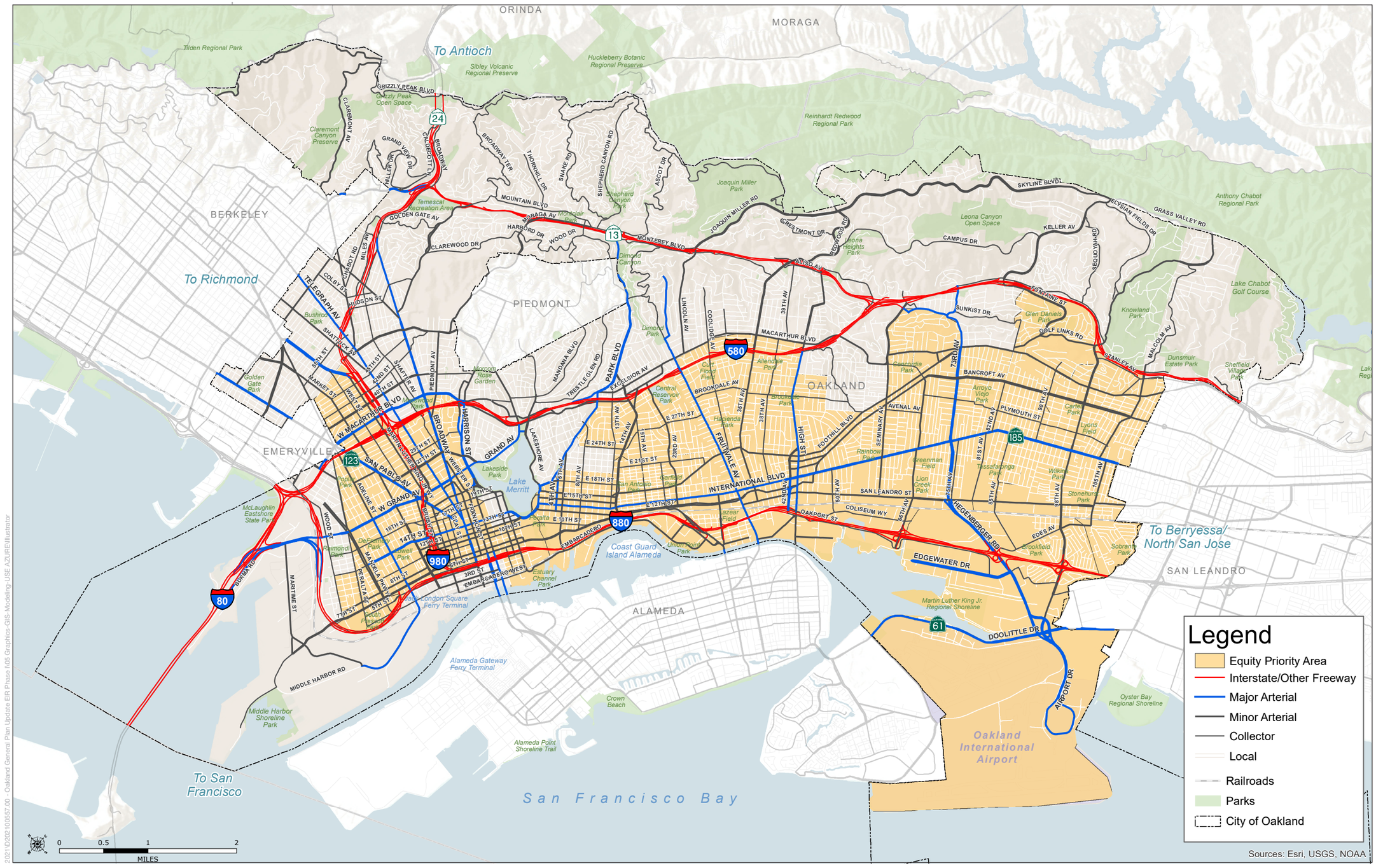
TABLE 4.15-1 (CONTINUED)
EXISTING AND PROJECTED ADT VOLUME FOR MAJOR ROADWAYS

#	Roadway	Limits	Functional Classification	Ownership	Data Year	ADT	Projected 2030 ADT
23	International Boulevard	Between 42nd Avenue and Seminary Avenue	Major Arterial	Caltrans	2019	20,700	21,400
24	International Boulevard	Between Seminary Avenue and 86th Avenue	Major Arterial	Caltrans	2019	24,100	25,100
25	International Boulevard	Between 86th Avenue and Durant Avenue	Major Arterial	Caltrans	2019	21,600	23,000
26	Doolittle Drive	Between Hegenberger Road and Harbor Bay Pkwy	Major Arterial	Caltrans	2019	20,500	21,100
27	San Pablo Avenue	Between 67th and 53rd Street	Major Arterial	Caltrans	2019	17,800	19,000
28	42nd Avenue	Between I-880 and International Boulevard	Major Arterial	Caltrans	2019	12,100	11,300
29	E 14th Street	Between Mandela Pkwy and Magnolia Street	Major Arterial	City of Oakland	2016	8,990	9,500
30	E 14th Street	Between Magnolia Street and Brush Street	Major Arterial	City of Oakland	2016	10,230	10,500
31	14th Street	Between Brush Street and Clay Street	Major Arterial	City of Oakland	2016	11,660	12,300
32	14th Street	Between Clay Street and Webster Street	Major Arterial	City of Oakland	2016	8,840	9,400
33	14th Street	Between Webster Street and Lakeside Dr	Major Arterial	City of Oakland	2016	8,840	8,900
34	1st Avenue	Between International Boulevard and E 18th Street	Major Arterial	City of Oakland		NA	37,300
35	3rd Avenue	Between E 18th Street and Park Boulevard	Major Arterial	City of Oakland	2013	2,380	3,100
36	42nd Avenue	Between San Leandro and International Boulevard	Major Arterial	City of Oakland	2013	10,890	10,100
37	4th Avenue	Between E 12 Street and Park Boulevard	Major Arterial	City of Oakland		NA	-
38	73rd Avenue	Between International Boulevard and Simson Street	Major Arterial	City of Oakland	2017	26,412	26,900
39	Adeline Street	Between 3rd Street and W Grand Avenue	Major Arterial	City of Oakland	2013	6,730	7,300
40	Airport Drive	Between Doolittle Drive and Neil Armstrong Way	Major Arterial	City of Oakland		NA	73,400
41	Broadway	Between 5th Street and Keith Avenue	Major Arterial	City of Oakland		NA	15,300
42	E 18th Street	Between 1st Avenue and 3rd Avenue	Major Arterial	City of Oakland		NA	20,500
43	MacArthur Boulevard	Between Hollis Street and Grand Avenue	Major Arterial	City of Oakland	2013	3,980	7,300
44	MacArthur Boulevard	Between Grand Avenue and Park Boulevard	Major Arterial	City of Oakland	2013	5,980	6,800

TABLE 4.15-1 (CONTINUED)
EXISTING AND PROJECTED ADT VOLUME FOR MAJOR ROADWAYS

#	Roadway	Limits	Functional Classification	Ownership	Data Year	ADT	Projected 2030 ADT
45	MacArthur Boulevard	Between Park Boulevard and Oakland Avenue	Major Arterial	City of Oakland	2013	11,095	12,000
46	Edgewater Drive	Between Hegenberger Road and Garretson Point Trail	Major Arterial	City of Oakland		NA	14,100
47	Fruitvale Avenue	Between Lyman Road and Blanding Avenue	Major Arterial	City of Oakland		NA	25,200
48	Harrison Street	Between W Grand Avenue and MacArthur Boulevard	Major Arterial	City of Oakland	2013	23,940	25,200
49	Hegenberger Road	Between International Boulevard and Doolittle Drive	Major Arterial	City of Oakland		NA	39,800
50	High Street	Between Tidewater Avenue and Brookdale Avenue	Major Arterial	City of Oakland	2016	16,650	16,800
51	Hillmont Drive	Between Overdale Avenue and Simson Street	Major Arterial	City of Oakland		NA	1,200
52	Lake Merritt Drive	Between Lakeside Drive and 1st Avenue	Major Arterial	City of Oakland		NA	-
53	Lakeshore Drive	Between 1st Avenue and E 18th Street	Major Arterial	City of Oakland	2013	13,850	13,300
54	Martin Luther King Jr. Way	Between 47th Street and 62nd Street	Major Arterial	City of Oakland		NA	55,200
55	Middle Harbor Road	Between Adeline Street and Maritime Street	Major Arterial	City of Oakland	2013	12,060	12,600
56	Oakland Avenue	Between W Grand Avenue and W MacArthur Avenue	Major Arterial	City of Oakland	2013	11,250	11,700
57	Park Boulevard	Between International Boulevard and Mountain Boulevard	Major Arterial	City of Oakland		NA	15,500
58	Webster Street	Between 6th Street and Embarcadero West	Major Arterial	City of Oakland	2016	10,670	11,200
59	Webster Posey Tube	Between Marina Village Parkway and Embarcadero West	Major Arterial	City of Oakland		NA	34,200
60	Telegraph Avenue	Between 16th Street and 66th Street	Major Arterial	City of Oakland		NA	13,800
61	W Grand Avenue	Between Bay Place and Park View Terrace	Major Arterial	City of Oakland	2020	15,260	15,100
62	W Grand Avenue	Between Euclid Avenue and MacArthur Boulevard	Major Arterial	City of Oakland	2020	16,670	17,000
63	Foothill Boulevard	Between 24th Avenue and Irving Avenue	Minor Arterial	City of Oakland	2019	10,140	10,000
64	Foothill Boulevard	Between Mitchell Street and 28th Street	Minor Arterial	City of Oakland	2019	9,730	9,600
65	Foothill Boulevard	Between Rosedale Avenue and 41st Street	Minor Arterial	City of Oakland	2019	8,630	8,800

SOURCE: Interstate and Other Freeway - Caltrans 2019; Major Arterial from previous traffic counts



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SOURCE: Dyett & Bhatia, 2022

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Figure 4.15-1
Street Network and Roadway Classification

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Summary of Roadway Mileage

Table 4.15-2 summarizes the total mileage by roadway classification, both for the City of Oakland as a whole and for the High Equity Priority Areas within the City (City of Oakland, 2018).[1] As shown in the table, local streets make up most of the roadway mileage in the City, both citywide and within High Equity Priority Areas. Arterial streets make up a higher percentage of roadway miles in High Equity Priority Areas (23 percent) versus citywide (17 percent). Since arterial streets carry higher traffic volumes and serve pedestrians, bicyclists, and transit users, the design and management of arterial streets is an especially important element of transportation equity.

TABLE 4.15-2
TOTAL MILEAGE OF STREETS BY ROADWAY CLASSIFICATION

Roadway Classification	Citywide		High Equity Priority Areas	
	Roadway Miles	Percent of Total	Roadway Miles	Percent of Total
Freeways	133	12%	63.7	12%
Major and Minor Arterial Streets	188.7	17%	117.2	22%
Collector Streets	106.9	10%	41.2	8%
Local Streets	663.6	61%	305.2	58%
Total	1092.2	100%	527.3	100%

SOURCE: Caltrans, 2022; Alameda CTC, 2021

4.15.1.2 Transit

The City is served by a variety of transit options. **Figure 4.15-2** shows the primary transit services and routes, which are summarized below:

Primary Transit Services

AC Transit

AC Transit provides bus transit services for portions of the East Bay in Alameda and Contra Costa Counties. AC Transit bus routes serve almost all of the City's neighborhoods and include local bus routes, routes serving schools, routes for early morning and late-night periods (Early Bird and All Nighter), and Transbay routes connecting Oakland to San Francisco. In 2020, AC Transit initiated the Tempo bus rapid transit service along International Boulevard; this service includes bus-only lanes and other features to improve bus speeds, reliability, and quality of travel. **Table 4.15-3** shows service frequency and hours of operations by service type.

[1] High Equity Priority Areas: OakDOT developed a Geographic Equity Toolbox using the data from American Community Survey (ACS) 2019 5-year estimates. The objective of the toolbox is to support project prioritization and funding in the high equity priority areas. High Equity Priority Areas are defined as the priority neighborhoods labelled as high and highest.

TABLE 4.15-3
AC TRANSIT SCHEDULE AND DAYS OF OPERATION

Service type	Days of operation	Hours of operations	Frequency
Trunks and Major Corridors	Every day	19 to 24 hours per day, for example, 5:00 a.m. to at least midnight	Every 15 - 20 mins
Rapids	Every day	14 to 16 hours per day, for example, 6:00 a.m. to at least 8:00 p.m.	Every 10 - 14 mins
Urban Crosstowns	Some or portion of the routes are suspended during the weekend	14 to 16 hours per day, for example, 5:00 a.m. to at least 7:00 p.m.	Every 15 -20 mins
Suburban Crosstowns	Some or portion of the routes are suspended during the weekend	14 to 16 hours per day, for example, 7:00 a.m. to at least 9:00 p.m.	Every 21 - 30 mins
Very-Low Density Lines	Some or portion of the routes are suspended during the weekend	14 to 16 hours per day, for example, 6:00 a.m. to at least 8:00 p.m.	Every 31 - 60 mins
Transbay	Mondays through Fridays except holidays	Peak Commute Periods Only	Every 21 - 30 mins

SOURCE: AC- Transit Short Range Transit Plan, 2019

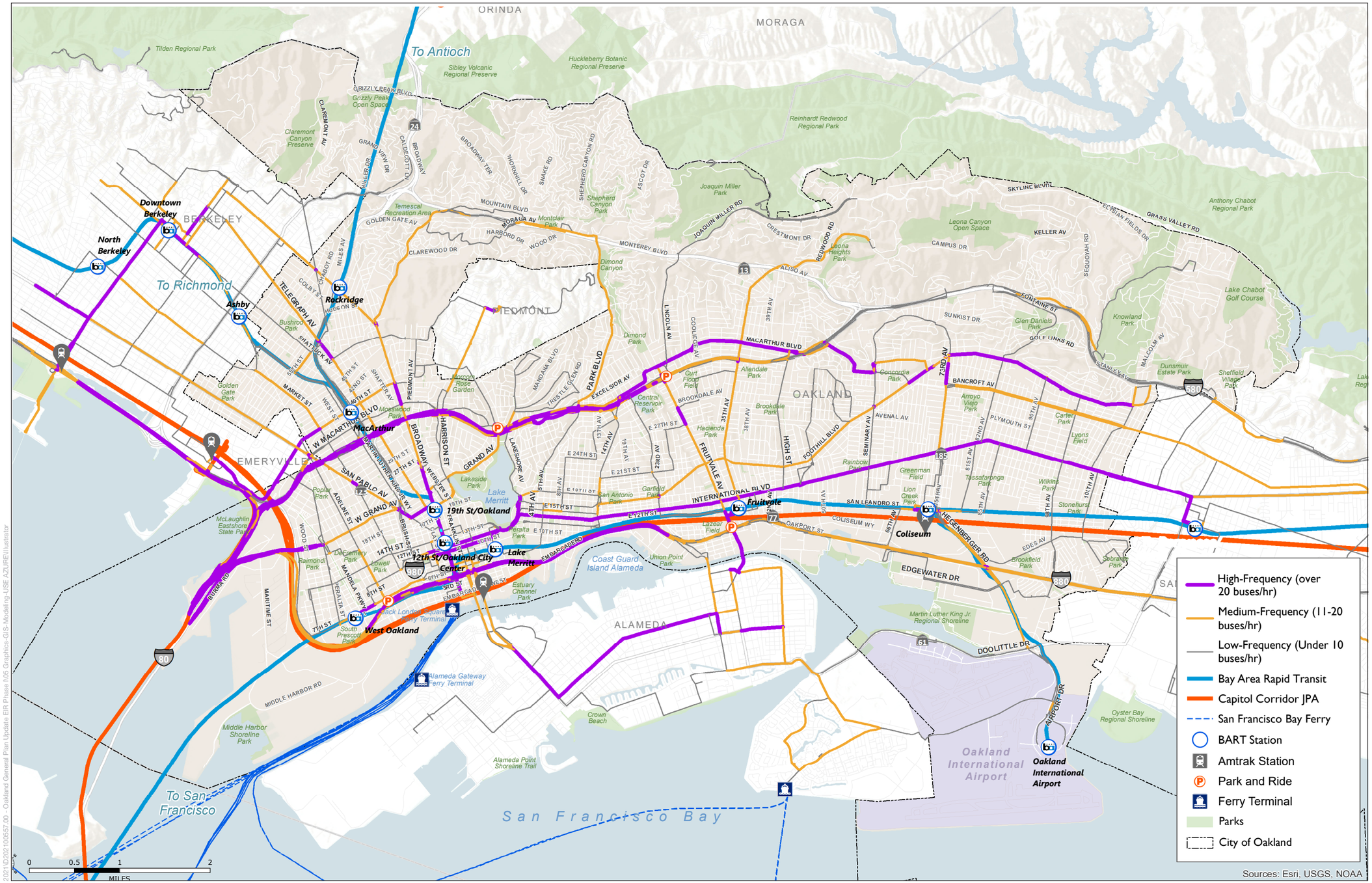
BART

BART operates regional rail transit services connecting the City with the Bay Area. BART serves portions of Alameda, Contra Costa, San Francisco, San Mateo, and Santa Clara Counties, and Downtown Oakland serves as the center of the BART system. There are nine BART stations within the City. The headway (service intervals) on all Oakland BART stations is below five minutes throughout the hours of operation, with West Oakland having the shortest headways of about three minutes. **Table 4.15-4** shows the service frequency and hours of operations by service route.

TABLE 4.15-4
BART SCHEDULE AND DAYS OF OPERATION

Service Name	Days of Operation	Hours of Operations	Frequency
Antioch - SFO + Millbrae (Yellow Line)	Every day	Weekdays (5:00 am - Midnight)	Every 15 mins
		Saturday (6:00 am - Midnight)	Every 15 mins
		Sunday (8:00 am - Midnight)	Every 30 mins
Dublin/Pleasanton - Daly City (Blue Line)	Every day	Weekdays (5:00 am - Midnight)	Every 15 mins
		Saturday (6:00 am - Midnight)	Every 15 mins
		Sunday (8:00 am - Midnight)	Every 30 mins
Berryessa/North San Jose - Richmond (Orange Line)	Every day	Weekdays (5:00 am - Midnight)	Every 15 mins
		Saturday (6:00 am - Midnight)	Every 15 mins
		Sunday (8:00 am - Midnight)	Every 30 mins
Berryessa/North San Jose - Daly City (Green Line)	Weekdays Only	Weekdays (5:00 am - Midnight)	Every 15 mins
Richmond - Millbrae + SFO (Red Line)	Weekdays Only	Weekdays (5:00 am - Midnight)	Every 15 mins
Oakland International Airport (OAK)	Every day	Weekdays (5:00 am - Midnight)	Every 15 mins
		Saturday (6:00 am - Midnight)	Every 15 mins
		Sunday (8:00 am - Midnight)	Every 30 mins

SOURCE: BART, 2022 (https://www.bart.gov/schedules)



SOURCE: Dyett & Bhatia, 2022

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Figure 4.15-2
Transit Network

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WETA

The Water Emergency Transportation Authority (WETA) operates the San Francisco Bay Ferry, which connects San Francisco with Oakland and other destinations around the Bay. There is one WETA ferry terminal within Oakland located at Jack London Square. This location provides ferry service to San Francisco, Alameda, and South San Francisco. **Table 4.15-5** shows the WETA schedule and days of operations.

TABLE 4.15-5
WETA SCHEDULE AND DAYS OF OPERATION

Days of Operation	Hours of Operations	Frequency
Weekdays	6:30 am - 10:15 pm	Every 25 mins during peak commute period (directional)
Weekends	8:30 am - 9:30 pm	Every 60 mins during peak hours and 75 mins during off peak

SOURCE: WETA, 2022 (sanfranciscobayferry.com)

Capitol Corridor

Capitol Corridor is a passenger rail service operated by Amtrak that extends from San Jose to the Sacramento region. There are two Capitol Corridor stations in Oakland: one at Jack London Square and the other at Oakland Coliseum. There are 11 round-trip trains running during the weekdays and nine round trip trains during the weekends.

Transit Streets

According to the Oakland Transit Action Strategy, any street that has bus service can be thought of as a "transit street." Transit streets are further categorized based on frequency of buses as listed below:

- High Frequency Transit Streets serve over 20 buses per hour, or a bus passing a stop at least every three minutes.
- Medium-Frequency Transit Streets have between 10 to 20 buses per hour or a bus passing a stop every three to six minutes.
- Low-Frequency Transit Streets have fewer than 10 buses per hour or a bus passing a stop less frequently than every six minutes.

Table 4.15-6 summarizes the total street mileage by transit service frequency, both for the High Equity Priority Areas and the rest of the City. As shown in the table, high-frequency transit streets are less prevalent in High Equity Priority Areas (15 percent of total miles) compared to the rest of the City (27 percent of total miles). This highlights the need for an equity-focused approach to transit policies and investments.

Other Transit Services

Other transit services not shown on Figure 4.15-2 are East Bay Paratransit, private shuttles, transportation network companies, and car sharing services.

TABLE 4.15-6
TRANSIT STREET MILEAGE CATEGORIZATION

Transit Street Categories	High Equity Priority Areas		Rest of Oakland	
	Roadway Miles	Share	Roadway Miles	Share
Low-Frequency	50.81	48%	74.15	48%
Medium-Frequency	38.83	37%	38.80	25%
High-Frequency	15.90	15%	41.39	27%
Grand Total	**105.55**	**100%**	**154.34**	**100%**

SOURCE: Oakland Transit Action Strategy, 2020

East Bay Paratransit. East Bay Paratransit is a public transit service for those who are unable to use regular buses or trains due a disability or a disabling health condition. East Bay Paratransit provides door-to-door service and meets Americans with Disabilities Act (ADA) requirements.

Private Shuttles. Numerous privately-operated shuttles run throughout the City to serve individual employers, developments, and/or business districts. Some services connect to BART stations and employment destinations within the Plan Area, while others provide access to regional employment outside of the City.

Transportation Network Companies (TNCs). TNCs, such as Uber and Lyft, provide last-mile connections using smartphone applications. While data on TNC use (especially for commute trips) is still limited, these services are becoming a significant part of the transportation system. The City is exploring the concept of mobility hubs – providing multiple modes of transportation in the same location. The hubs may include designated white curb space for passenger pickup and drop off for ride share services and taxis.

Car Sharing Services. Car sharing services such as Gig car and Zipcar provides an alternative to car rental and ownership. These services are membership-based and are available to all qualified drivers in a community. The services allow members to rent out vehicles hourly or daily at a fraction of the cost of owning a personal car or moped. The City adopted its first formal car share policy in 2015, which provided a regulatory framework for car share in the public right-of-way and municipal lots and garages.

The Parking and Mobility Division is implementing two separate car share pilot programs: the Free-Floating Car Share Pilot and the Dedicated Space Car Share Pilot. Each of the pilot programs, allow "qualified car share organizations" to purchase permits from the City.

4.15.1.3 Bicycle and Pedestrian Facilities

Safer, comfortable, and convenient pedestrian and bicycle facilities can connect people to local destinations, support neighborhood businesses, cultivate culture, and protect the environment. Oakland has made significant investments in recent decades to build a comprehensive and connected bicycle and pedestrian network. However, many of these investments mirror historic patterns of disinvestment, resulting in significant gaps in spaces for walking and biking in West

and East Oakland, as noted in both the 2017 Oakland Pedestrian Plan (Oakland Walks) and the 2019 Oakland Bike Plan (Let's Bike Oakland), described below in the *Regulatory Setting*.

Oakland is home to 1,120 miles of sidewalks, with 31 miles of gaps in the sidewalk network. Oakland's sidewalk gaps are concentrated in parts of West Oakland and scattered across East Oakland. According to Oakland Walks, sidewalks in East and West Oakland are more likely to be damaged and to be missing critical amenities such as curb ramps. Unfortunately, East and West Oakland neighborhoods are disproportionately burdened by roadway fatalities and serious injuries involving people walking. Moreover, the neighborhoods along International Boulevard and parts of West Oakland north of Adeline Street are less likely to have sufficient tree coverage, exposing people walking to an uncomfortable environment characterized by extreme heat and pollution.

Oakland is also home to 183 miles of bikeways with an additional 339 miles of planned bikeways (see **Figure 4.15-3**). Prior to the 2000s, much of Oakland's bicycle infrastructure was located along the shoreline or in the hills. Since 2000, Oakland has constructed nearly 130 miles of bikeways. Existing bikeway types are listed in **Table 4.15-7**.

TABLE 4.15-7
EXISTING BIKEWAY TYPES AND MILEAGE

Bikeway Type	Description	Mileage
Shared-use Paths (Class I)	Paved rights-of-way completely separated from streets; shared with pedestrians. Examples in Oakland: Lake Merritt Boulevard, SF Bay Trail	29.8
Bike Lanes (traditional) (Class II)	On-street bikeways that are delineated by painted pavement markings such as stripes and stencils. Examples in Oakland: Howe Street, Mandela Parkway, E 12th Street	82.4
Buffered Bike Lane (Class IIB)	Description: Buffer striping to provide greater separation between bicyclists and parked or moving vehicles. Examples in Oakland: Madison Street, Oak Street, Clay Street	40.09
Bicycle Routes (Class III)	Streets designated for bicycle travel and shared with motor vehicles. Examples in Oakland: 90th Avenue, 40th Street	14
Neighborhood Bike Routes / Slow Streets / Bicycle Boulevards (Class IIIB)	Description: Bike routes on residential streets that prioritize people walking and biking with traffic calming treatments. Examples in Oakland: 32nd Street, 11th Avenue, Plymouth Street	14.3
Separated Bike Lanes (Class IV)	Description: Space for bicyclists separated by parked cars, curbs, bollards, or planter boxes. Examples in Oakland: Telegraph Avenue	2.3

SOURCES: Oakland Department of Transportation, Bikeway Types, 2021; Oakland Department of Transportation, Existing and Proposed Bikeways, 2021; The forthcoming AASHTO Guide for the Development of Bicycle Facilities discourages implementation of bicycle routes a because of the lack of protection they provide for bicyclists.

Micromobility

The term "micromobility" encompasses bikeshare, electric bikes (e-bikes), scooter share, electric scooters, mopeds, and other personal mobility devices. Micromobility has emerged in cities throughout the U.S. and across the world since the middle of the 2010s.

Today, the following companies operate shared micromobility services in the City:

- Lime (Electric Scooter share)

- VeoRide (Electric Scooter share)
- LINK (Electric Scooter share)
- Lyft (Bikeshare)

Shared micromobility services tend to be used more in areas that have a high density of jobs, homes and public transit, and a low rate of auto ownership. In Oakland, the areas that get the highest level of use are downtown and neighborhoods bordering Lake Merritt. All of the shared micromobility services in Oakland are operated by private companies, without public subsidy, and with business models that leave little margin for loss. Therefore, the operators tend to deploy vehicles where they will be used the most and generate enough revenue to sustain the service.

The City developed bike share and scooter share programs to help ensure equitable distribution of micromobility vehicles by requiring private micromobility services companies to meet minimum levels of service coverage. For the bikeshare program, City staff worked to ensure that ten percent of stations were located east of 14th Avenue to serve less resourced neighborhoods within the City. The scooter share program mandates that, for operators with fleets over 250 vehicles, ten percent of vehicles be located in the Fruitvale neighborhood and ten percent in East Oakland.

4.15.1.4 Goods Movement

The Plan Area is the transportation and logistics center for the Bay Area. The Bay Area is the midpoint of Interstate Highway 5, which traverses the west coast from Canada to Mexico; and the western terminus of Interstate 80, connecting Oakland to New York. The spurs and beltways radiating from these two interstate highways form a grid that connects the entire Bay Area – with Oakland as the region's hub (Oakland City Concil, 2001). Thus, the City plays an important role in sustaining supply chains.

Figure 4.15-4 shows the primary goods movement network within the Plan Area. The network can be classified into global gateways and regional corridors to serve global, national, regional, and local needs. It consists of the following:

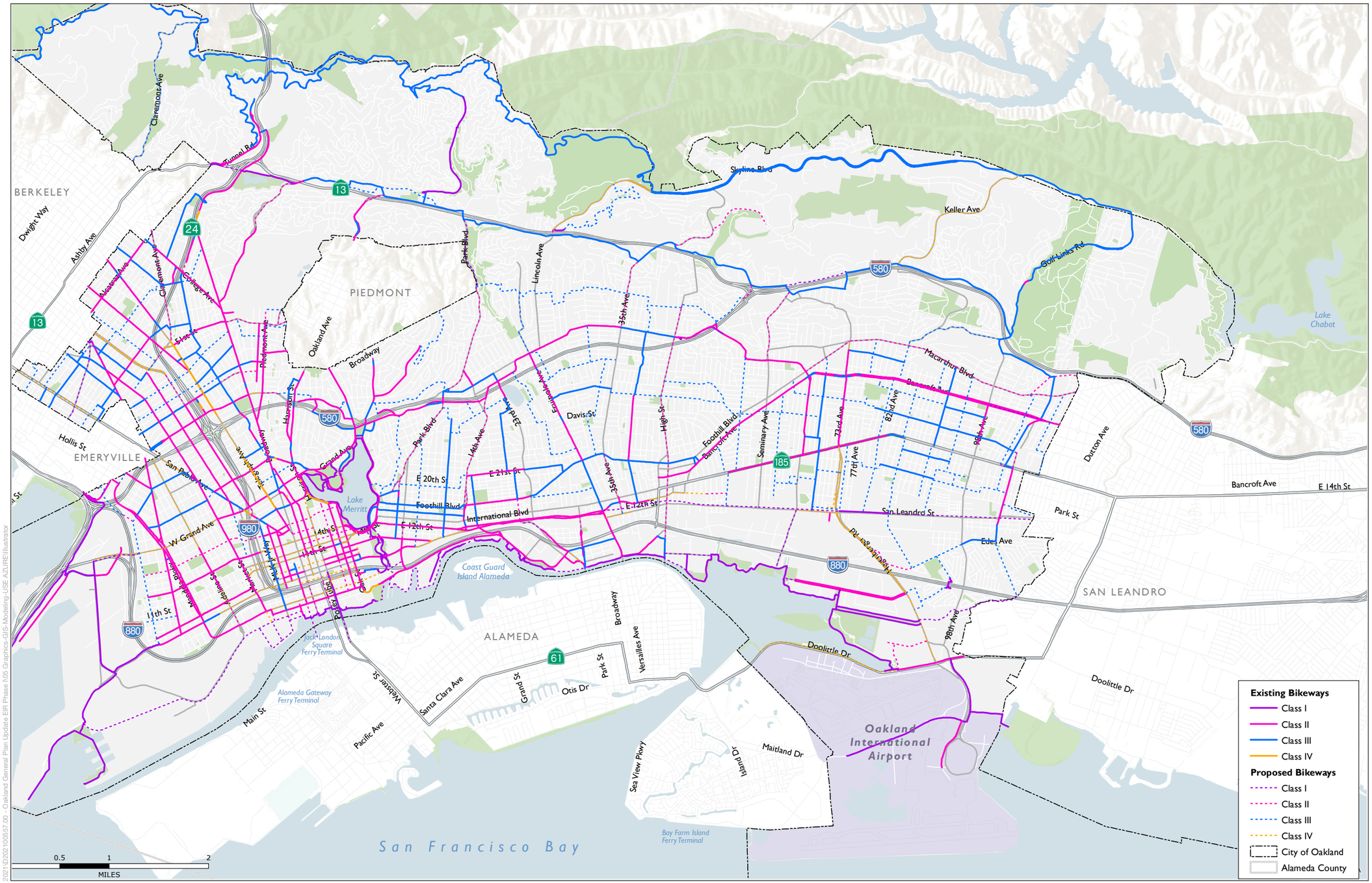
Global Gateways

Port of Oakland

Located in West Oakland, the Port of Oakland is the largest container port in Northern California and the fifth busiest container port in the U.S. The Port is an important global gateway for moving high volumes of trade goods between the U.S. and other countries.

Oakland International Airport

Oakland International Airport, located in East Oakland, is the second busiest domestic air freight airport in the State, home to a major FedEx hub, and is critical for high-value goods movement shipments and the growing e-commerce sector. It is owned by the Port of Oakland.



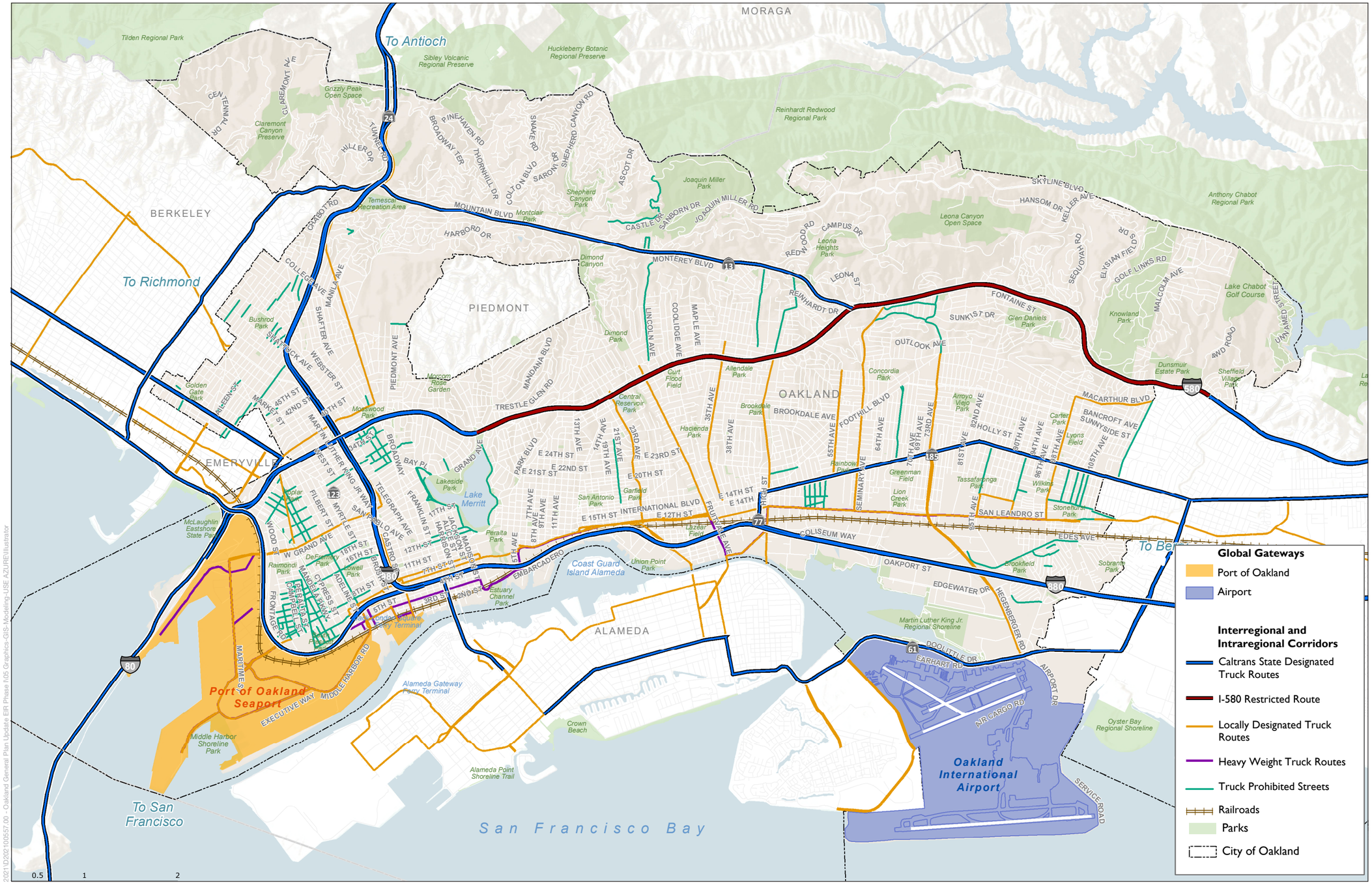
2021\D202100557.00 - Oakland General Plan Update EIR Phase I\05 Graphics-GIS-Modeling-USE AZ\JPEG\Illustrator

SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 4.15-3
Existing and Proposed Bike Network

ESA



SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 4.15-4
Goods Movement Network

ESA

Regional Corridors

Caltrans State Designated Truck Routes

Caltrans State legal truck routes include both grade-separated freeways and at-grade State routes such as San Pablo Avenue/State Route 123. Commercial trucks are authorized to use Caltrans State legal truck routes, consistent with the California Vehicle Code, except where specific restrictions have been adopted.

In addition to restrictions that are specific to individual roadways, trucks are restricted from using any Caltrans State legal truck route if the vehicle exceeds 80,000 pounds or is longer than 65 feet. The weight limit is implemented to manage the impact of trucks on roadway surfaces and safety concerns of other roadway users.

I-580 Truck Route Restriction

As noted above, a specific truck route restriction exists on I-580 between Grand Avenue and the Oakland/San Leandro border where trucks exceeding 4.5 tons (9,000 pounds) are not allowed to use the roadway. The restriction was implemented when I-580 was constructed in the 1960s and was adopted into the California Vehicle Code in 1999.

Oakland residents living near I-880 and on truck routes between MacArthur Boulevard and I-880 have raised concerns that the restriction shifts truck traffic and impacts away from higher resourced neighborhoods near I-580 onto historically underserved communities in East Oakland. For example, trucks traveling to commercial businesses on Foothill Boulevard and MacArthur Boulevard likely travel a greater distance on at-grade roads from I-880 through underserved communities rather than taking a more direct route using I-580.

Heavy Weight Truck Routes

Many shippers maximize the loading of heavy commodities that move through the Port. The City of Oakland and the Port maintain the joint Port-City of Oakland Heavyweight Container Permit Program, which allows vehicles up to 95,000 pounds (versus the 80,000-pound limit for Caltrans State legal truck routes) to travel between the Port of Oakland and East Oakland on designated city roads.

Locally Designated Truck Routes and Truck Prohibited Streets

Truck routes and truck-prohibited streets describe specific classification of streets as defined in the Oakland Municipal Code. The City uses these designations as a primary method for regulating truck movement. Truck routes are the designated routes for commercial vehicles to travel through and within the City. Truck-prohibited streets are streets, or parts of streets, which are designated as prohibited to trucks.

Rail Corridors

Railway service that is part of the goods movement system includes freight corridors operated by Union Pacific (UP) and Burlington Northern Santa Fe Railway (BNSF) Railway. Unlike the highway and Port elements of the goods movement network, freight rail corridors are privately owned and operated.

4.15.2 Regulatory Setting

Federal, State, regional and local policies regulate many aspects of the City's transportation system, including planning and programming; design; operations; and funding. While the Oakland Department of Transportation (OakDOT) has primary responsibility for the maintenance and operation of local transportation facilities, there is continued coordination between OakDOT staff and regional, State, and federal agencies to plan, manage, and enhance the City's transportation assets; these entities include Alameda County, Alameda County Transportation Commission (ACTC), Metropolitan Transportation Commission (MTC), Caltrans, regional transit providers and the Federal Highway Administration (FHWA).

4.15.2.1 Federal

Federal Highway Administration

The FHWA is an agency within the U.S. Department of Transportation that supports State and local governments in the design, construction, and maintenance of the nation's highway system through the Federal Aid Highway Program. Federal funding for roads, bridges, and mass transit is provided through the 2021 Infrastructure Investment and Jobs Act (IIJA), also known as the "Bipartisan Infrastructure Law."

Americans with Disabilities Act

The Americans with Disabilities Act of 1990 (ADA) provides comprehensive rights and protections to individuals with disabilities. The goal of the ADA is to assure equality of opportunity, full participation, independent living, and economic self-sufficiency. To implement this goal, the U.S. Access Board has created accessibility guidelines for public rights-of-way. The guidelines address various issues, including roadway design practices, slope and terrain issues, pedestrian access to streets, sidewalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way.

4.15.2.2 State

California Department of Transportation (Caltrans)

Caltrans is the owner and operator of the State highway system, which includes facilities in and around Oakland. In its Vehicle Miles Traveled-Focused Transportation Impact Study Guide (TISG), 2020, Caltrans developed an approach for evaluating the transportation impacts of land use projects and plans on State highway facilities; this document does not address the impacts of transportation projects (Caltrans 2020). In accordance with current CEQA requirements, the TISG does not consider vehicle delay in its evaluation of transportation impacts, instead focusing on vehicle miles traveled (VMT). The purposes of the TISG include providing guidance to lead agencies regarding when they should analyze potential impacts to the State highway system; to aid Caltrans staff in reviewing projects; and to ensure consistency in the assessment of impacts and identification of non-capacity increasing mitigation measures.

Sustainable Communities Strategies, SB 375

Senate Bill (SB) 375, signed in August 2008, directs each of the State's 18 major Metropolitan Planning Organizations to prepare a "Sustainable Communities Strategy" (SCS) that contains a growth strategy to meet emission targets for inclusion in the Regional Transportation Plan (RTP). On September 23, 2010, the California Air Resources Board (CARB) adopted final regional targets for reducing greenhouse gas (GHG) emissions from 2005 levels by 2020 and 2035.

The intent of SB 375 is to use the Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) to integrate regional land use, regional housing need allocations (RHNA), environmental, and transportation planning to ensure efficient regional planning in the future that leads to reduced greenhouse gas (GHG) emissions from land and transportation uses. The purpose of the SCS is to lay out how the region will meet GHG emissions reduction targets set by CARB, by concentrating future growth within Priority Development Areas (PDAs) and Transit Priority Areas (TPAs) and thereby reduce VMT.[2] As a result of SB 375, preparation of local RHNA Plans is required to be coordinated and consistent with the RTP/SCS for the length of the housing element cycle. Local governments play a large role in helping to develop the transportation and land use scenarios used in the SCS development process.

Vehicle Miles Traveled and Transportation Performance Metrics

SB 743, passed in 2013, resulted in several statewide CEQA changes. It required the California Governor's Office of Planning and Research (OPR) to establish new metrics for determining the significance of transportation impacts of projects within TPAs and allows OPR to extend use of the metrics beyond TPAs. OPR selected VMT as the preferred transportation impact metric and applied their discretion to require its use statewide. This legislation also established that aesthetic and parking effects of residential, mixed-use residential, or employment center projects on an infill site within a TPA are not significant impacts on the environment. The revised *CEQA Guidelines* that implement this legislation became effective on December 28, 2018. The revised guidelines state that vehicle level of service (LOS) and similar measures related to delay shall not be used as the sole basis for determining the significance of transportation impacts for land use projects, and that as of July 1, 2020, this requirement shall apply statewide. The OPR "Technical Advisory on Evaluating Transportation Impacts in CEQA" includes specifications for VMT methodology and recommendations for significance thresholds, screening of project that may be presumed to have less than significant impacts, and mitigation (OPR, 2018). Lead agencies ultimately have the discretion to set or apply their own significance thresholds, provided they are based on substantial evidence.

Screening criteria include:

- **Small projects:** The Technical Advisory concludes that, absent any information to the contrary, projects that generate 110 trips per day or less may be assumed to cause a less-than-significant transportation impact.

[2] To be eligible for designation as a Priority Development Area, an area must be within an existing community, near existing or planned fixed transit or served by comparable bus service and planned for more housing. A Transit Priority Area is an area within one-half mile of an existing or planned major transit stop such as a rail transit station, a ferry terminal served by transit, or the intersection of two or more major bus routes.

- **Projects near transit stations:** Projects located within ½ mile of an "existing major transit stop" or an "existing stop along a high-quality transit corridor" would have a less-than-significant impact on VMT. Affordable residential development: Projects consisting of a high percentage of affordable housing may be assumed to cause a less-than-significant transportation impact on VMT because they may improve jobs-housing balance and/or otherwise generate less VMT than market-based units.
- **Redevelopment projects:** If a proposed redevelopment project leads to a net overall decrease in VMT (when compared against the VMT of the existing land uses), the project would lead to a less-than-significant transportation impact.
- **Local-serving retail:** Trip lengths may be shortened and VMT reduced by adding "local-serving" retail opportunities that improve retail destination proximity. Page 17 of the Technical Advisory generally describes retail development including stores less than 50,000 square feet as local serving. In May 2020, OPR staff indicated during online webinars that any retail building that is 50,000 square feet or less may be considered local serving.

The Technical Advisory recommends thresholds for a general plan, area plan, or community plan where it may have a significant impact on transportation if proposed new residential, office, or retail land uses would in aggregate exceed the respective thresholds recommended for land use projects. For example, a general plan's residential generated VMT under cumulative conditions would be compared to 15 percent below the baseline citywide or region-wide average to determine impact significance. Another approach commonly used by local and regional agencies is to determine the total VMT per capita (or service population) for the area under consideration for baseline conditions and compare it to the total VMT per capita with the proposed plan in the horizon year. If the VMT per capita is lower in the horizon year with the plan than the VMT per capita under existing conditions, the plan may have a less than significant impact on VMT.

Other key guidance includes:

- VMT is the most appropriate metric to evaluate a project's transportation impact.
- OPR recommends tour- and trip-based travel models to estimate VMT, but ultimately defers to local agencies to determine the appropriate tools.
- OPR recommends measuring VMT for residential and office projects on a "per rate" basis. Specifically, OPR recommends VMT per capita for residential projects and VMT per employee for office projects.
- OPR recommends that a per capita or per employee VMT that is fifteen percent (15 percent) below that of existing development may be a reasonable threshold (page 10). In other words, an office project that generates VMT per employee that is more than 85 percent of the regional VMT per employee could result in a significant impact. OPR notes that this threshold is supported by evidence that connects this level of reduction to the State's emissions goals.
- For retail projects, OPR recommends measuring the net decrease or increase in VMT in the planning area with and without the project. The recommended impact threshold is any increase in total VMT.
- Cities and counties still have the ability to use measures of delay such as LOS for other plans, studies, or network monitoring. However, according to CEQA Section 15064.3, Determining

the Significance of Transportation Impacts, "effect on automobile delay shall not constitute a significant environmental impact."

California Complete Streets Act

The term "Complete Streets" refers to a balanced, multimodal transportation network that meets the needs of all users of streets including bicyclists, children, and persons with disabilities, motorists, movers of commercial goods, pedestrians, public transportation, and seniors. A "Complete Street" is one that provides safe and convenient travel in a manner that is suitable to the local context.

The California Complete Streets Act mandates any substantive revision of the circulation element of a city or county's general plan to identify how they will safely accommodate the circulation of all users of the roadway.

Provision of safe mobility for all users contributes to the Caltrans's vision: "improving mobility across California". The successful long-term implementation of this policy is intended to result in more options for people to go from one place to another, less traffic congestion and greenhouse gas emissions, more walkable communities (with healthier, more active people), and fewer barriers for older adults, children, and people with disabilities.

Economically, complete streets can help revitalize communities and give families the option to lower transportation costs by using transit, walking, or bicycling rather than driving to reach their destinations. Caltrans is actively engaged in implementing its complete streets policy in all planning, programming, design, construction, operations, and maintenance activities and products on the State Highway System (Caltrans, 2021).

4.15.2.3 Regional

Plan Bay Area

The MTC is the federally recognized Metropolitan Planning Organization for the nine-county Bay Area, which includes Alameda County and the City of Oakland. On July 18, 2013, *Plan Bay Area* was jointly approved by the Association of Bay Area Governments' (ABAG's) Executive Board and by MTC (MTC & ABAG, 2013). The plan includes the region's RTP/SCA as required under SB 375. On July 26, 2017, MTC adopted *Plan Bay Area 2040*, a focused update that builds upon the growth pattern and strategies developed in the original *Plan Bay Area* (2013), but with updated planning assumptions that incorporate key economic, demographic, and financial trends since the original plan was adopted (MTC & ABAG, 2017).

Most recently, on October 21, 2021, the MTC and ABAG jointly adopted Plan Bay Area 2050 as the official regional long-range plan for the Bay Area. Plan Bay Area 2050 connects the elements of housing, the economy, transportation and the environment through 35 strategies that will make the Bay Area more equitable for all residents and more resilient in the face of unexpected challenges. Plan Bay Area 2025 meets all federal and State requirements for the RTP/SCS.

The Plan focuses on the importance of availability of transportation choices and its interrelatedness with housing and employment. It also recognizes the impact of the transportation sector on climate

change, being the largest contributor (over 40 percent) of California's greenhouse gas emissions. In the short-term, the plan's Implementation Plan identifies more than 80 specific actions for MTC, ABAG and partner organizations to implement over the next five years to make headway on each of the 35 strategies (MTC & ABAG, 2021). It will be several years before the regional transportation model and county transportation models are updated to reflect Plan Bay Area 2050 (the models currently incorporate data from Plan Bay Area 2040).

The following strategies and projects identified as a part of the Plan will have an impact on the City's transportation network:

- **Maintain and optimize the existing transportation system**: As a part of this strategy, the Plan includes funding to implement interchange improvements along I-880 between Oak Street and Broadway, 23rd Avenue and 29th Avenue, and 42nd Avenue and High Street.
- **Create healthy and safe streets:** The Plan envisions a well-connected network with 10,000 new miles of protected bike lanes and off-street paths, with emphases on connections to transit and investments in Equity Priority Communities. The strategy also focuses on the advancement of a regional Vision Zero Policy.
- **Expand and modernize the regional rail network:** Two projects, South Bay Connect and Link21, have been identified as a part of this strategy. South Bay Connect includes funding to implement improvements to existing Capitol Corridor rail service between Oakland and Newark/Fremont. Improvements include relocation of rail service between Oakland Coliseum and Newark from the Niles Subdivision to the Coast Subdivision, one new rail station, one new in-line intermodal bus facility, and enhanced park-and-ride facilities. Link21 provides new transbay rail service between San Francisco and Oakland, including new stations in the East Bay and San Francisco (10 trains per hour per direction in peak).
- **Express Bus Service:** The I-80 modernization project includes funding to implement new express bus service along I-80 (on express lanes where available) between Vallejo and Downtown Oakland, including park-and-ride facilities (15-minute peak headways). The Red Line (Oakland to Redwood City) ReX project includes funding to implement new express bus service along I-580, I-238, I-880, SR 84 and US 101 (on express lanes where available) between Downtown Oakland (19th St BART Station) and Redwood City (Caltrain Station).
- **Freight Improvements:** This program generally implements programs that improve freight operations and support the Port of Oakland. Improvements include new weigh stations and rest areas and improvements to existing freight terminals and freight rail. Example projects include grade separation improvements at 7th Street at the Port of Oakland.
- **Congestion Pricing:** This program includes funding to implement cordon-based congestion pricing for vehicles leaving and entering Treasure Island. Improvements include Muni bus frequency upgrades; free shuttles; a new ferry terminal; new ferry service between Treasure Island and the San Francisco Ferry Building (30-minute peak headways); and new AC Transit express bus service to Oakland (10-minute peak headways).

Alameda Countywide Transportation Plan, 2020

The Countywide Transportation Plan (CTP) establishes near-term projects, programs, and strategic priorities, details a 30-year transportation vision and guides the decision-making of the Alameda CTC. The CTP is updated every four years to accommodate changing conditions and

new demands placed on the transportation system. The following list of projects are identified as the 10-year priority projects that are significant for the City of Oakland.

1. Foothill Boulevard Corridor Improvements (Phase 1)
2. Shattuck Ave./Martin Luther King Jr. Way Corridor Improvements
3. West Grand Avenue Corridor Improvements
4. Railroad At-Grade Corridor Safety Project through Jack London District
5. 19th Street Bike Station Plaza
6. 19th Street/Oakland BART Station Street Elevator
7. Lake Merritt and West Oakland TOD
8. Bay Bridge Forward
9. 42nd Ave. & High St. I-880 Access Improvements
10. Bancroft Avenue Greenway
11. Broadway Transit Corridor
12. Downtown Oakland East- West Safe Streets
13. East Bay BRT Corridor Safety Improvements
14. East Oakland Neighborhood Bikeways
15. Oakland Army Base Infrastructure Improvements
16. Telegraph Avenue Complete Streets
17. MacArthur Smart City Corridor
18. West Oakland Industrial Streets

Alameda Countywide Active Transportation Plan, 2019

The Alameda Countywide Active Transportation Plan (Countywide ATP) provides a vision, goals, and priorities to improve walking and biking throughout the 15 diverse jurisdictions in Alameda County. The Countywide ATP was developed to establish countywide priorities that further local agencies' efforts. The plan further provides resources and recommendations that could be used by local jurisdictions.

Alameda Countywide Multimodal Arterial Plan, 2016

The Alameda Countywide Multimodal Arterial Plan intends to address the needs and mobility for all modes using complete streets concepts. The plan provides a framework for designing, prioritizing and implementing improvements in the context of the surrounding land use to address the needs of all modes on the County's arterial roadways. It provides a basis for the integrated management of major arterial corridors and identifies a priority list of short- and long-term improvements and strategies.

Congestion Management Program

The Alameda County Transportation Commission (Alameda CTC) coordinates transportation planning efforts throughout Alameda County and programs federal, State, regional, and local

funding for project planning and implementation. Through its Congestion Management Program (CMP), Alameda CTC oversees and monitors the operations and performance of roadways in the CMP network, which consist of freeways and major arterials that provide connectivity in the County. The Land Use Analysis Program of the CMP requires local jurisdictions to evaluate the potential impacts of proposed land use changes (e.g., General Plan amendments, and developments estimated to generate 100 or more net new PM peak hour automobile trips) on the CMP network.

4.15.2.4 Local Plans, Ordinances and Policies

City of Oakland General Plan

The Land Use and Transportation Element (LUTE) of Oakland's General Plan establishes long-term city-wide planning goals and provides strategies to accomplish them. Relevant goals/ objectives include increasing pedestrian safety through traffic-calming, improving streetscapes and increasing pedestrian access to destinations such as the waterfront and the Oakland Coliseum.

2023-2031 Housing Element

In tandem with the LUTE, the 2023-2031 Housing Element promotes a land use pattern and implements policies that accelerate and target housing production while increasing and encouraging safe and sustainable travel. The following policies and actions pertain to transportation and circulation.

Policies:

Policy 3.2*:* Create a more diverse mix of homes to meet community needs.

Policy 3.4: Reform zoning and land use to address community priorities.

Policy 3.6: Streamline the Approval of New Housing.

Policy 3.8: Convert vacant land and units to housing.

Policy 5.2: Promote resilient and sustainable development.

Actions:

Action 3.2.1: Develop zoning standards to encourage missing middle and multi-unit housing types in currently single-family-dominated neighborhoods, including flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and ADUs.

Action 3.2.3: Promote flexibility in adaptive reuse to increase the housing stock.

Action 3.2.5: Reduce constraints to the development of ADUs.

Action 3.3.5: Implement an affordable housing overlay.

Action 3.3.7: Study the targeted implementation of an inclusionary housing requirement.

Action 3.4.1: Revise development standards, including allowable building heights, densities, open space and setback requirements.

Action 3.4.4: Revise citywide parking standards.

Action 3.4.8: Implement objective design standards.

Action 3.4.9: Implement new ADU standards that streamline approvals and address unpermitted units.

Action 3.4.10: Implement a Housing Sites Overlay Zone to permit sites included in the Housing Sites Inventory to develop with affordable housing by right.

Action 3.6.2: Provide increased flexibility in development standards.

Action 3.8.2: Encourage the conversion of vacant ground floor commercial space to residential uses in appropriate locations.

Action 5.2.2: Promote infill, transit-oriented development (TOD), and mixed-use development.

Action 5.2.8: Encourage new affordable housing in higher resource neighborhoods.

Action 5.2.9: Prioritize improvements to meet the needs of low-resourced and disproportionately burdened communities.

Oakland Pedestrian Plan, 2017

Oakland's Pedestrian Plan is part of the LUTE. In 2017, the City of Oakland completed an update of the Pedestrian Plan (Oakland Walks) that reflects Oakland's changing conditions, needs and priorities. An update to the plan adopted in 2002, the 2017 Pedestrian Plan:

- Incorporated up-to-date information on existing conditions
- Refined the City's pedestrian vision and goals; and
- Outlined a five-year work plan of specific, high-priority and cost-effective improvements, programs, and policies

Oakland Bike Plan, 2019

Oakland's Bicycle Plan (Let's Bike Oakland) is part of the LUTE. It identifies projects and programs for the City of Oakland Bicycle Network. The vision of the plan is - "Oakland will be a bicycle-friendly city where bicycling provides affordable, safe and healthy mobility for all Oaklanders. New projects and programs will work to enhance existing communities and their mobility needs."

East Oakland Mobility Action Plan, 2021

The East Oakland Mobility Action Plan (MAP) provides the policy foundation for achieving a transportation system that recognizes and balances the needs of all road users. East Oaklanders face historical inequity, environmental constraints, public health issues, and safety concerns. The MAP identifies an action plan that serves as a guide for making sound transportation decisions in East Oakland to make our mission statement a reality.

The East Oakland MAP is intended to guide the City and other partner agencies in allocating resources for future mobility improvements in East Oakland and identifying ways in which transportation projects can be done differently to not replicate a long history of planning injustice and harm.

Transportation Impact Review Guidelines, 2017

The Transportation Impact Review Guidelines (TIRG or Guidelines) provide direction on the scope of study that the City of Oakland requires in evaluating the potential transportation impact of proposed land use development projects. This evaluation addresses a range of issues necessary for the City to analyze, evaluate, advise upon, and disclose in the review of proposed projects. Additionally, the Guidelines ensure that potentially significant impacts are studied according to the City's thresholds of significance under the California Environmental Quality Act (CEQA). The Guidelines also provide direction on appropriate mitigations for significant impacts in the context of the overall policies and objectives of the City.

According to the City of Oakland's *TIRG*, VMT impacts would be less than significant for a Project if any of the identified screening criteria are met:

- **Criterion #1: Small Projects:** The Project generates fewer than 100 vehicle trips per day.
- **Criterion #2: Low-VMT Areas:** The Project meets map-based screening criteria by being in an area that exhibits below-threshold VMT, or 15 percent or more below the regional average.
- **Criterion #3: Near Transit Stations:** The Project is in a Transit Priority Area[3] or within a one-half mile of a Major Transit Corridor or Stop[4] and satisfies the following:
  - Has a floor area ratio (FAR) of more than 0.75.
  - Does not include more parking for use by residents, customers, or employees of the Project than other typical nearby uses, or more than required by the City (if parking minimums pertain to the site) or allowed without a conditional use permit (if minimums and/or maximums pertain to the site).
  - Is consistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the MTC).

4.15.2.5 City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to reducing impacts on Transportation and Circulation are listed below. All SCAs would be adopted as enforceable conditions of approval and required, as applicable, to be implemented during construction and operation of the Proposed Project to help ensure less-than-significant impacts related to Transportation and Circulation. The SCAs are incorporated and required as part of Proposed Project, so they are not listed as mitigation measures.

[3] According to the California Public Resource Code, a Transit Priority Area is defined as a one-half mile area around an existing major transit stop or an existing stop along a high-quality transit corridor. Public Resources Code, § 21064.3 defines major transit stop as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of 15 minutes or less during the morning and afternoon peak commute periods. Public Resources Code, § 21155 defines a high-quality transit corridor as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

[4] "Major transit stop" is defined in CEQA Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

- **SCA 75: Construction Activity in the Public Right-of-Way**

  a. Obstruction Permit Required

  Requirement: The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets, sidewalks, bicycle facilities, and bus stops.

  b. Traffic Control Plan Required

  Requirement: In the event of obstructions to vehicle or bicycle travel lanes, bus stops, or sidewalks, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian accommodations (or detours, if accommodations are not feasible), including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The Traffic Control Plan shall be in conformance with the City's Supplemental Design Guidance for Accommodating Pedestrians, Bicyclists, and Bus Facilities in Construction Zones.

  c. Repair of City Streets

  Requirement: The project applicant shall repair any damage to the public right-of way, including streets and sidewalks, caused by project construction at his/her expense within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to approval of the final inspection of the construction-related permit. All damage that is a threat to public health or safety shall be repaired immediately.

- **SCA 76: Bicycle Parking**

  Requirement: The project applicant shall comply with the City of Oakland Bicycle Parking Requirements (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall demonstrate compliance with the requirements.

- **SCA 77: Transportation Improvements**

  Requirement: The project applicant shall implement the recommended on- and off-site transportation-related improvements contained within the Transportation Impact Review for the project (e.g., signal timing adjustments, restriping, signalization, traffic control devices, roadway reconfigurations, transportation demand management measures, and transit, pedestrian, and bicyclist amenities). The project applicant is responsible for funding and installing the improvements and shall obtain all necessary permits and approvals from the City and/or other applicable regulatory agencies such as, but not limited to, Caltrans (for improvements related to Caltrans facilities) and the California Public Utilities Commission (for improvements related to railroad crossings), prior to installing the improvements. To implement this measure for intersection modifications, the project applicant shall submit Plans, Specifications, and Estimates (PS&E) to the City for review and approval. All elements shall be designed to applicable City standards in effect at the time of construction and all new or upgraded signals shall include these enhancements as required by the City. All other facilities supporting vehicle travel and alternative modes through the intersection shall be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for, among other items, the elements listed below:

a. 2070L Type Controller with cabinet accessory
b. GPS communication (clock)
c. Accessible pedestrian crosswalks according to Federal and State Access Board guidelines with signals (audible and tactile)
d. Countdown pedestrian head module switch out
e. City Standard ADA wheelchair ramps
f. Video detection on existing (or new, if required)
g. Mast arm poles, full activation (where applicable)
h. Polara Push buttons (full activation)
i. Bicycle detection (full activation)
j. Pull boxes
k. Signal interconnect and communication with trenching (where applicable), or through existing conduit (where applicable), 600 feet maximum
l. Conduit replacement contingency
m. Fiber switch
n. PTZ camera (where applicable)
o. Transit Signal Priority (TSP) equipment consistent with other signals along corridor
p. Signal timing plans for the signals in the coordination group
q. Bi-directional curb ramps (where feasible, and if project is on a street corner)
r. Upgrade ramps on receiving curb (where feasible, and if project is on a street corner)

- **SCA 78: Transportation and Parking Demand Management**

  Transportation and Parking Demand Management (TDM) Plan Required Requirement: The project applicant shall submit a Transportation and Parking Demand Management (TDM) Plan for review and approval by the City.

  i. The goals of the TDM Plan shall be the following:

     - Reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable.
     - Achieve the following project vehicle trip reductions (VTR):
       - Projects generating 50-99 net new a.m. or p.m. peak hour vehicle trips: 10 percent VTR
       - Projects generating 100 or more net new a.m. or p.m. peak hour vehicle trips: 20 percent VTR
     - Increase pedestrian, bicycle, transit, and carpool/vanpool modes of travel. All four modes of travel shall be considered, as appropriate.
     - Enhance the City's transportation system, consistent with City policies and programs.

ii. The TDM Plan should include the following:

- Baseline existing conditions of parking and curbside regulations within the surrounding neighborhood that could affect the effectiveness of TDM strategies, including inventory of parking spaces and occupancy if applicable.
- Proposed TDM strategies to achieve VTR goals (see below).

iii. For employers with 100 or more employees at the subject site, the TDM Plan shall also comply with the requirements of Oakland Municipal Code Chapter 10.68 Employer Based Trip Reduction Program.

iv. The following TDM strategies must be incorporated into a TDM Plan based on a project location or other characteristics. When required, these mandatory strategies should be identified as a credit toward a project's VTR.

Improvement	**Required by code or when…**
Bus boarding bulbs or islands	• A bus boarding bulb or island does not already exist, and a bus stop is located along the project frontage; and/or • A bus stop along the project frontage serves a route with 15 minutes or better peak hour service and has a shared bus-bike lane curb
Bus shelter	• A stop with no shelter is located within the project frontage, or • The project is located within 0.10 miles of a flag stop with 25 or more boardings per day
Concrete bus pad	• A bus stop is located along the project frontage and a concrete bus pad does not already exist
Curb extensions or bulb-outs	• Identified as an improvement within site analysis
Implementation of a corridor- level bikeway improvement	• A buffered Class II or Class IV bikeway facility is in a local or county adopted plan within 0.10 miles of the project location; and • The project would generate 500 or more daily bicycle trips
Implementation of a corridor- level transit capital improvement	• A high-quality transit facility is in a local or county adopted plan within 0.25 miles of the project location; and • The project would generate 400 or more peak period transit trips
Installation of amenities such as lighting; pedestrian-oriented green infrastructure, trees, or other greening landscape; and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.	• Always required
Installation of safety improvements identified in the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.)	• When improvements are identified in the Pedestrian Master Plan along project frontage or at an adjacent intersection
In-street bicycle corral	• A project includes more than 10,000 square feet of ground floor retail, is located along a Tier 1 bikeway, and on-street vehicle parking is provided along the project frontages.
Intersection improvements[5]	• Identified as an improvement within site analysis
New sidewalk, curb ramps, curb and gutter meeting current City and ADA standards	• Always required

5 Including but not limited to visibility improvements, shortening corner radii, pedestrian safety islands, accounting for pedestrian desire lines.

Improvement	Required by code or when…
No monthly permits and establish minimum price floor for public parking[6]	• If proposed parking ratio exceeds 1:1000 sf. (commercial)
Parking garage is designed with retrofit capability	• Optional if proposed parking ratio exceeds 1:1.25 (residential) or 1:1000 sf. (commercial)
Parking space reserved for car share	• If a project is providing parking and a project is located within downtown. One car share space reserved for buildings between 50 – 200 units, then one car share space per 200 units.
Paving, lane striping or restriping (vehicle and bicycle), and signs to midpoint of street section	• Typically required
Pedestrian crossing improvements	• Identified as an improvement within site analysis
Pedestrian-supportive signal changes[7]	• Identified as an improvement within operations analysis
Real-time transit information system	• A project frontage block includes a bus stop or BART station and is along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better
Relocating bus stops to far side	• A project is located within 0.10 mile of any active bus stop that is currently near side
Signal upgrades[8]	• Project size exceeds 100 residential units, 80,000 sf. of retail, or 100,000 sf. of commercial; and • Project frontage abuts an intersection with signal infrastructure older than 15 years
Transit queue jumps	• Identified as a needed improvement within operations analysis of a project with frontage along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better
Trenching and placement of conduit for providing traffic signal interconnect	• Project size exceeds 100 units, 80,000 sf. of retail, or 100,000 sf. of commercial; and • Project frontage block is identified for signal interconnect improvements as part of a planned ITS improvement; and A major transit improvement is identified within operations analysis requiring traffic signal interconnect
Unbundled parking	• If proposed parking ratio exceeds 1:1.25 (residential)

v. Other TDM strategies to consider include, but are not limited to, the following:

- Inclusion of additional long-term and short-term bicycle parking that meets the design standards set forth in chapter five of the Bicycle Master Plan and the Bicycle Parking Ordinance (Chapter 17.117 of the Oakland Planning Code), and shower and locker facilities in commercial developments that exceed the requirement.
- Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority bikeways, on-site signage and bike lane striping.
- Installation of safety elements per the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.) to encourage convenient and safe crossing at arterials, in addition to safety elements required to address safety impacts of the project.

6 May also provide a cash incentive or transit pass alternative to a free parking space in commercial properties.
7 Including but not limited to reducing signal cycle lengths to less than 90 seconds to avoid pedestrian crossings against the signal, providing a leading pedestrian interval, provide a "scramble" signal phase where appropriate.
8 Including typical traffic lights, pedestrian signals, bike actuated signals, transit-only signals

- Installation of amenities such as lighting, street trees, and trash receptacles per the Pedestrian Master Plan, the Master Street Tree List and Tree Planting Guidelines and any applicable streetscape plan.
- Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements.
- Direct on-site sales of transit passes purchased and sold at a bulk group rate (through programs such as AC Transit Easy Pass or a similar program through another transit agency).
- Provision of a transit subsidy to employees or residents, determined by the project applicant and subject to review by the City, if employees or residents use transit or commute by other alternative modes.
- Provision of an ongoing contribution to transit service to the area between the project and nearest mass transit station prioritized as follows: 1) Contribution to AC Transit bus service; 2) Contribution to an existing area shuttle service; and 3) Establishment of new shuttle service. The amount of contribution (for any of the above scenarios) would be based upon the cost of establishing new shuttle service (Scenario 3).
- Guaranteed ride home program for employees, either through 511.org or through separate program.
- Pre-tax commuter benefits (commuter checks) for employees.
- Free designated parking spaces for on-site car-sharing program (such as City Car Share, Zip Car, etc.) and/or car-share membership for employees or tenants.
- On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools.
- Distribution of information concerning alternative transportation options.
- Parking spaces sold/leased separately for residential units. Charge employees for parking or provide a cash incentive or transit pass alternative to a free parking space in commercial properties.
- Parking management strategies including attendant/valet parking and shared parking spaces.
- Requiring tenants to provide opportunities and the ability to work off-site.
- Allow employees or residents to adjust their work schedule in order to complete the basic work requirement of five eight-hour workdays by adjusting their schedule to reduce vehicle trips to the worksite (e.g., working four, ten-hour days; allowing employees to work from home two days per week).
- Provide or require tenants to provide employees with staggered work hours involving a shift in the set work hours of all employees at the workplace or flexible work hours involving individually determined work hours.

The TDM Plan shall indicate the estimated VTR for each strategy, based on published research or guidelines where feasible. For TDM Plans containing ongoing operational VTR strategies, the Plan shall include an ongoing monitoring and enforcement program to ensure

the Plan is implemented on an ongoing basis during project operation. If an annual compliance report is required, as explained below, the TDM Plan shall also specify the topics to be addressed in the annual report.

b. TDM Implementation – Physical Improvements

Requirement: For VTR strategies involving physical improvements, the project applicant shall obtain the necessary permits/approvals from the City and install the improvements prior to the completion of the project.

c. TDM Implementation – Operational Strategies

Requirement: For projects that generate 100 or more net new a.m. or p.m. peak hour vehicle trips and contain ongoing operational VTR strategies, the project applicant shall submit an annual compliance report for the first five years following completion of the project (or completion of each phase for phased projects) for review and approval by the City. The annual report shall document the status and effectiveness of the TDM program, including the actual VTR achieved by the project during operation. If deemed necessary, the City may elect to have a peer review consultant, paid for by the project applicant, review the annual report. If timely reports are not submitted and/or the annual reports indicate that the project applicant has failed to implement the TDM Plan, the project will be considered in violation of the Conditions of Approval and the City may initiate enforcement action as provided for in these Conditions of Approval. The project shall not be considered in violation of this Condition if the TDM Plan is implemented but the VTR goal is not achieved.

- **SCA 79: Transportation Impact Fee**

  Requirement: The project applicant shall comply with the requirements of the City of Oakland Transportation Impact Fee Ordinance (Chapter 15.74 of the Oakland Municipal Code).

4.15.3 Environmental Analysis

4.15.3.1 Significance Criteria

The City of Oakland has established thresholds of significance for CEQA impacts, which incorporate those in Appendix G of the *CEQA Guidelines* (City of Oakland, 2020). The following thresholds are consistent with OPR guidance and with the City's *TIRG*. The Proposed Project would have a significant adverse impact related to transportation and circulation if it would:

1. Conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths (except for automobile level of service or other measures of vehicle delay).

2. Cause substantial additional VMT per capita, per service population, or other appropriate efficiency measure. Specifically,

   a. For residential uses, a project would cause substantial additional VMT if it exceeds existing regional household VMT per capita minus 15 percent.

   b. For office uses, a project would cause substantial additional VMT if it exceeds the existing regional VMT per worker minus 15 percent.

   c. For retail uses, a project would cause substantial additional VMT if it exceeds the existing regional VMT per worker minus 15 percent.

3. Substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow lanes) or by adding new roadways to the network.

4.15.3.2 Approach to Analysis/Methodology

This is a program-level EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Impacts relative to Transportation and Circulation are evaluated using the criteria listed above and based on information included in the City of Oakland General Plan, Map Atlas, and the documents listed in Section 4.9.6, *References – Transportation and Circulation*.

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future development under the Proposed Project, this EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas and analyzes the impacts of housing development through the projection period ending in 2030.

The following summarizes the methodology and results for the travel demand analysis of future development under the Proposed Project and the methodology for determining transportation impacts. The travel demand and impact analysis methodologies use the data and guidance within the City's TIRG.

Analysis Periods. The transportation impact analysis analyzes the baseline existing conditions described in Chapter 3 relative to the *Buildout Program*, which represents the housing development reasonably be expected to occur within the eight-year projection period ending in 2030.

Travel Demand Methodology. Forecasts of regional travel by various modes, regional average VMT per capita and VMT per employee values are determined using the Alameda Countywide travel model. The travel demand model is a set of mathematical procedures and equations that represent the variety of transportation choices that people make, and how those choices result in trips on the transportation network.

Neighborhoods within Oakland are expressed geographically in transportation analysis zones, or TAZs. There are a total of 369 TAZs within Oakland that vary in size from a few city blocks in the downtown core, to multiple blocks in outer neighborhoods, to even larger geographic areas in lower density areas in the hills. TAZs are used in transportation planning models for transportation analysis and other planning purposes.

- ***Model Steps*.** The Alameda Countywide travel model is a trip-based model that uses a series of calculation steps to estimate travel associated with the land uses and transportation network.
  - *Vehicle Ownership*: How many vehicles are owned by the households in each TAZ based on incomes and accessibility to transit

  - *Trip Generation*: How many daily trips by trip purpose are generated by each land use in each TAZ
  - *Trip Distribution*: How many trips of each type travel to each other TAZ
  - *Mode Choice*: Which travel modes are used by people of different demographic categories for trips of different purposes between each origin and destination
  - *Time of Day*: Which trips are made during peak hours versus off-peak hours
  - *Trip Assignment*: Which routes are used by each vehicle trip or transit trip

  The daily activity patterns in the travel model are based on a statistical analysis of a household travel survey, where a representative sample of households were asked to track all daily activities and trips by all members of their household. The travel model was calibrated to these surveyed travel patterns, and also validated by its ability to replicate counted traffic volumes, transit ridership, and total VMT from the Highway Performance Measurement System (HPMS) which is based on traffic counts.

- ***Land Uses.*** The travel model requires land uses to be defined for each geographic area in the ten-county study area (Bay Area plus San Joaquin County). The model defines land uses in TAZs which are typically bounded by major arterial or collector streets and are generally subdivisions of Census tracts. The model land use inputs include numbers of households and employees by employment category, as well as enrollment at schools.

  The Alameda Countywide model had defined a 2020 base year land use database (estimated prior to 2020) and 2040 land use forecast based on the Plan Bay Area 2040 RTP. The 2020 base year housing quantities in each TAZ were updated based on more current information. The *Buildout Program*, including 41,458 housing units of various types that would be expected to be developed under the Proposed Project was then added to the 2020 base year quantities. A linear interpolation between 2020 and 2040 was used to estimate 2030 employment within the City of Oakland and all 2030 land uses outside of Oakland.

- ***Transportation Networks.*** The travel model contains representations of transportation networks for all travel modes. The model road network includes freeways, highways, arterial streets, most collector streets, and local streets which provide connectivity between neighborhoods. The roads are coded with information on functional classification, number of through lanes, speed, and capacity.

  All regular weekday transit routes are coded in the model. Bus routes are assumed to run on the streets and be subject to varying congested conditions on those streets. Rail transit operates on separate facilities and is not affected by road congestion. The model also has a general representation of transit stop locations and park-and-ride access.

  Bicycles and pedestrians are assumed to have access to all streets except freeways. Separate non-motorized paths are represented where required to show additional access not provided by the local street system.

- ***Future Travel Trends.*** The travel model presumes that future background travel options and behaviors remain similar to current conditions and does not explicitly account for potential changes associated with disruptive trends, emerging technologies, and changes in travel preferences. The model also does not assume a significant increase in working at home compared to baseline conditions. As a result, the travel model is likely to represent a conservative estimate of future amounts of commuting, vehicle use and VMT.

Construction. Future development under the Proposed Project may result in construction-related impacts. These impacts are analyzed in Impact TRA-1, below. The construction impact analysis assesses if future development under the Proposed Project would require a substantially extended construction duration or intense construction activity and, if so, the analysis assesses the effects of construction activities on people walking, bicycling, or driving, and riding public transit and on emergency vehicle operators. Potential short-term construction impacts on sidewalks, in bicycle lanes, and/or in travel lanes were assessed qualitatively, based on general construction-related information for activities associated with other similar development projects as may occur from future development the Proposed Project.

Vehicle Miles Traveled Analysis.

- ***Land Use Components.*** The City of Oakland uses VMT efficiency metrics (per capita or per employee) for thresholds of significance. VMT per capita reductions mean that individuals will, on average, travel less by automobile than previously but, because the population will continue to grow, it may not mean an overall reduction in the number of miles driven. The analysis of VMT impacts compares average daily VMT per capita for conditions without and with future development under the Proposed Project, based on output from the Alameda CTC model analyses conducted as part of the travel demand analysis. A significant impact may occur if VMT per capita with future development are equal to or greater than the following thresholds of significance (Oakland Department of Transportation, 2017):
  - For residential projects, a project would cause substantial additional VMT if it were to exceed existing regional household VMT per capita minus 15 percent.
  - For office projects, a project would cause substantial additional VMT if it were to exceed the existing regional VMT per employee minus 15 percent.
  - For retail projects, a project would cause substantial additional VMT if it were to exceed the existing regional VMT per employee minus 15 percent.
- ***Transportation Components.*** The TIRG identifies a list of transportation components of an area plan, individual development project, or infrastructure project that would not likely lead to a substantial or measurable increase in VMT and would not exceed the quantitative threshold of significance. The Proposed Project would not include any transportation projects; however, future development under the Proposed Project could include transportation features such as curb cuts, sidewalk widenings, changes to on-street curb regulation. If the transportation features of a project fit within the general types of projects identified as projects that do not generate trips and would not increase vehicle travel, then the City generally presumes that VMT impacts would be less than significant. These types of projects include active transportation, rightsizing, transit projects, and other minor transportation projects identified in the TIRG.

Cumulative Conditions. The discussion of cumulative transportation impacts assesses whether future development under the Proposed Project, in conjunction with overall citywide growth and other cumulative projects, would significantly affect the transportation network and, if so, whether the Proposed Project's contribution to the cumulative impact would be considerable. The operational analysis of the Proposed Project condition is largely a cumulative analysis in that the transportation modeling also includes the citywide and regional changes in housing units and employment that would occur through the projection period ending in 2030 regardless of

adoption of the Proposed Project. Thus, the transportation assessment of operational impacts of the Proposed Project presented in Impacts TRA-1 through TRA-4 considers the changes in travel demand projected to occur through 2030 due to land use growth, and the cumulative transportation and infrastructure projects anticipated to be completed in 2030.

The cumulative impact of construction and operations of future development under the Proposed Project, in combination with construction of other cumulative development, transportation and infrastructure projects projected to occur by 2030, is presented in Impact TR-4.

4.15.3.3 Proposed 2045 General Plan Policies, Land Use and Zoning

Safety Element

The following policies and actions pertaining to transportation and circulation are proposed as a part of the Safety Element Update in the Proposed Project.

Policies:

SAF-1.3: Limit Development in Hazardous Areas and Minimize Erosion. Minimize threats to structures and humans by limiting development in areas subject to landslides or other geologic threat and undertake efforts to limit erosion from new development.

SAF-1.4: Seismic Hazard Coordination. Work with other public agencies to reduce potential damage from earthquakes to "lifeline" utility, economic, and transportation systems, including Caltrans; BART; PG&E, EBMUD, and other utilities providers, the Port of Oakland, and others.

SAF-2.3: Development in the Very High Fire Hazard Severity Zone (VHFHSZ). Prioritize development in areas with existing adequate road networks, evacuation routes, and water infrastructure. Require any new development in the Very High Fire Hazard Severity Zone to prepare a Fire Protection Plan that minimizes risks by:

- Assessing site-specific characteristics such as topography, slope, vegetation type, wind patterns etc.
- Siting and designing development to avoid hazardous locations (e.g. through fire breaks) to the extent feasible.
- Incorporating fuel modification and brush clearance techniques in accordance with applicable fire safety requirements and carried out in a manner which reduces impacts to environmentally sensitive habitat to the maximum feasible extent.
- Using fire-resistant building materials and design features, such as visible signage, consistent with the adopted Municipal Code and Fire and Building Code standards;
- Using fire-retardant, native plant species in landscaping.
- Complying with established standards and specifications for fuel modification, defensible space, access, and water facilities.
- Banning generators and fuel storage (e.g. for generators) in VHFHSZ.
- Requiring street improvements to comply with minimum fire road access standards.

- Disallowing new subdivisions in areas with less than two evacuation routes (as shown in Figure SAF-1d), unless a development were to be able to provide additional connections to ameliorate this condition.

SAF-5.4: Hazardous Materials Accidents. Seek to prevent industrial and transportation accidents involving hazardous materials, and enhance the City's capacity to respond to such incidents. Continue to enforce regulations limiting truck travel through certain areas of the city to designated routes and consider updating OMC 10.52.010 to establishing time-based restrictions on truck travel on certain routes to reduce the risk and potential impact of accidents during peak traffic hours.

SAF-8.1: Emergency Response. Maintain and enhance the City's capacity for emergency response, fire prevention, and fire-fighting.

SAF-8.2: Emergency Services Review. Continue to engage the Police and Fire departments in the development review process to ensure that projects are designed and operated in a manner that minimizes the potential for public safety and fire hazards and maximizes the potential for responsive police and fire services.

SAF-8.3: Hazard and Management Plans. Maintain and update as necessary the Oakland Emergency Operations Plan, Annex of Emergency Support Functions, and Integrated Preparedness Plans, which describes how the City will prepare for, prevent, respond to, recover from and mitigate the effects of all types of hazard and threats. Incorporate EOP policy recommendations for terrorism and public health crises as part of these documents' future planning cycles.

SAF-8.4: Data-Driven Equity Approach. To support implementation and future updates to the City's Local Hazard Mitigation Plan, and other safety-related plans, utilize the best available local data to identify racial disparities in the City of Oakland that can be used by the City to rank risk and prioritize mitigation strategies that incorporate a racial equity lens.

SAF-8.5: Cohesive Evacuation Routes Network. Ensure the evacuation routes network is interconnected with adequate capacity and reflects ability to evacuate for multiple threats.

- Maintain adequate capacity along evacuation routes through methods such as limiting on-street parking where capacity may be needed.

- Maintain a higher level of tree and vegetation maintenance along evacuation routes and remove flammable trees adjacent to these routes.

SAF-8.7: Local Hazard Mitigation Plan. To comply with federal and state law, follow and annually update the Oakland Local Hazard Mitigation Plan. Use the LHMP to guide mitigating actions to protect the whole community and environment from natural and humanmade hazards.

SAF-8.8: Risk Reduction Models. Integrate new risk reduction models (such as sea level rise modeling, wildfire mapping tools, etc.), tools, and methods into existing plans such as the General Plan, neighborhood and area plans, green infrastructure planning processes, etc., as may be appropriate.

SAF-8.11: Critical Facilities Locations. Locate critical facilities, such as hospitals and health care facilities, emergency shelters, fire stations, police stations, emergency

command centers, and other emergency service facilities and utilities so as to minimize exposure to flooding, seismic, geologic, wildfire, and other hazards, except those facilities that provide frontline access, such as fire stations in areas of fire hazard. If critical facilities must be located in hazard zones, require building construction and materials that minimize hazard, safe access for emergency response vehicles, visible street signs, and adequate infrastructure for emergency scenarios, such as flooding, backup power and water supplies.

SAF-8.12: Facilities and Climate Impacts. Consider climate impacts, risk, and uncertainty in designing and evaluating capital improvement program design and adjust infrastructure design standards and project locations to address asset- and site-specific vulnerabilities.

SAF-8.14: Emergency Notification. Use early warning notification systems (Zonehaven, text messages, etc.) to notify residents by wireless emergency alert of the need to evacuate in the event of an emergency and the location of evacuation routes, points, and critical facilities such as schools and day care centers, particularly residents of vulnerable areas and neighborhoods with constrained emergency access. Continue to collaborate with adjoining jurisdictions on the network of outdoor warning sirens, and to test the sirens on a monthly basis.

SAF-8.15: Traffic Signaling. Prioritize the connection of traffic signals along evacuation routes to the City's Traffic Management Center to allow for real-time modifications to signal timing that can speed evacuation in the event of emergency.

SAF-8.16: Priority Route Coordination. Partner with Caltrans and neighboring jurisdictions on measures to protect critical evacuation routes and work with local agencies to develop contingency plans that address disconnected routes and explore roadway improvements that can provide better emergency access under emergency evacuation scenarios. Work with emergency response teams and transit providers to identify and support Oakland residents without access to transportation in the event of an emergency.

Actions:

SAF-A.30: Maintain adequate capacity along evacuation routes as shown in SAF-11, e.g., by limiting street parking where capacity may be needed.

SAF-A.31: Maintain a higher level of tree and vegetation maintenance along evacuation routes and remove flammable trees and others that could fall and block access adjacent to these routes.

SAF-A.32: As part of the LUTE update, project future emergency service needs for planned land uses and evaluate capital improvement and staffing plans accordingly.

SAF-A.33: Periodically assess the need for new or relocated fire stations, facilities, programs, and technologies.

SAF-A.34: Strive to meet a goal of responding to fires and other emergencies within seven minutes of notification 90 percent of the time.

SAF-A.35: Continue to participate in multi-jurisdictional programs and task forces, such as the Hills Emergency Forum and Diablo FireSafe Council, that work to reduce the threat of wildfires.

SAF-A.36: Implement at least three resilience hubs, including in West Oakland, East Oakland, and at the Lincoln Square Recreation Center.

SAF-A.37: Identify ways the City can help support decentralized community facilities to serve residents unable to travel to centralized resilience hubs.

SAF-A.38: In partnership with OakDOT, the Human Services Department, AC Transit, healthcare, and other community organizations, explore organization of a network to transport those without vehicles to these centralized resilience hubs during times of emergency. As part of the LUTE update in Phase 2, explore use of electrified buses as "mobile resilience centers".

SAF-A.39: Establish neighborhood-level communication networks to inform residents of the location and directions to the nearest cooling center and coordinate transportation to these centers for limited-mobility residents during extreme heat events.

SAF-A.40: Evaluate capital improvement projects in the Infrastructure and Facilities Element and LUTE in Phase 2 using climate impacts, risk, and uncertainty. Evaluate CIP projects as part of short- and long-term CIP reports.

SAF-A.42: Continue to collaborate with adjoining jurisdictions on the network of outdoor warning sirens, and to test the sirens on a monthly basis.

SAF-A.43: Consider roadway improvements for better emergency access as part of the LUTE and identify any possible tradeoffs for everyday street safety.

Environmental Justice Element

The following goals and policies pertaining to transportation and circulation are proposed as a part of the Environmental Justice Element Update in the Proposed Project.

Policies:

EJ-1.1: Toxic Air Contaminants. Reduce the public's exposure to toxic air contaminants through appropriate land use and transportation strategies, particularly in EJ Communities and other areas most burdened by air pollution, as identified in Figure EJ-12.

EJ-1.2: Truck Emissions and Pollution Exposure. Minimize air pollution and exposure of sensitive uses to truck pollution, particularly in EJ Communities and other areas most burdened by air pollution, while recognizing the Port of Oakland's role as the highest-volume shipping port in Northern California.

EJ-1.9: EV Charging. Require industrial and warehouse facilities to provide electrical connections for electric trucks and transport refrigeration units in support of CARB regulations.

EJ-1.10: Reduce Emissions from Port Operation. Support Port of Oakland's efforts to reduce emissions as part of operation and compliance with CARB regulations. This could include:

- Support of zero-emission drayage truck operations through appropriate local ordinance amendments, including allowable weight limits for single-axle, zero-emission trucks on local streets, and developing an investment plan for needed upgrades.

- Provision of data or staff time to study of the effects on truck flow and congestion due to increasing visits from larger container ships, the feasibility of an off-terminal container yard that utilizes zero-emission trucks to move containers to and from the marine terminals, and the potential efficiency gains from increasing the number of trucks hauling loaded containers on each leg of a roundtrip to the Port.

EJ-1.17: Data-Informed Efforts. Collaborate with BAAQMD, community organizations, and other stakeholders, to use air quality monitoring data to inform area-specific improvement actions outside of AB 617-related efforts. Such actions may include:

- Prioritizing areas for capital investments with co-benefits for air quality, such as the planting of trees and installation of EV charging infrastructure.
- Integrating air quality improvement actions into planning efforts, such as new specific plans, master plans, or area plans that will guide development in impacted areas.
- Limiting the establishment of new sources of air pollutants in areas with elevated levels of pollutant concentrations unless appropriate mitigation is implemented.
- Obtaining and using hyperlocal data along with community ground-truthing to more accurately inform development of air quality improvement strategies that are most effective and responsive to the needs of EJ Communities.
- Seeking opportunities to enhance existing air monitoring efforts, such as by working with BAAQMD and helping to expand the current monitoring network, especially where sensitive uses are within close proximity (within 500 feet) of pollution sources.
- Partnering with industrial and warehouse facility owners, community-based environmental and energy justice organizations to install rooftop solar PV systems to power EV charging stations.

EJ-4.6: Environmental Quality. In private and non-profit housing projects in EJ Communities, promote and seek ways to incentivize the inclusion of features and amenities that support and enhance the health of occupants and the environment, including:

- On-site health and human services;
- Energy-efficient appliances;
- Green infrastructure, such as green roofs or appropriate tree planting;
- Car sharing;
- Community gardens or sponsored rides to farmers markets; and
- Transit and bus passes for lower income workers to reduce emissions.

EJ-7.1: Complete Neighborhoods. Promote "complete neighborhoods"— where residents have safe and convenient access to goods and services on a daily or regular basis—that address unique neighborhood needs, and support physical activity, including walking, bicycling, active transportation, recreation, and active play.

EJ-7.2: Accessible Neighborhoods. Encourage active modes of transportation and transit accessibility by supporting neighborhoods that provide access to a range of daily goods, services, and recreational resources within comfortable walking or biking distance.

Encourage transit providers to establish and maintain routes to jobs, shopping, schools, parks and healthcare facilities that are convenient to EJ Communities.

EJ-7.3: Street Design for Safe Speeds. Work to maximize the safety of the transportation network by designing/redesigning streets for lower driving speeds and enforcing speed limits as well as promoting safe driving behavior. Strategies could include implementing leading pedestrian intervals for crosswalks in residential neighborhoods and providing pedestrian scale lighting. Prioritize speed reduction efforts in areas with the highest concentration of bicycle and pedestrian collisions in EJ Communities. Study enforcement patterns annually to avoid racial profiling.

EJ-7.4: Safe Oakland Streets. Use a community-engagement-rooted, data-driven, "vision zero" approach to eliminate all traffic fatalities and severe injuries, while increasing safety, health, and equitable mobility for all.

EJ-7.5: Bicycle-and Pedestrian-Friendly Design. Prioritize designs that protect people biking and walking, such as improvements that increase visibility of bicyclists and pedestrians, traffic calming, and safer intersection crossings and turns. Improvements should also prioritize universal design so that improvements are usable by all people, to the greatest extent possible, without the need for adaptation or specialization.

EJ-7.6: Collaborative Safety Solutions. Collaborate with educational institutions, senior living facilities, community organizations, and other stakeholders, particularly those who reside in EJ Communities, when developing and implementing programs and improvements that increase safety and encourage the use of active transportation modes. Identify and plan for improvements in collaboration with existing neighborhood residents and businesses to address concerns about gentrification and displacement.

EJ-7.7: **Equitable** ***Paving.*** Continue to plan and distribute paving program resources based on equity, road condition and safety metrics.

EJ-7.9: Enhancing Access to Parks. Pursue strategies that increase community access to safe, high quality open space, parks and recreational facilities, including increasing access to pedestrian and bicycle amenities around open space or recreational areas; expanding joint use agreements with schools and educational institutions; removing physical barriers to access (ex: fences); and providing a choice of legible routes to and from park areas through the installation of new or improved multi-use shared paths, wayfinding, and signage.

Actions:

EJ-A.1: Amend the City's Zoning code to include the following changes:

- Allow greater residential density in less-polluted areas, including existing single-family residential neighborhoods.
- Condition the permitting of heavy industrial businesses within five hundred (500) feet of a zone that permits residential activities.
- Establish special permit criteria for truck-intensive industrial activities located within five hundred (500) feet of any zone that permits residential activities.
- Establish special performance standards and standard conditions of approval for Truck-Intensive Industrial Activities located within five hundred (500) feet of any zone that permits residential activities.

- Amend the permit procedures for nonconforming Truck-Intensive Industrial Activities.
- Condition the permitting of commercial kitchen operations designed for online ordering and food delivery.
- Modify the S-19 Health and Safety Protection Combining Zone to prohibit use of diesel generators as the primary source of power within five hundred (500) feet from any Residential, Open Space, or Institutional Zone boundary.

EJ-A.8: As part of the LUTE update in Phase 2, explore modifications to truck routes and truck management in partnership with the Port of Oakland and WOIEP.

EJ-A.9: Designate an adequate system of roads connecting port terminals, warehouses, freeways and regional arterials, and other important truck destinations that minimizes impacts to sensitive uses This system should rely upon arterial streets away from residential neighborhoods.

EJ-A.10: Adopt requirements that new commercial and employment uses that generate truck traffic are located along existing truck routes to the extent feasible and work with project proponents to develop preferred truck routing that avoids sensitive land uses, such as schools, hospitals, elder and childcare facilities, and residences wherever feasible.

EJ-A.11: Coordinate with public agencies in the Bay Area region to catalyze the development and deployment of zero emission medium- and heavy-duty fleets and support development of shared charging hubs and resources. Support advocacy efforts for significant additional funding for retrofitting or replacing diesel trucks with zero-emission EV trucks, prioritizing a just transition approach by including economic support for independent truckers to compensate for lost wages while waiting for retrofitted or new EV trucks.

EJ-A.12: Work with the Port of Oakland to establish permanent locations for parking and staging of Port-related trucks and cargo equipment, i.e. tractors, chassis, and containers. Such facilities will provide long-term leases to parking operators and truck owner-operators at competitive rates. Such facilities will be at the City or Port logistics center or otherwise not adjacent to Oakland residents who are disproportionately impacted by poor air quality.

EJ-A.26: As part of the LUTE update in Phase 2, include policies that promote a fine-grained neighborhood land use pattern that encourages walking, biking, and getting around without a car.

EJ-A.27: As part of the LUTE update in Phase 2, include policies that prioritize bicyclist, pedestrian, and roadway improvements that prioritize safety and comfort of non-auto users. Target these improvements in EJ Communities and areas identified in Figure EJ-22.

EJ-A.28: As part of LUTE update in Phase 2, study shuttles and other local transit programs that are supportive of AC Transit's core service to foster local mobility and connections between neighborhoods and rail transit.

Proposed General Plan and Planning Code Amendments

Proposed General Plan Amendments

The Proposed Project contains several land use designation changes as shown in Figures 3-12, 3-13, and 3-15 in the Project Description. The land use designation revisions were designed to ensure future development is compatible with surrounding existing, entitled, and future land uses and proposed zoning changes. The land use changes such as upzoning and transit-oriented development would require changes to the surrounding transportation facilities, as further described in section 4.15.4.

Proposed Zoning Amendments

The Proposed Project has identified several zoning reforms that would further increase housing production capacity and unlock additional opportunities for affordable and missing middle housing in high-resource neighborhoods and affirmatively further fair housing. The zoning reforms include the addition of two overlay zones: Affordable Housing Overlay (AHO) Zone and Housing Sites Overlay Zone. The following planning code amendments related to transit are proposed as a part of the HEI to facilitate more housing:

- Increase permitted densities in areas near transit and along transit corridors through zoning map changes.
- Reduce parking requirements to lower the cost of new housing production and allow for more housing to be built.
  - No minimum parking requirements for residential facility types within ½ mile of a major transit stop and if located farther than ½ mile from a major transit stop a minimum of 0.5 parking spaces per unit is required (reduced from 1 parking space per unit).
  - No minimum parking requirements within the S-15 Transit Zone, and D-CO-1 Zone in addition to the existing no minimum parking requirements in the CBD, D-LM, and S-2 Zones.
  - Reduced maximum parking requirements in the CBD, S-15 Transit Zone, D-CO-1, D-LM, and S-2 Zones.
  - No minimum parking requirements for 100% affordable housing developments.

4.15.4 Impacts of the Project

Impact TRA-1: Adoption of the Proposed Project would not conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit, roadway, bicycle lanes, and pedestrian paths. (Criterion 1) (*Less than Significant*)

This section discusses the Proposed Project's potential impacts related to conflicts with applicable plans, ordinances, and policies. The Proposed Project would not conflict with applicable plans, ordinances, and policies that address the circulation system, as discussed in **Table 4.15-8**.

TABLE 4.15-8
CONSISTENCY WITH APPLICABLE PLANS, ORDINANCES, AND POLICIES

Plan/Ordinance/Policy	Project Consistency
Plan Bay Area 2050	***Consistent.*** The Proposed Project would be consistent with the Plan Bay Area 2050 goals and performance targets for transportation system effectiveness. Specifically, future development allowable under the Proposed Project would increase residential density near existing and future transit hubs, thereby reducing the demand for travel by single occupancy vehicles and reducing vehicle miles traveled per capita.
Alameda Countywide Transportation Plan, 2020	***Consistent.*** The Proposed Project would be consistent with the Alameda Countywide Transportation Plan, which establishes near-term projects, programs, and strategic priorities, details a 30-year transportation vision and guides the decision-making of the Alameda CTC. Specifically, the Proposed Project articulates goals, policies, and actions that would improve and expand connected multimodal choices, create safe multimodal facilities, and promote infill transit-oriented and mixed-use development facilitating multimodal local, regional, and interregional travel.
Alameda Countywide Active Transportation Plan, 2019	***Consistent.*** The Proposed Project would be consistent with the Alameda Countywide Active Transportation Plan, which provides a vision, goals, and priorities to improve walking and biking throughout the 15 diverse jurisdictions in Alameda County. Specifically, the Proposed Project articulates goals, policies, and actions that would create environments that support physical activity, recreation, and healthy lifestyles through safe and comfortable walkable, bikeable neighborhoods.
Alameda Countywide Multimodal Arterial Plan, 2016	***Consistent.*** The Proposed Project would be consistent with the Alameda Countywide Multimodal Arterial Plan which intends to address the needs and mobility for all modes using complete streets concepts. Specifically, the Proposed Project articulates goals, policies, and actions that would create environments that support physical activity, recreation, and healthy lifestyles through safe and comfortable walkable, bikeable neighborhoods.
Alameda County Transportation Commission Congestion Management (CMP) Program Land Use Analysis Program	***Consistent.*** The Proposed Project would generate more than 100 p.m. peak hour trips and would be subject to the Alameda CTC CMP Land Use Analysis Program requirement to consider auto impacts to vehicle delay on Metropolitan Transportation System (MTS) roadway segments and impacts to MTS transit operators and riders. Roadway level of service and vehicle delay are no longer a CEQA thresholds and this analysis is provided for informational purposes in Appendix D. The future development under the Proposed Project would increase residential density near existing and future transit, thereby reducing the demand for travel by single occupancy vehicles and reducing vehicle miles traveled per capita. Future development consistent with the Proposed Project would seek to implement projects identified in local, regional, and state planning documents including AC Transit Major Corridors Study, Alameda Countywide Active Transportation Plan, and the Alameda Countywide Multimodal Arterial Plan, Let's Bike Oakland!, and Oakland Walks, among others. The Proposed Project also articulates goals, policies, and actions that would create environments that support physical activity, recreation, and healthy lifestyles through safe and comfortable walkable, bikeable neighborhoods. There are no specific development projects or changes to the street network associated with the *Buildout Program*. Future development projects consistent with the Proposed Project would be required to meet Alameda CTC CMP Land Use Program Analysis requirements on a project level.
Bay Area Rapid Transit (BART) Station Access, Transit-Oriented Development, and Transportation Demand Management Policies	***Consistent.*** The Proposed Project would be consistent with BART's policies related to station access, transit-oriented development, and TDM. Specifically, the future development under the Proposed Project would increase residential density near existing and future transit hubs (including BART stations), thereby reducing the demand for travel by single occupancy vehicles and reducing vehicle miles traveled per capita. Additionally, future development would support BART's goals to maximize affordable and mixed-income housing; increase transit ridership; and provide access improvements that are likely to increase the share of BART patrons who walk, bike, or take transit to BART. Therefore, the Proposed Project would comply BART'S station access, TOD, and TDM policies.
City of Oakland General Plan, 1998	***Consistent.*** The Proposed Project would be consistent with the City of Oakland's General Plan and Land Use and Transportation Element, which establishes long-term city-wide planning goals and provides strategies to accomplish them. Specifically, the Proposed Project articulates goals, policies, and actions that would create environments that support physical activity, recreation, and healthy lifestyles through safe and comfortable neighborhoods.

TABLE 4.15-8 (CONTINUED)
CONSISTENCY WITH APPLICABLE PLANS, ORDINANCES, AND POLICIES

Plan/Ordinance/Policy	Project Consistency
Oakland Pedestrian Plan, 2017	***Consistent.*** The Proposed Project would be consistent with the City of Oakland's 2017 Pedestrian Plan, Oakland Walks, which is an update to the pedestrian plan adopted in 2002. Specifically, the Proposed Project articulates goals, policies, and actions that would create environments that support physical activity, recreation, and healthy lifestyles through safe and comfortable walkable neighborhoods. The Proposed Project also includes policies that would maximize the safety of the transportation network by designing streets for lower speeds and implement pedestrian-friendly design.
Oakland Bike Plan, 2019	***Consistent.*** The Proposed Project would be consistent with the City of Oakland's 2019 Bicycle Plan, Let's Bike Oakland! Specifically, the Proposed Project articulates goals, policies, and actions that would create environments that support physical activity, recreation, and healthy lifestyles through safe and comfortable bikeable neighborhoods. The Proposed Project also includes policies that would maximize the safety of the transportation network by designing streets for lower speeds and implement bicycle-friendly design.
East Oakland Mobility Action Plan, 2021	***Consistent.*** The Proposed Project would be consistent with the East Oakland MAP, which is intended to guide the City and other partner agencies in allocating resources for future mobility improvements in East Oakland and identifying ways in which transportation projects can be done differently to not replicate a long history of planning injustice and harm. Specifically, the Proposed Project articulates goals, policies, and actions that would reduce air pollution and eliminate associated public health disparities, promote and seek ways to incentivize the inclusion of features that support and enhance health, and collaborate with stakeholders, particularly those who reside in EJ Communities, when developing and implementing programs.
Transportation Impact Review Guidelines, 2017	***Consistent.*** The Proposed Project would be consistent with the Transportation Impact Review Guidelines (TIRG). Based on the analysis documented in this Transportation and Circulation section, the Proposed Project would result in less-than-significant impacts according to the significance criteria established in the TIRG for consistency with plans and policies (Impact TR-1), vehicle miles traveled (Impact TR-2), and induced automobile travel (Impact TR-3). Additionally, future development under the Proposed Project would be required to undergo a project-level environmental review.

SOURCE: Compiled by Kittelson & Associates, Inc. 2022

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. There are no specific development projects or specific changes to the street network associated with the *Buildout Program*. However, future development under the Proposed Project could include changes to the adjacent street network such as new or relocated driveways, reconstructed sidewalks, and various color curb changes to accommodate on-street commercial and passenger loading activities; and could include one or more transportation features to allow for site access that would change the transportation network. The types of transportation features would depend on the building size and the configuration of the parcel and frontage with adjacent streets. Individual building projects would be required to meet planning code requirements for provision of onsite freight loading spaces, onsite and on-street bicycle parking spaces, vehicle parking, and transportation demand management.

As part of the City's entitlement process, future development under the Proposed Project would be required to comply with existing regulations, including General Plan policies and zoning regulations. Additionally, future development under the Proposed Project would be subject to all applicable City guidelines, standards, and specifications. Any changes to the public right-of-way would still need to go through subsequent approval processes, such as by the planning

commission and city council. The Oakland Department of Transportation would provide oversight engineering review to ensure that future development is constructed according to City specifications and incorporates relevant SCAs listed below, which focus on the safety and performance of the transportation system. Given that future development would be required to implement existing and proposed policies, SCAs, and comply relevant regulations for land use development and transportation, impacts related to conflicts with policies, plans, and regulations would be less than significant.

These regulations and policies are reinforced by SCAs 77, Transportation Improvements, and 78, Transportation and Parking Demand Management, which collectively require future development under the Proposed Project to conduct a Transportation Impact Review to identify any potential conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit, roadway, bicycle lanes, and pedestrian paths.

Mitigation: None required.

Summary

With adherence to proposed policies, SCAs, and regulatory compliance, the Proposed Project would result in a less-than-significant impact related to conflicts with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

Impact TRA-2: Adoption of the Proposed Project would not cause substantial additional VMT per capita, per service population, or other appropriate efficiency measure. (Criterion 2) (*Less than Significant*)

This section discusses the Proposed Project's impacts related to VMT. VMT can be presented as total VMT, or as efficiency metrics expressed in VMT per capita, VMT per employee, and VMT per service population on a typical day. Total VMT represents all VMT generated in the City, while VMT per resident, or employee is an efficiency metric that represents VMT generated on a typical day per person who lives and/or works in the City. VMT per capita is measured to evaluate residential projects, VMT per employee for employment projects, and VMT per service population for a combination of land uses. This analysis uses VMT per capita to assess impacts of the Proposed Project.

VMT Screening

As described above in the *Regulatory Setting* under Transportation Impact Review Guidelines, the City of Oakland has adopted screening criteria and thresholds to evaluate significant impacts for VMT. The potential to screen the *Buildout Program* from VMT analysis was considered. Based on this review, summarized in this section, the Proposed Project was found to exceed the screening criteria and additional detailed analysis was required.

- **Criterion #1: Small Projects.** The Project generates fewer than 100 vehicle trips per day.

  Not met. The *Buildout Program* includes 41,458 housing units. This scale of development would be expected to generate more than 100 vehicle trips per day.

- **Criterion #2: Low-VMT Areas.** The Project meets map-based screening criteria by being in an area that exhibits below-threshold VMT, or 15 percent or more below the regional average.

  Not met. The *Buildout Program* includes housing sites located across the City and the specific location of future development has not been determined. Several of the housing sites identified in the 2023-2031 Housing Element are located in areas that do not meet map-based screening criteria and exhibit above-threshold VMT.

- **Criterion #3: Near Transit Stations.** The Project is in a Transit Priority Area[9] or within a one-half mile of a Major Transit Corridor or Stop[10] and satisfies the following:

  – Has a floor area ratio (FAR) of more than 0.75.

  – Does not include more parking for use by residents, customers, or employees of the Project than other typical nearby uses, or more than required by the City (if parking minimums pertain to the site) or allowed without a conditional use permit (if minimums and/or maximums pertain to the site).

  – Is consistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the MTC).

  Not met. The *Buildout Program* includes housing sites located across the City and the specific location of future development has not been determined. Future development under the Proposed Project could occur on sites not located within Transit Priority Areas or within a one-half mile of a Major Transit Corridor or Stop.

VMT Analysis

For residential uses, the City of Oakland adopted the threshold of significance for VMT analysis according to the guidance from OPR that a residential project's VMT impact is considered less-than-significant if its household VMT per capita is at least 15 percent below the regional average (nine-county Bay Area) Household VMT per capita. Therefore, an increase in the VMT per capita under the horizon year with the *Buildout Program* compared to the respective threshold (15 percent below the regional average VMT per capita) would be considered a significant impact.

VMT was calculated for the *Buildout Program* by Kittelson & Associates in June 2022. VMT thresholds by land use type are shown in **Table 4.15-9** and represent 15 percent below the regional average VMT per capita (or 85 percent of the regional baseline). **Table 4.15-10** summarizes the population, residential VMT, and residential VMT per capita for the applicable regional threshold, the 2020 baseline, and the City of Oakland 2030 with Proposed Project.

[9] According to the California Public Resource Code, a Transit Priority Area is defined as a one-half mile area around an existing major transit stop or an existing stop along a high-quality transit corridor. Public Resources Code, § 21064.3 defines major transit stop as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of 15 minutes or less during the morning and afternoon peak commute periods. Public Resources Code, § 21155 defines a high-quality transit corridor as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

[10] "Major transit stop" is defined in CEQA Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

TABLE 4.15-9
VMT THRESHOLDS BY LAND USE TYPE FOR PROJECTS

Land Use Type (Units)	Regional Baseline (2020)	Threshold (85% of Baseline)
Residential (VMT Per Capita)	19.9	16.9

SOURCE: Kittelson & Associates, Inc. 2022

TABLE 4.15-10
VMT RESULTS SUMMARY

Units	Bay Area Region 2020 Baseline	Oakland 2020 Baseline	Oakland 2030 with Proposed Project
Population	7,854,095	426,853	529,609
Residential VMT	156,364,910	5,650,254	6,445,245
VMT Per Capita	19.9	13.2	12.2

SOURCE: Kittelson & Associates, Inc. 2022

As shown in the Table 4.15-10, the 2020 baseline residential VMT per capita is 13.2 which is below the impact threshold of 16.9. In addition, the 2030 *Buildout Program* residential VMT per capita is estimated to be 12.2 which is a decrease from the 2020 baseline condition and also below the impact threshold of 16.9. The reduction indicates that the future development under the Proposed Project would improve the jobs/housing balance and provide more opportunities for Oakland residents and employees to access jobs and services within the City and within shorter distances and with non-auto transportation options. This reduction also reflects that in most cases, future individual buildings consistent with the proposed action would be in areas of the City and within zones where the daily VMT per capita is more than 15 percent below the regional VMT thresholds and would therefore not result in substantial additional VMT. Moreover, future development consistent with the proposed action would share many of the characteristics that result in low VMT per capita – characteristics such as density, diversity of uses, proximity to transit, among others. Additionally, the zones where future residential development consistent with the proposed action would be predominantly located in transit priority areas (i.e., within one-half-mile of a major transit stop), although some development may occur on parcels that are not currently in transit priority areas. Furthermore, given that future development under the Proposed Project would be subject to General Plan policies and all applicable City guidelines, standards, and specifications that would further promote sustainable transportation options and reduce VMT per capita, impacts related to vehicle miles traveled would be less than significant.

These regulations and policies are reinforced by SCAs 76, Bicycle Parking; 77, Transportation Improvements; and 78, Transportation and Parking Demand Management, which collectively require future development under the Proposed Project to conduct a Transportation Impact Review which includes VMT Analysis to estimate the VMT per capita, per service population, or other appropriate efficiency measure and develop and adopt a TDM plan to mitigate any significant impacts related to VMT. While SCA 79, Transportation Impact Fee (TIF) is not directly related to VMT evaluation, the funds from the TIF program will be used to reduce VMT.

Mitigation: None required.

Summary

With adherence to proposed policies, SCAs, and regulatory compliance, the Proposed Project would result in a less-than-significant impact related to vehicle miles traveled.

Impact TRA-3: Adoption of the Proposed Project would not substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow lanes) or by adding new roadways to the network. (Criterion 3) (*Less than Significant*)

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. There are no specific development projects or specific changes to the street network associated with the *Buildout Program*. However, future development under the Proposed Project, could include changes to the adjacent street network such as new or relocated driveways, new and reconstructed sidewalks, sidewalk bulb-outs, raised crosswalks, bicycle lanes or other bicycle facilities, removal of on-street vehicular parking, new or relocated on-street commercial and passenger loading zones, and modified travel lanes adjacent to the sites. These features fit the general types of projects identified in the TIRG that would not substantially induce automobile travel. Furthermore, given that future development would be required to meet General Plan policies and planning code requirements for provision of onsite freight loading spaces, onsite and on-street bicycle parking spaces, vehicle parking, and transportation demand management, and implement applicable SCAs, impacts related to induced automobile travel would be less than significant.

These regulations and policies are reinforced by SCAs 76, Bicycle Parking; 77, Transportation Improvements; and 78, Transportation and Parking Demand Management, which collectively require future development under the Proposed Project to promote alternative mode of transportation and avoid roadway expansion as a solution to relief congestion.

Mitigation: None required.

Summary

With adherence to proposed policies, SCAs, and regulatory compliance, the Proposed Project would result in a less-than-significant impact related to induced automobile travel.

4.15.5 Cumulative Impacts

Impact TRA-4: Implementation of the Proposed Project, combined with cumulative development, would not result in significant cumulative impacts related to transportation. (*Less than Significant*)

The *Buildout Program* represents the maximum feasible housing development that the City has projected can reasonably be expected to occur through the projection period ending in 2030.

Therefore, the analysis of the Proposed Project's environmental impacts is largely a cumulative impact analysis by nature. The discussion of cumulative transportation impacts assesses whether the future development under the Proposed Project, in conjunction with overall citywide growth and other cumulative projects, would significantly affect the transportation network and, if so, whether the Proposed Project's contribution to the cumulative impact would be considerable.

As discussed in Impact TR-2, the Proposed Project would have a less than significant impact related to VMT. Based on technical guidance from the Governor's Office of Planning and Research, if a project has a less than significant impact on VMT using an efficiency metric (e.g., VMT per capita), and is aligned with long-term environmental goals and relevant plans, this implies that the project would not contribute to a cumulative VMT impact. Therefore, the Proposed Project would not have a considerable contribution to a cumulative VMT impact.

These regulations and policies are reinforced by SCA 77, Transportation Improvements, which require future development under the Proposed Project to conduct a Transportation Impact Review which includes cumulative impact analysis related to transportation.

Mitigation: None required.

Summary

With adherence to proposed policies, SCAs, and regulatory compliance, the Proposed Project would result in a less-than-significant cumulative impact.

4.15.6 References – Transportation and Circulation

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4.16 Tribal Cultural Resources

This section describes conditions and potential environmental effects of the Proposed Project pertaining to tribal cultural resources. The section discusses relevant existing environmental conditions of the Plan Area and regulations pertinent to this section, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts to the physical environment that could result from implementation of the Proposed Project and its associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that would reduce potential impacts to this environmental topic are identified; both existing and proposed updated/new General Plan policies and SCAs are considered. Mitigation measures to address potentially significant impacts are also identified.

This section incorporates relevant information from the General Plan Update Map Atlas (see Appendix A) prepared in support of the Proposed Project. The NOP (Notice of Preparation) for this Draft EIR received one comment from the Native American Heritage Commission (NAHC) on this topic. Based on the requirement of Public Resources Code Section 21080.3(b), the NAHC recommended consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your Proposed Project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources.

4.16.1 Environmental Setting

4.16.1.1 Tribal Cultural Resources Terminology

Tribal Cultural Resources. Tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed, or determined to be eligible for listing, on the national, State, or local register of historical resources (Public Resources Code [PRC] Section 21074[a][1]).

4.16.1.2 Tribal Cultural Resources Setting

Section 4.4, *Cultural Resources*, provides the geoarchaeological, pre-contact, and ethnographic settings relevant to tribal cultural resources.

Identified Pre-contact Archaeological Resources

As described in Section 4.4, *Cultural Resources*, the NWIC records search indicated that over 40 pre-contact archaeological resources are recorded within the Plan Area. These resources consist of shell mounds, habitation sites, isolated artifacts, petroglyphs, bedrock milling stations, and human burial sites. Pre-contact archaeological resources can also be considered tribal cultural resources.

Tribal Consultation Efforts

On July 27, 2021, the City received a response from the NAHC requesting a search of the sacred lands file and a list of tribes in the vicinity. The City contacted each tribe on the NAHC list for

Alameda County by certified letter on August 24, 2021. Tribes included the Amah Mutsun Tribal Band of Mission San Juan Bautista, the Costanoan Rumsen Carmel Tribe, the Indian Canyon Mutsun Band of Costanoan, the Muwekma Ohlone Indian Tribe, the North Valley Yokuts Tribe, the Ohlone Indian Tribe, the Wuksache Indian Tribe/Eshom Valley Band, and the Confederated Villages of Lisjan. The letters provided contact information on the Proposed Project including a map of the Plan Area. One response was received from the Indian Canyon Mutsun Band of Costanoan on by email on September 11, 2021. The City responded on September 30, 2021 requesting a meeting. The City and Kanyon Sayers-Roods who represents the tribe held a video meeting and discussed the Proposed Project.

4.16.2 Regulatory Setting

4.16.2.1 Federal

There are no federal laws or regulations related specifically to tribal cultural resources. Section 106 of the National Historic Preservation Act considers historic properties, which also includes traditional cultural properties.[1] Section 4.4.2 within Section 4.4, *Cultural Resources*, provides a summary of Section 106 of the National Historic Preservation Act.

4.16.2.2 State

Public Resources Code Section 21074 (AB 52)

In September of 2014, the California Legislature passed Assembly Bill (AB) 52, which added provisions to the PRC regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. AB 52 requires lead agencies to analyze project impacts on "tribal cultural resources" separately from archaeological resources (PRC Section 21074; 21083.09). AB 52 defines "tribal cultural resources" in PRC Section 21074 and requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (PRC Section 21080.3.1, 21080.3.2, 21082.3).

Specifically, PRC Section 21084.3 states:

a) Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.

b) If the lead agency determines that a project may cause a substantial adverse change to a tribal cultural resource, and measures are not otherwise identified in the consultation process provided in Section 21080.3.2, the following are examples of mitigation measures that, if feasible, may be considered to avoid or minimize the significant adverse impacts:

    1) Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

[1] A *traditional cultural property* is a property that is eligible for inclusion in the National Register of Historic Places based on its associations with the cultural practices, traditions, beliefs, lifeways, arts, crafts, or social institutions of a living community.

2) Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

   (A) Protecting the cultural character and integrity of the resource.

   (B) Protecting the traditional use of the resource.

   (C) Protecting the confidentiality of the resource.

3) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

4) Protecting the resource.

4.16.2.3 City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to reducing impacts related to Tribal Cultural Resources are in Section 4.4, *Cultural Resources*, and include SCA 32, Archaeological and Paleontological Resources – Discovery During Construction, SCA 33, Archaeologically Sensitive Areas – Pre-Construction Measures, and 34, Human Remains – Discovery During Construction. These SCAs provide provision for archaeological resources and human remains, which could also be considered tribal cultural resources All SCAs would be adopted as enforceable conditions of approval and required, as applicable, to be implemented during construction and operation of future development under the Proposed Project to help ensure less-than-significant impacts related to Tribal Cultural Resources. The SCAs are incorporated and required as part of the Proposed Project, so they are not listed as mitigation measures.

4.16.3 Environmental Analysis

4.16.3.1 Significance Criteria

The City of Oakland has established thresholds of significance for CEQA impacts, which incorporate those in Appendix G of the *CEQA Guidelines* (City of Oakland, 2020). Adoption of the Proposed Project would have a significant adverse impact related to cultural resources if it would:

1. 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:

   a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or,

   b. 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. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

4.16.3.2 Approach to Analysis/Methodology

This is a program-level Draft EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Impacts to tribal cultural resources are evaluated using the criterion listed above and based on information provided through consultation with Native American tribes.

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future development under the Proposed Project, this Draft EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas and analyzes the impacts of housing development through the projection period ending in 2030.

Impacts on tribal cultural resources are assessed in consultation, as applicable, with the affiliated Native American tribes in accordance with PRC Section 21080.3. This analysis considers whether the Proposed Project would cause damaging effects to any tribal cultural resource, including archaeological resources and human remains.

4.16.3.3 Topics Considered and Determined to Have No Impact

All topics related to Tribal Cultural Resources are analyzed below.

4.16.4 Impacts of the Project

Impact TRI-1: Adoption of the Proposed Project could cause a substantial adverse change in the significance of a tribal cultural resource. (Criterion 1) (*Less than Significant with Mitigation*)

The City sent letters to the culturally affiliated Native American tribes and individuals that may have interest in the Proposed Project. The Indian Canyon Band of Costanoan Ohlone responded to the request for consultation and the City held a video meeting with the Tribe. Based on the results of the meeting, no tribal cultural resources listed or eligible for listing in the California Register or in a local register of historical resources were identified in the Plan Area. However, approximately 40 pre-contact archaeological sites are in the Plan Area and these resources could also be considered tribal cultural resources.

Based on the background research and known archaeological sensitivity of the Plan Area, the potential exists for archaeological resources or human remains that may be tribal cultural resources to be uncovered during ground-disturbing activities associated with future development under the Proposed Project. Without appropriate protocol for handling uncovered resources, the Proposed Project could result in a substantial adverse change in the significance of tribal cultural resources, which would be considered a significant impact. Compliance with SCAs 32, Archaeological and Paleontological Resources – Discovery During Construction; and 34, Human Remains – Discovery During Construction, would establish protocol to identify, evaluate, and

address potential impacts to previously unknown archaeological resources and would establish protocol to protect cultural resources and human remains if they are inadvertently discovered during project construction. SCA 33, Archaeologically Sensitive Areas – Pre-construction Measures, ensures that the project applicant implement either Provision A (Intensive Pre-Construction Study) or Provision B (Construction ALERT Sheet) in areas determined to be archaeologically sensitive. However, SCA 33 would not reduce potential impacts to tribal cultural resources to a less-than-significant level in all cases. To avoid significant impacts in areas of archaeological sensitivity, both Provision A and Provision B of SCA 33 should be followed because project applicants do not have the qualifications to determine whether to implement an Intensive Pre-Construction Study or provide a Construction ALERT Sheet. That determination should be made by a Secretary of the Interior-qualified archaeologist.

In addition, if Native American archaeological resources, which could also be considered tribal cultural resources, are identified or suspected in a project site, a Native American representative(s) registered with the Native American Heritage Commission that is traditionally and culturally affiliated with the geographic area as described in Public Resources Code Section 21080.3 shall be consulted. Implementation of Mitigation Measure CUL-2 would reduce impacts to tribal cultural resources to a less-than-significant level by requiring minor text changes to SCA 33.

Mitigation Measure CUL-2: Text changes to SCA 33 (see Section 4.4)

Summary

With adherence to the aforementioned SCAs, mitigation measures, and other regulatory compliance, adoption of the Proposed Project would result in a less than significant impact on tribal cultural resources.

4.16.5 Cumulative Impacts

Impact TRI-2: Adoption of the Proposed Project, combined with cumulative development, could result in less than significant cumulative impacts for tribal cultural resources. (*Less than Significant with Mitigation*)

This section presents an analysis of the cumulative effects of future development under the Proposed Project in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to tribal cultural resources could occur if the incremental impacts of the of future development under the Proposed Project combined with the incremental impacts of cumulative development would be significant, and if the Proposed Project's contribution would be considerable.

Geographic Context

The geographic context for the analysis of cumulative tribal cultural resources impacts is cumulative development in the Plan Area.

Cumulative Impacts Tribal Cultural Resources

Future development under the Proposed Project and cumulative projects could include excavation and grading that could potentially impact archaeological resources and human remains that may be present, which could also be considered tribal cultural resources. The cumulative effect of this future development is the continued loss of cultural remains. Potential future development increases the likelihood that additional archaeological resources could be uncovered, so it is therefore possible that cumulative development could result in the demolition or destruction of unique archaeological resources, which could contribute to the erosion of the pre-contact record of the City and the wider region. However, implementation of Mitigation Measure CUL-2, which includes revisions to SCA 33, and SCAs 33 and 34 would effectively mitigate these effects. These measures would require a protocol in the event cultural materials and/or human remains are found during ground disturbing activities as well as an Intensive Pre-Construction Study and a Construction ALERT Sheet in Archaeologically Sensitive Areas.

Implementation of Mitigation Measure CUL-2, which includes revisions to SCA 33, and SCAs 33 and 34 would establish protocol to identify, evaluate, and address any potential impacts to previously unknown archaeological resources and would establish appropriate protocol to protect cultural resources and human remains, which could also be considered tribal cultural resources, if they are inadvertently discovered during project construction. With implementation of these mitigation measures, the Proposed Project's contribution to any potential cumulative impacts to tribal cultural resources would be reduced to a less than significant level. As such, cumulative impacts related to tribal cultural resources would be less than significant.

Summary

With adherence to the aforementioned SCAs, mitigation measures, and other regulatory compliance, adoption of the Proposed Project would result in a less than significant cumulative impact on tribal cultural resources.

4.16.6 References – Tribal Cultural Resources

City of Oakland, 2020. *City of Oakland CEQA Thresholds of Significance Guidelines*, December 16, 2020.

4.17 Utilities and Service Systems

This section describes conditions and potential environmental effects of the Proposed Project pertaining to utilities and service systems. The section discusses relevant existing environmental conditions of the Plan Area and regulations pertinent to this section, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts to the physical environment that could result from adoption of the Proposed Project and its associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that would reduce potential impacts to this environmental topic are identified; both existing and proposed updated/new General Plan policies and SCAs are considered.

This section incorporates relevant information from the General Plan Update Map Atlas (see Appendix A) prepared in support of the Proposed Project. In response to the NOP (Notice of Preparation) of this Draft EIR, the City received scoping comments related to utilities and service systems from the East Bay Municipal Utility District (EBMUD). The EBMUD comments were provided as a standard letter describes the process and requirements for approving individual projects' new water connections and new pipe installation, such as completed remediation plans and landslide mitigation measures. The letter includes a description of existing wastewater facilities and service and ongoing efforts to address wet weather capacity issues. It includes the status of EBMUD's water recycling program and describes opportunities to expand the recycled water infrastructure. The letter also describes opportunities for future projects to incorporate water conservation measures such as compliance with Assembly Bill 325, "Model Water Efficient Landscape Ordinance."

4.17.1 Environmental Setting

4.17.1.1 Environmental Setting

Water

The Plan Area is served by existing water supplies, treatment facilities, and distribution systems, which are operated and managed by EBMUD as described below. The information presented in this section is based on the Map Atlas and the EBMUD Urban Water Management Plan 2020 (UWMP) (EBMUD, 2021a).

Water Supply

EBMUD provides potable water to approximately 1.4 million people throughout portions of Alameda and Contra Costa counties, including the City of Oakland. EBMUD obtains approximately 90 percent of its water from the Mokelumne River watershed and transports it through pipe aqueducts to temporary storage reservoirs in the East Bay hills. EBMUD has water rights and facilities to divert up to a daily maximum of 325 million gallons per day (mgd). However, this allocation may be constrained by several factors – including upstream water use by prior water right holders; downstream water use, and other downstream obligations including protection of public trust resources, drought, or less-than normal rainfall for more than a year, and emergency outage.

EBMUD's water supply system consists of a network of reservoirs, aqueducts (pipelines), water treatment plants, pumping plants, and other distribution facilities and pipelines that convey Mokelumne River water from Pardee Reservoir to EBMUD customers. While the number of accounts has increased steadily since 1970, the average daily water demand has not increased correspondingly; outside of droughts, demand remains relatively stable. In 2020, the average daily water demand was approximately 155 mgd. This number represents potable water demand only and does not include recycled water. Total domestic demand is projected to increase to 201 mgd by 2040 and to 218 mgd by 2050; these figures are adjusted to account for water conservation and recycled water.

Despite EBMUD's aggressive conservation and water recycling programs, Mokelumne River and the local watershed supply are not enough to meet the projected 2040 customer demands during multi-year droughts without achieving potentially significant water use reductions. To meet projected water needs and address deficient supply during severe droughts, EBMUD is working to identify supplemental water supplies and additional recycled water programs. New water supplies will come from water transfers, groundwater storage, and regional supply projects.

Additionally, recycled water treatment facilities have been constructed at EBMUD's wastewater treatment plant, located at the foot of the San Francisco-Oakland Bay Bridge. EBMUD stores the recycled water in a 1.5-million-gallon storage tank at the wastewater treatment plant and uses another 2.4 mgd at the plant for various industrial processes as well as landscape irrigation. EBMUD's 2019 Updated Recycled Water Master Plan identifies additional implementation programs including planned expansions of the San Ramon Valley recycled water project, the East Bayshore recycled water project, and a satellite recycled water project at the Diablo Country Club (EBMUD, 2019). These are expected to increase production use by approximately one mgd in 2025.

EBMUD holds a water service contract with the U.S. Bureau of Reclamation (USBR) to receive water from the Central Valley Project (CVP) through the Freeport Regional Water Project in years when EBMUD's water supplies are relatively low. On February 28, 2020, EBMUD signed a contract with the USBR which "converted" its 2006 water service contract to a permanent repayment contract pursuant to the 2016 Water Infrastructure Improvements for the Nation Act (EBMUD, 2021b). Qualifying years for obtaining CVP water are those in which EBMUD's total stored water supply is forecast as of March 1, updated monthly through May 1, to be below 500 thousand acre-feet (TAF) on September 30 of that year. The contract enables EBMUD to receive up to 133 TAF of CVP water in a single qualifying year, not to exceed a total of 165 TAF over three consecutive qualifying years (EBMUD, 2021b). Because EBMUD relies on CVP deliveries during dry and critically dry periods, the CVP supply constitutes a critical component of EBMUD's water supply reliability.

Water Treatment Facilities

There are six water treatment plants in the EBMUD water supply and distribution system which have a treatment capacity of over 375 mgd. The water treatment plants are Upper San Leandro in Oakland, San Pablo in Kensington, Sobrante in El Sobrante, and plants located in and named for Orinda, Lafayette, and Walnut Creek. The Orinda Water Treatment Plant has the largest output,

with a maximum capacity of 200 mgd and serves all or parts of Alameda, Albany, Berkely, El Cerrito, Emeryville, Moraga, Oakland, Orinda, Piedmont, Richmond, and San Leandro. All water delivered to customers is filtered through sand and anthracite. Each water treatment plant also provides disinfection, fluoridation, and corrosion control (EBMUD, 2022).

Water Distribution

After water is treated at one of the water treatment plants, it is distributed throughout EBMUD's service area, which is divided into 125 pressure zones ranging in elevation from sea level to 1,450 feet. Approximately 50 percent of treated water is distributed to customers purely by gravity. The EBMUD water distribution network includes 4,200 miles of pipe, 131 pumping plants, and 167 water distribution reservoirs (EBMUD, 2021a).

Wastewater

The City provides citywide sanitary sewer collection services throughout the Plan Area, while EBMUD provides sewage transport, treatment, and discharge services. These services and existing infrastructure are described below.

Wastewater Collection

The City's sewer collection system is separated into 22 large basins and 228 sub-basins. Sewer discharge from buildings within Oakland flows through lateral lines to the City's sewer network, which is mostly gravity fed. Currently, the City operates and maintains approximately 930 miles of sewer lines, 29,000 structures, and 7 pump/lift stations. The sewer network is connected directly to trunk lines that convey sewage flows to EBMUD wastewater interceptors and finally to the Municipal Wastewater Treatment Plant (MWTP) located in West Oakland. EBMUD wastewater interceptors consist of 29 miles of reinforced concrete pipes ranging from one to nine feet in diameter.

EBMUD has historically operated three Wet Weather Facilities (WWF) to provide treatment for high wet weather flows that exceed the treatment capacity of the MWTP. In conjunction, Oakland's infiltration/inflow (I/I) correction program, designed to keep stormwater from entering the wastewater flows, began in the 1980s to rehabilitate 25 percent of the sewer system sub-basins, work which was completed in 2014. However, in 2009 the U.S. Environmental Protection Agency (USEPA) filed a complaint against EBMUD, Stege Sanitary District, and the Cities of Oakland, Berkeley, Alameda, Emeryville, Piedmont and Albany, prohibiting them from dumping wastewater into the Bay. A federal consent decree, a regional agreement to settle the lawsuit filed by the USEPA, was reached to significantly improve the aging sewer infrastructure and protect the San Francisco Bay from sewage spills. The 2014 settlement, called the Landmark Clean Water Agreement, is a regional agreement that gives the cities and districts until 2036 to repair and replace sewer lines, reduce the amount of I/I, and reduce discharges into the Bay during heavy storms (City of Oakland, 2014a). To meet this requirement, actions will need to be taken over time to reduce I/I, eliminating discharges from EBMUD WWF. Specifically, the agreement requires the Satellite Agencies to perform I/I reduction work, including sewer main rehabilitation and inspection at specified intervals that this work has resulted in a pre-determined level of

reduction in WWF discharges.[1] If enough I/I reductions are not achieved, additional investment into the region's wastewater infrastructure would be required, which may result in significant financial implications for East Bay residents.

The City has committed to several project deliverables under the Landmark Clean Water Agreement, many of which were already in place, and will be assessed and monitored over the 22-year period of the agreement. Some of these include rehabilitating 13 miles of sewer pipes per year, cleaning 140 miles of sewer pipes per year, inspecting 92 miles of sewer pipes per year, treating 50 miles of sewer pipes per year, and eliminating high priority storm water inflow sources within two years wherever found (City of Oakland, 2014a). These commitments will help combat the City's aging wastewater collection system, which is approximately 50 years old, with some of the existing infrastructure dating over 100 years old. Additionally, the City participates in the Regional Private Sewer Lateral Ordinance which requires property owners to validate compliance when selling, building, or remodeling properties (see below). Over time, these programs will reduce the non-wastewater components flowing into the system.

Wastewater Treatment Facilities

EBMUD provides domestic, commercial, and industrial wastewater treatment services to approximately 685,000 people in a service district known as Special District No. 1, an 83-square-mile area of Alameda and Contra Costa counties. EBMUD owns and operates a network of 15 wastewater pumping stations (with 0.5- to 54.7-mgd capacity) and 8 miles of force mains that convey wastewater to the MWTP located at 2020 Wake Avenue in Oakland. Treated water is disinfected, dechlorinated, and discharged through an outfall 1.2 miles off the East Bay Shore into the Bay. Solids are pumped to digesters for stabilization and are then dewatered and hauled offsite. Methane generated by the digesters is used to produce renewable energy.

The MWTP provides primary treatment for up to a peak flow of 320 mgd and secondary treatment for a maximum flow of 168 mgd. Storage basins provide plant capacity for a short-term hydraulic peak of 415 mgd. The average dry weather flow into the treatment plant from 2010 to 2019 was approximately 54 mgd.

EBMUD recycles water at its main wastewater treatment facility and has done so since the early 1970s. Recycled water is suitable for land uses that do not require potable water sources, such as industrial uses and certain landscaped areas. According to the UMWP, EBMUD provided approximately 8.3 mgd of recycled water to customers in 2020 and aims to meet the 2040 projected demand of 20 mgd. Incentives used by EBMUD to encourage customers to utilize recycled water include subsidized costs and reduced rates on recycled water, long-term contracts, grants, and low-interest loans used to retrofit buildings so that they can accommodate recycled water.

Stormwater

The Alameda County Flood Control & Water Conservation District was created in 1949 by the State Legislature to provide flood control and conservation services to Alameda County. The District's flood control infrastructure includes hundreds of miles of pipelines, channels, creeks,

[1] Satellite Agencies refers to the seven wastewater collection system agencies that discharge to the EBMUD wastewater interceptor system.

erosion control measures, and pump stations. The City of Oakland is located within Zone 12, which also includes the City of Emeryville, and is the largest of the Alameda County Flood Control & Water Conservation District's zones. Zone 12 has approximately 50 miles of closed conduit, approximately 12 miles of earthen and concrete channels, as well as 18 miles of existing natural waterways.

The Plan Area spans across three watersheds: Glen Echo Creek Watershed in the north, West Oakland Watershed in the western central portion of the Plan Area, and Oakland Estuary Watershed covering a majority of the central and southern portion of the Plan Area (see Figure 4.9-1 in Section 4.9, *Hydrology and Water Quality*). Most of the stormwater runoff collected within the area flows through underground pipes and culverts to creeks that eventually drain into the San Francisco Bay. Five Pump stations within Zone 12 (Lake Merritt, Ettie, McKillop, Hardy, and Temescal) lift stormwater to enable it to drain to the Bay.

The City of Oakland is responsible for the operation and maintenance of the local storm drainage system in the Plan Area. The City of Oakland's storm drainage system network is comprised of approximately 400 miles of storm drainpipes with inlets and manholes, along with pump stations, trash capture devices, weirs, and green infrastructure facilities. The City's storm drainage system also consists of over 100 miles of open creeks and 15,000 structures (including inlets, manholes, and catch basins) (BKF, 2022). These facilities are both publicly and privately owned. City-owned drainage systems are typically located within easements and rights-of-way. These piped storm drainage collection systems outfall into existing creeks (some managed by the Alameda County Flood Control and Water Conservation District), the Oakland Estuary, and/or the San Francisco Bay.

In 2019, the City of Oakland developed a "Green Stormwater Infrastructure Plan" to protect and restore watersheds within the City, work within the local Alameda County Clean Water Program, and to comply with the California Regional Water Quality Control Board's (RWQCB's) Municipal Regional Stormwater Permit (MRP) (see *Regulatory Setting* below) (City of Oakland, 2019). "Green Stormwater Infrastructure" refers to a variety of practices and engineered facilities designed to detain and clean, capture and reuse, or infiltrate stormwater runoff to reduce the volume of runoff and improve water quality. In accordance with the City's Resilient Oakland Playbook, Oakland will use green infrastructure to manage stormwater and reduce flooding risks, as well as provide urban greening benefits, such as improved air quality and reduced urban heat island effects, especially for neighborhoods that have limited access to parks and green space (City of Oakland, 2016).

In 2021, the City began developing an updated Storm Drainage Master Plan (SDMP) that will provide recommendations for the rehabilitation of the existing storm drainage system, construction of new improvements, and the maintenance and care of the City's existing drainage assets. The City intends to use this study to establish and prioritize storm drainage capital improvement projects, identify permitting requirements, and develop improved maintenance and management practices and standards that address water quality issues consistent with the MRP and other associated stormwater management guidelines and regulations (see *Regulatory Setting*

below). The SDMP aims to be a living document that is continuously updated as a vital tool for guiding investment in the City's storm drainage system.

Solid Waste

Municipal solid waste collection and disposal in Alameda County is a local government responsibility shared among fourteen cities and two sanitary districts. Non-hazardous solid waste and green waste (e.g., yard trimmings) in the City of Oakland are collected by Waste Management of Alameda County (WMAC), a subsidiary of Waste Management Incorporated (WMI), while recycling services are provided by California Waste Solutions. Alameda County currently has two operating landfills: Altamont Landfill and Vasco Road Landfill (ACWMA, 2022). Each of these is privately owned and operated.

WMAC provides waste collection services for residential, commercial, and industrial customers, as well as public facilities (parks and public buildings). These waste materials are taken to the Davis Street Resource and Recovery Complex in San Leandro for processing, and then hauled to the Altamont Landfill and Resource Facility near the City of Livermore.

The Davis Street Transfer Station is owned and operated by WMAC. Transfer operations consist of receiving, weighing, compacting, and loading waste into long-haul semi-transfer trailers for transport to the Altamont Landfill. In 2017, the transfer station output was 525,203 tons of municipal solid waste (msw). The transfer station's daily outflow of 2,020 tons per day (tpd) is well below the permitted maximum daily throughput of 5,600 tons. In 2017, the transfer station had an output of 125,963 tons of organic waste (484 tpd). In addition, the transfer station recovers clean loads of wood, dirt, and concrete. In August 2002, a materials recovery facilities (MRF) line began operation targeting recyclables-rich debris boxes and self-haul loads, including construction and demolition waste materials. In 2017, this MRF processed approximately 135, 476 tons of recyclables (521 tpd) (ACWMA, 2022).

The Altamont Landfill is in unincorporated Alameda County on a 2,034-acre site, of which 480 acres are permitted for landfill. The Facility is owned and operated by WMAC. In 2000, Waste Management received a permit to expand the Altamont Landfill and a new landfill cell was opened in March 2019 providing additional disposal capacity. Daily disposal at Altamont Landfill is limited to a maximum of 11,150 tpd, but actual input averaged approximately 3,013 tpd. As of 2018, the estimated remaining refuse capacity for the Altamont Landfill was 65.4 million cubic yards (60 million tons). The permitted capacity at Altamont Landfill is 87 million cubic yards. At the average rate of fill from 2014 – 2018 and adjusting for projections for waste declines through 2023 (held after 2023 due to uncertainty), the facility has capacity remaining and an estimated closure date of 2049 (ACWMA, 2022).

In 2020, the City of Oakland disposed of approximately 277,117 tons (3.50 pounds per day per person, 7.70 pounds per day per employee) of solid waste at various disposal facilities, which is well within the recommended daily per-capita targets of 5.80 pounds per day per person, 15.30 pounds per day per employee, established by the California Department of Resources Recycling and Recovery (CalRecycle, 2020).

4.17.2 Regulatory Setting

4.17.2.1 Federal

Clean Water Act

The Clean Water Act established the basic structure for regulating discharges of pollutants into the waters of the U.S. and gave the USEPA the authority to implement pollution control programs, such as setting wastewater standards for industry. The Clean Water Act sets water quality standards for all contaminants in surface waters. The statute employs a variety of regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. The Army Corps of Engineers has jurisdiction over all waters of the U.S. including, but not limited to, perennial and intermittent streams, lakes, and ponds, as well as wetlands in marshes, wet meadows, and side hill seeps. Under Section 401 of the Clean Water Act, every applicant for a federal permit or license for any activity which may result in a discharge to a water body must obtain State Water Quality Certification that the proposed activity will comply with State water quality standards.

National Pollutant Discharge Elimination System

The National Pollution Discharge Elimination System (NPDES) is a nationwide program for permitting surface water discharges, including from municipal and industrial point sources. In California, NPDES permitting authority is delegated to and administered by the nine regional water quality control boards (RWQCB). The San Francisco Bay RWQCB has set standard conditions for each permittee in the Bay Area, including effluent limitation and monitoring programs.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), Subtitle D, contained in Title 42 of the U.S. Code Section 6901 et seq. contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design, groundwater monitoring, and closure of landfills. The USEPA waste management regulations are codified in Title 40 of the Code of Federal Regulations (CFR) parts 239–282. The RCRA Subtitle D is implemented by Title 27 of the PRC, approved by the USEPA.

4.17.2.2 State

Urban Water Management Planning Act

California Water Code Section 10610 et seq. requires all public water systems that provide water for municipal purposes to more than 3,000 customers, or that supply more than 3,000 acre-feet per year (AFY), to prepare an Urban Water Management Plan. Urban Water Management Plans are key water supply planning documents for municipalities and water purveyors in California, and often form the basis of Water Supply Assessments (WSAs) (refer to the following discussion of Senate Bill [SB] 610 and SB 221) prepared for individual projects. Urban Water Management Plans must be updated at least every 5 years on or before July 1, in years ending in 5 and 0.

EBMUD adopted its 2020 Urban Water Management Plan (UWMP) and an associated Water Shortage Contingency Plan in June 2021 (EBMUD, 2021).

Senate Bill X7-7 (Water Conservation Act of 2009)

The Water Conservation Act of 2009 (Senate Bill X7-7) was enacted in November 2009 and requires that all water suppliers increase their water use efficiency. Water Code Section 10608 et seq. required urban retail water suppliers to set and achieve water use targets that would help the State achieve a 20 percent per capita reduction in urban water use by December 31, 2020. SB X7-7 requires each urban retail water supplier to develop urban water use targets and an interim urban water use target, in accordance with specified requirements. The bill is intended to promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in California Water Code Section 10631 as part of Urban Water Management Plans.

Senate Bills 610 and 221

The purpose and legislative intent of SB 610 and SB 221, enacted in 2001, is to preclude the approval of certain development projects without specific evaluations performed and documented by the local water provider that indicate that water is available to serve the project. SB 610 requires the local water provider for a large-scale development project to prepare a WSA.[2] The WSA evaluates the water supply available for new development based on anticipated demand. The WSA must be included in the environmental document. The lead agency may evaluate the information presented in the WSA, and then must determine whether the projected water supplies would be sufficient to satisfy the project's demands in addition to existing and planned future uses.

SB 221 requires the local water provider to provide "written verification" of "sufficient water supplies" to serve subdivisions involving more than 500 residential units per Government Code Section 66473.7. Sufficiency is different under SB 221 than under SB 610. Under SB 221, sufficiency is determined by considering:

- The availability of water over the past 20 years;
- The applicability of any urban-water shortage contingency analysis prepared in compliance with Water Code Section 10632;
- The reduction in water supply allocated to a specific use by an adopted ordinance; and
- The amount of water that can be reasonably relied upon from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer.

[2] All projects that meet any of the following criteria require a WSA: (1) A proposed residential development of more than 500 dwelling units; (2) a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space; (3) a proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space; (4) a proposed hotel or motel, or both, having more than 500 rooms; (5) a proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area; (6) a mixed-use project that includes one or more of the projects specified in SB 610; or (7) a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project.

As a result of the information contained in the written verification, as part of the tentative map approval process, a city or county may attach conditions to ensure that an adequate water supply is available to serve the proposed project. Typically, following project certification, an additional water supply verification must be completed at the tentative map stage, prior to adoption of the final map, for certain tentative maps. In most cases, a WSA prepared under SB 610 would meet the requirement for proof of water supply under SB 221.

Assembly Bill 325

Assembly Bill (AB) 325, the Water Conservation in Landscaping Act of 1990, directs local governments to require the use of low-flow plumbing fixtures and the installation of drought-tolerant landscaping in all new development. Pursuant to the Water Conservation in Landscaping Act, the California Department of Water Resources developed a Model Water Efficient Landscape Ordinance.

California Health and Safety Code Section 116555

Under California Health and Safety Code Section 116555, a public water system must provide a reliable and adequate supply of pure, wholesome, healthful, and potable water.

Senate Bill 7 (2016)

In September 2016, Governor Jerry Brown signed into law SB 7, which requires new multi-family residential rental buildings in California constructed after January 1, 2018, to include a sub-meter for each dwelling unit and to bill tenants in apartment buildings accordingly for their water use to encourage water conservation.

Executive Orders B-29-15 and B-37-16

In April 2015, Governor Brown issued Executive Order B-29-15, which called for mandatory water use reductions. The executive order required cuts for public landscaping and institutions that typically use large amounts of water (e.g., golf courses), banned new landscape irrigation installation, and required municipal agencies to implement conservation pricing, subsidize water-saving technologies, and implement other measures to reduce the State's overall urban water use by 25 percent. The order also required local water agencies and large agricultural users to report their water use more frequently.

In May 2016, Governor Brown issued Executive Order B-37-16, which made the mandatory water use reduction of 25 percent permanent and directed the California Department of Water Resources and State Water Resources Control Board (SWRCB) to strategize further water reduction targets. The order also made permanent the requirement that local agencies report their water use monthly. Additionally, certain wasteful practices such as sidewalk hosing and runoff-causing landscape irrigation were permanently outlawed, while local agencies must prepare plans to handle droughts lasting 5 years.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act (Division 7 of the California Water Code) provides the basis for water quality regulation in California. The Porter-Cologne Act defines water quality objectives as the

limits or levels of water constituents that are established for reasonable protection of beneficial uses of surface, ground, and saline waters of the State. The SWRCB administers water rights, water pollution control, and water quality functions throughout California, while the San Francisco Bay RWQCB conducts regional planning, permitting, and enforcement activities. For additional requirements, refer to Section 4.9, *Hydrology and Water Quality*.

Water Quality Order No. 2004-12-DWQ

In July 2004, the SWRCB adopted Water Quality Order No. 2004-12-DWQ (General Order) which incorporates the minimum standards established by the Part 503 Rule and expands upon them to fulfill obligations to the California Water Code. However, since California does not have delegated authority to implement the Part 503 Rule, the General Order does not replace the Part 503 Rule. The General Order also does not preempt or supersede the authority of local agencies to prohibit, restrict, or control the use of biosolids subject to their jurisdiction, as allowed by law.

Executive Order N-7-22

On March 28, 2022, Governor Gavin Newsom issued Executive Order (EO) N-7-22 in response to intensifying drought conditions. Among other requirements, EO N-7-22 limits a county, city or other public agency's ability to permit modified or new groundwater wells and instructs the SWRCB to consider (1) requiring certain water conservation measures from urban water suppliers and (2) banning non-functional or decorative grass at businesses and institutions.

California Green Building Standards Code

Water and Wastewater

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code is intended to encourage more sustainable and environmentally friendly building practices, conserve natural resources, and promote the use of energy-efficient materials and equipment. Since 2011, the CALGreen Code has been mandatory for all new residential and non-residential buildings constructed in the State. Mandatory measures related to water conservation include water-conserving plumbing fixture and appliance requirements, including flow rate maximums, compliance with State and local water-efficient landscape standards for outdoor potable water use in landscape areas, and recycled water systems, where available. The CALGreen Code was most recently updated in 2019 to include new mandatory measures for residential and non-residential uses; the 2019 amendments to the CALGreen Code became effective January 1, 2020. Updates include more stringent requirements for residential metering faucets, and a requirement that all residential and non-residential developments adhere to a local water efficient landscape ordinance or to the State of California's Model Water Efficient Landscape Ordinance, whichever is more stringent.

Solid Waste

As amended, the CALGreen Code (California Code of Regulations Title 24, Part 11) requires that readily accessible areas be provided for recycling by occupants of residential. The CALGreen Code also requires that residential building projects recycle and/or salvage for reuse a minimum of 65 percent of their non-hazardous construction and demolition waste or comply with a local construction and demolition waste management ordinance, whichever is more stringent (Section

5.408.1). The 2016 version of the code increased the minimum diversion requirement for non-hazardous construction and demolition waste to 65 percent from 50 percent (in the 2013 and earlier versions) in response to AB 341, which declared the policy goal of the State that not less than 75 percent of solid waste generated would be source reduced, recycled, or composted by 2020.

Assembly Bill 939 (California Integrated Waste Management Act)

AB 939, enacted in 1989 and known as the California Integrated Waste Management Act (Public Resources Code Section 40050 et seq.), requires each city and county in the State to prepare a Source Reduction and Recycling Element to demonstrate a reduction in the amount of waste being disposed to landfills. The act required each local agency to divert at least 50 percent of all solid waste (from 1990 levels), beginning January 1, 2000, and at least 75 percent by 2010. Diversion includes waste prevention, reuse, and recycling. In 2006, SB 1016 revised the reporting requirements of AB 939 by implementing a per capita disposal rate based on a jurisdiction's population (or employment) and its disposal. The new per capita disposal and goal measurement system moves the emphasis from an estimated diversion measurement number to an actual disposal measurement number, along with an evaluation of program implementation efforts.

The Integrated Waste Management Act requires local agencies to maximize the use of all feasible source reduction, recycling, and composting options before using transformation (incineration of solid waste to produce heat or electricity) or land disposal. The act also resulted in the creation of the State agency now known as the California Department of Resources Recycling and Recovery (CalRecycle). Under the Integrated Waste Management Act, local governments develop and implement integrated waste management programs consisting of several types of plans and policies, including local construction and demolition ordinances. The act also set in place a comprehensive statewide system of permitting, inspections, and maintenance for solid waste facilities, and authorized local jurisdictions to impose fees based on the types and amounts of waste generated.

In 2011, AB 341 amended AB 939 to declare the policy goal of the State that no less than 75 percent of solid waste generated would be source reduced, recycled, or composted by the year 2020, and annually thereafter.

Assembly Bill 341 and 1826

AB 341, signed into law in 2012, requires multi-family residential dwellings, businesses and schools to recycle. AB 1826 (2014) furthered diversion and recycling requirements by requiring that businesses and multi-family dwellings with more than five units also divert organic material. AB 1826 does not require multi-family dwellings to divert compostable food waste.

Senate Bill 1383

SB 1383 established targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. SB 1383 granted CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets. It also established a target of recovering no less than 20 percent of currently disposed edible food for human consumption by 2025.

4.17.2.3 Regional

Alameda County Clean Water Program

The Alameda Countywide Clean Water Program consists of 17 member agencies, including the City of Oakland and the Alameda County Flood and Water Conservation District, that work together to protect creeks, wetlands, and the San Francisco Bay. The member agencies have developed performance standards to clarify the requirements of the stormwater pollution prevention program, adopted stormwater management ordinances, conducted extensive education and training programs, and reduced stormwater pollutants from industrial areas and construction sites. The Alameda Countywide Clean Water Program is part of the *California Regional Water Quality Control Board, San Francisco Bay Region, Municipal Regional Stormwater NPDES Permit. Order No. R2-2022-0018 NPDES Permit No. CAS612008* (MRP) that was adopted by the RWQCB on May 11, 2022. The MRP is designed to enable the Alameda County Clean Water Program agencies to meet federal Clean Water Act requirements.

MRP Provision C.3

The City of Oakland is covered by the MRP, which requires new development and redevelopment projects to incorporate site design, source control, and Low Impact Development (LID)–based stormwater treatment controls to reduce the pollutant load in post-construction stormwater discharges and manage runoff flows. LID–based treatment controls are intended to maintain or restore the site's natural hydrologic functions, maximizing opportunities for infiltration and evapotranspiration, and for using stormwater as a resource (e.g., rainwater harvesting for non-potable uses). The MRP also requires that stormwater treatment measures be properly installed, operated, and maintained.

Regional Private Sewer Lateral Ordinance

In 2009, the USEPA and the RWQCB ordered the EBMUD, six East Bay cities, and one sewer district to fix old, cracked sanitary sewer pipes. Many of these pipes needed repair to prevent infiltration of rainwater, which can overwhelm wastewater pipes and treatment facilities and cause partially treated wastewater to be released into the Bay. EBMUD and its partners have been required to have a Regional Private Sewer Lateral Ordinance beginning in 2011 in order to meet the requirements of the MRP and federal consent decree (EBMUD, 2011). The Regional Private Sewer Lateral Ordinance requires private lateral sewer owners to comply with the replacement and testing requirements to eliminate I/I from older sewer laterals. For new or redevelopment, the ordinance requires the installation and testing of sewer laterals to document that no stormwater is entering the wastewater flows through I/I.

EBMUD Urban Water Management Plan

As described above, EBMUD is required by the California Water Code to update and adopt an Urban Water Management Plan and submit a completed plan to the Department of Water Resources every five years. The UWMP provides an assessment of EBMUD's water supply and demand, an overview of the recycled water and conservation programs, compliance with the Water Conservation Act of 2009, and EBMUD's Water Shortage Contingency Plan. The UWMP is part of the EBMUD's long-term planning to ensure water supply reliability for EBMUD

customers, especially during drought periods. The EBMUD Board of Directors adopted the final UWMP and Water Shortage Contingency on June 22, 2021.

4.17.2.4 Local Plans, Ordinances and Policies

Zero Waste Strategic Plan

In March 2006, the City of Oakland adopted a zero-waste goal by 2020 and passed a resolution adopting the Zero Waste Strategic Plan in December 2006. The main strategies outlined in the plan include (1) expand and improve local and regional recycling and composting; (2) develop and adopt new rules and incentives to reduce waste disposal; (3) preserve land for sustainable development and green industry infrastructure; (4) advocate for manufacturer responsibility for produce waste, ban problem materials; and (5) educate, promote, and advocate a zero waste sustainability agenda (City of Oakland, 2006).

Construction and Demolition Debris Waste Reduction and Recycling Requirements

The City of Oakland's construction and demolition debris waste reduction and recycling requirements (Municipal Code Chapter 15.34) are intended to further the goals of AB 939. They require a project applicant to prepare and submit a Construction and Demolition Debris Waste Reduction and Recycling Plan to divert at least 50 percent of all construction and demolition debris generated by project construction from landfill disposal. The Construction and Demolition Debris Waste Reduction and Recycling Plan is required to document the ways in which the applicant will reduce the quantity of construction and demolition debris disposed of at landfills by 50 percent or more. The City will not approve a building permit for a project until the plan is approved.

City of Oakland General Plan

The City of Oakland General Plan serves as the guiding document for the City's planning and future development. It includes goals, policies, and implementation measures that reflect the community priorities, values, and vision. The Land Use and Transportation Element (LUTE) and the OSCAR Element of the General Plan includes the following policies related to utilities and service systems.

The following objectives and policies within the Neighborhoods section of the LUTE apply citywide and are relevant to the Proposed Project (City of Oakland, 1998):

> ***Policy N12.4: Undergrounding Utility Lines.*** Electrical, telephone, and related distribution lines should be underground in commercial and residential areas, except where special local conditions such as limited visibility of the poles and wires make this unneeded. They should also be underground in appropriate institutional, industrial, and other areas, and generally along freeways, scenic routes, and heavily traveled streets. Programs should lead systematically toward the eventual undergrounding of all existing lines in such places. Where significant utility extensions are taking place in these areas, such as in new subdivisions, utilities should be installed underground at the start.
>
> ***Policy N12.5: Reducing Capital Improvement Disparities.*** In its capital improvement and public service programs, the City should give priority to reducing deficiencies in, and disparities between, existing residential areas.

The following objectives and policies within the OSCAR apply citywide and are relevant to the Proposed Project (City of Oakland, 1996):

> ***Policy CO-4.1: Water Conservation.*** Emphasize water conservation and recycling strategies in efforts to meet future demand.
>
> ***Policy CO-4.2: Drought-Tolerant Landscaping.*** Require use of drought-tolerant plants to the greatest extent possible and encourage the use of irrigation systems which minimize water consumption.
>
> ***Policy CO-4.3: Use of Reclaimed Water.*** Promote the use of reclaimed wastewater for irrigating landscape medians, cemeteries, parks, golf courses, and other areas requiring large volumes of non-potable water.
>
> ***Policy CO-13.1: Reliable Energy Network.*** Promote a reliable local energy network which meets future needs and long-term economic development objectives at the lowest practical cost.
>
> ***Policy CO-13.3: Construction Methods and Materials.*** Encourage the use of energy-efficient construction and building materials. Encourage site plans for new development which maximize energy efficiency.
>
> ***Policy CO-13.4: Alternative Energy Sources.*** Accommodate the development and use of alternative energy resources, including solar energy and technologies which convert waste or industrial byproducts to energy, provided that such activities are compatible with surrounding land uses and regional air and water quality requirements.

4.17.2.5 City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to reducing impacts related to utilities and service systems are listed below. All SCAs would be adopted as enforceable conditions of approval and required, as applicable, to be implemented during construction and operation of future development under the Proposed Project to help ensure less-than-significant impacts related to utilities and service systems. The SCAs are incorporated and required as part of the Proposed Project, so they are not listed as mitigation measures.

- **SCA 82: Construction and Demolition Waste Reduction and Recycling**

  Requirement: The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/ alterations/modifications with construction values of $50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.

- **SCA 83: Underground Utilities**

  Requirement: The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.

- **SCA 84: Recycling Collection and Storage Space**

  Requirement: The project applicant shall comply with the City of Oakland Recycling Space Allocation Ordinance (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall contain recycling collection and storage areas in compliance with the Ordinance. For residential projects, at least two (2) cubic feet of storage and collection space per residential unit is required, with a minimum of ten (10) cubic feet. For nonresidential projects, at least two (2) cubic feet of storage and collection space per 1,000 square feet of building floor area is required, with a minimum of ten (10) cubic feet.

- **SCA 85. Green Building Requirements**

  a) Compliance with Green Building Requirements During Plan-Check

  Requirement: The project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (chapter 18.02 of the Oakland Municipal Code).

  i. The following information shall be submitted to the City for review and approval with the application for a building permit:

     - Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards.
     - Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit.
     - Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit.
     - Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (ii) below.
     - Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance.
     - Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit.
     - Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

ii. The set of plans in subsection (i) shall demonstrate compliance with the following:

- CALGreen mandatory measures.
- [INSERT: Green building point level/certification requirement: (See Green Building Summary Table; for New Construction of Residential or Non-residential projects that remove a Historic Resource (as defined by the Green Building Ordinance) the point level certification requirement is 53 points for residential and LEED Gold for non-residential)] per the appropriate checklist approved during the Planning entitlement process.
- All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Bureau of Planning that shows the previously approved points that will be eliminated or substituted.
- The required green building point minimums in the appropriate credit categories.

b) Compliance with Green Building Requirements During Plan-Check

Requirement: The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project.

i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit.

ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance.

iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

c) Compliance with Green Building Requirements During Plan-Check

Requirement: Prior to the finalizing the Building Permit, the Green Building Certifier shall submit the appropriate documentation to City staff and attain the minimum required point level.

- **SCA 86. Green Building Requirements – Small Projects**

a) Compliance with Green Building Requirements During Plan-Check

The project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (Chapter 18.02 of the Oakland Municipal Code) for projects using the [INSERT: StopWaste.Org Small Commercial Checklist or Bay Friendly Basic Landscape Checklist].

i. The following information shall be submitted to the City for review and approval with the application for a building permit:

- Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards.
- Completed copy of the green building checklist approved during the review of a Planning and Zoning permit.

- Permit plans that show in general notes, detailed design drawings and specifications as necessary compliance with the items listed in subsection (b) below.
- Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance.
- Other documentation to prove compliance.

ii. The set of plans in subsection (a) shall demonstrate compliance with the following:

- CALGreen mandatory measures.
- All applicable green building measures identified on the checklist approved during the review of a Planning and Zoning permit, or submittal of a Request.

b) Compliance with Green Building Requirements During Plan-Check

Requirement: The project applicant shall comply with the applicable requirements of CALGreen and the Green Building Ordinance during construction.

The following information shall be submitted to the City for review and approval.

i. Completed copy of the green building checklists approved during review of the Planning and Zoning permit and during the review of the Building permit.

ii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

- **SCA 87: Sanitary Sewer System**

  Requirement: The project applicant shall prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City of Oakland Sanitary Sewer Design Guidelines. The Impact Analysis shall include an estimate of pre-project and post-project wastewater flow from the project site. In the event that the Impact Analysis indicates that the net increase in project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer system, the project applicant shall pay the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding improvements to the sanitary sewer system.

- **SCA 88: Storm Drain System**

  Requirement: The project storm drainage system shall be designed in accordance with the City of Oakland's Storm Drainage Design Guidelines. To the maximum extent practicable, peak stormwater runoff from the project site shall be reduced by at least 25 percent compared to the pre-project condition.

- **SCA 89: Recycled Water**

  Requirement: Pursuant to Section 16.08.030 of the Oakland Municipal Code, the project applicant shall provide for the use of recycled water in the project for feasible recycled water uses unless the City determines that there is a higher and better use for the recycled water, the use of recycled water is not economically justified for the project, or the use of recycled water is not financially or technically feasible for the project. Feasible recycled water uses may include, but are not limited to, landscape irrigation, commercial and industrial process use, and toilet and urinal flushing in non-residential buildings. The project applicant shall contact

the New Business Office of the East Bay Municipal Utility District (EBMUD) for a recycled water feasibility assessment by the Office of Water Recycling. If recycled water is to be provided in the project, the project drawings submitted for construction-related permits shall include the proposed recycled water system and the project applicant shall install the recycled water system during construction.

- **SCA 90: Water Efficient Landscape Ordinance (WELO)**

  Requirement: The project applicant shall comply with California's Water Efficient Landscape Ordinance (WELO) in order to reduce landscape water usage. For the specific ordinance requirements, see the link below: http://www.water.ca.gov/wateruseefficiency/landscape ordinance/docs/Title%2023%20extract%2 0-%20Official%20CCR%20pages.pdf.

  For any landscape project with an aggregate (total noncontiguous) landscape area equal to 2,500 sq. ft. or less, the project applicant may implement either the Prescriptive Measures or the Performance Measures, of, and in accordance with the California's Model Water Efficient Landscape Ordinance. For any landscape project with an aggregate (total noncontiguous) landscape area over 2,500 sq. ft., the project applicant shall implement the Performance Measures in accordance with the WELO.

  Prescriptive Measures: Prior to construction, the project applicant shall submit the Project Information (detailed below) and documentation showing compliance with Appendix D of California's Model Water Efficient Landscape Ordinance (see page 38.14(g) in the link above).

  Performance Measures: Prior to construction, the project applicant shall prepare and submit a Landscape Documentation Package for review and approval, which includes the following:

  a. Project Information:
     i. Date,
     ii. Applicant and property owner name,
     iii. Property address,
     iv. Total landscape area,
     v. Project type (new, rehabilitated, cemetery, or homeowner installed),
     vi. Water supply type and water purveyor,
     vii. Checklist of documents in the package, and
     viii. Project contacts
     ix. Applicant signature and date with the statement: "I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package."

  b. Water Efficient Landscape Worksheet
     i. Hydrozone Information Table
     ii. Water Budget Calculations with Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use
     iii. Soil Management report
     iv. Landscape Design Plan
     v. Irrigation Design Plan, and

vi. Grading Plan

Upon installation of the landscaping and irrigation systems, and prior to the final of a construction-related permit, the Project applicant shall submit a Certificate of Completion (see page 38.6 in the link above) and landscape and irrigation maintenance schedule for review and approval by the City. The Certificate of Completion shall also be submitted to the local water purveyor and property owner or his or her designee.

4.17.3 Environmental Analysis

4.17.3.1 Significance Criteria

The City of Oakland has established thresholds of significance for CEQA impacts, which incorporate those in Appendix G of *the CEQA Guidelines* (City of Oakland, 2020). Adoption of the Proposed Project would have a significant adverse impact related to utilities and service systems if it would:

1. Exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board.
2. Require or result in construction of new storm water drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects.
3. Exceed water supplies available to serve the project from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects.
4. Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments and require or result in construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects.
5. Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects.
6. Violate applicable federal, State, and local statutes and regulations related to solid waste.

The changes to Appendix G of the State *CEQA Guidelines* effective in December 2018 were intended to reflect recent changes to the CEQA statute and court decisions. Many of these recent changes and decisions are already reflected in the City's adopted significance thresholds, which have been used to determine the significance of potential impacts. The topics or questions in Appendix G are reflected in the City's current thresholds even though there are differences in the text between them. Additionally, the City's thresholds related to utilities and service systems contain topics related to energy. The discussion of impacts related to energy is contained in Section 4.5, *Energy*, of this Draft EIR.

Specifically for water supply, the following water supply analysis is done in accordance with standards set forth in the Supreme Court of California *Vineyards* case,[3] including those stated in revised Appendix G of the *CEQA Guidelines*, to address whether the water supplier (EBMUD) has sufficient water supplies "reasonably likely" to be available to serve the Proposed Project and reasonably foreseeable development during normal, dry and multiple dry years. In addition, the analysis addresses the reliability of identified water sources which is analyzed in the 2020 UWMP. To the extent that the topics or questions in Appendix G are not reflected in the City's thresholds, these topics and questions are considered in the impact analysis below.

4.17.3.2 Approach to Analysis / Methodology

This is a program-level Draft EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Impacts relative to Utilities and Service Systems are evaluated using the criteria listed above and based on information included in the City of Oakland General Plan, Map Atlas, and the documents listed in Section 4.14.7, *References – Utilities and Service Systems*.

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future development under the Proposed Project, this Draft EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas and analyzes the impacts of housing development through the projection period ending in 2030.

4.17.3.3 Proposed 2045 General Plan Policies, Land Use and Zoning

The following policies and actions pertaining to utilities and service systems are proposed as a part of the Safety Element Update in the Proposed Project.

Policies:

SAF-1.2: Structural Hazards. Continue, enhance or develop regulations and programs designed to minimize seismically related structural hazards from new and existing buildings.

SAF-1.4: Seismic Hazard Coordination. Work with other public agencies to reduce potential damage from earthquakes to "lifeline" utility, economic, and transportation systems, including Caltrans; BART; PG&E, EBMUD, and other utilities providers; the Port of Oakland, and others.

SAF-2.8: Water Infrastructure. In partnership with EBMUD, plan for the ongoing maintenance and long-term integrity of planned and existing water supply infrastructure, including peak load water supply.

SAF-3.5: Green Stormwater Infrastructure. Fund and implement a green infrastructure program for the installation and maintenance of projects and existing civic resources such

[3] *Vineyard Area Citizens for Responsible Growth v. Rancho Cordova* (2007) 40 Cal.4th 412.

as the parks system and public spaces, to improve stormwater management, support biodiversity, reduce air pollution exposure, improve water quality, and increase access to natural spaces, including trees. Prioritize investment in frontline communities, particularly in residential neighborhoods dominated by concrete and asphalt with limited green space and elevated air pollution, in Priority Conservation Areas, and in areas where green infrastructure, including trees and other types of vegetated buffers, can effectively ad-dress stormwater management issues and reduce air pollution exposure among sensitive populations.

Actions:

SAF-A.6: Continue implementation of the Mandatory Soft Story Retrofit Program and explore expansion of the retrofit program to include buildings with non-ductile concrete construction. Invest in and seek grant funding to support the seismic retrofit of structures within the city, prioritizing socially vulnerable neighborhoods shown in Figure SAF-1. Within these areas, prioritize low-income homeowners and landlords that provide affordable housing.

SAF-A.16: Continue to repair, maintain, and make structural improvements to storm drains to enable them to perform to their design capacity in handling water flows.

SAF-A.32: As part of the LUTE update, project future emergency service needs for planned land uses and evaluate capital improvement and staffing plans accordingly.

The following policy and actions pertaining to utilities and service systems are proposed as a part of the Environmental Justice Element in the Proposed Project:

EJ-1.11: Building Electrification. Continue to enforce compliance with the Building Electrification Ordinance, which re-quires new buildings to be natural gas-free and support the transition of existing buildings to natural gas alternatives in order to improve safety and air quality and reduce health risks. This could include:

- Ensuring that all new developments reduce on-site natural gas combustion through electrification of heating and cooking technologies.

EJ-A.15: In partnership with school districts, community college networks, local vocational programs, labor unions in the recycling and waste diversion sector, and unhoused residents who depend on recycling for their survival, co-create a community reuse and repair program to increase waste diversion, reduce material consumption, and create green jobs. As part of creating this program, the City will also explore creating or designating live/work or other spaces dedicated to material repair and upcycling, and selling of repaired and upcycled goods. Target this program for residents of neighborhoods with the highest unemployment rates.

4.17.3.4 Topics Considered and Determined to Have No Impact

All utilities and service systems topics are analyzed below.

4.17.4 Impacts of the Project

Impact UTL-1: Adoption of the Proposed Project would not exceed the capacity of the existing wastewater conveyance or treatment system and could result in exceedance of EBMUD's wastewater discharge limitations. (Criteria 1 and 4) (*Less than Significant*)

Wastewater Treatment Capacity

The *Buildout Program* includes up to 41,458 housing units accommodating growth of up to approximately 39,377 households and 100,411 residents.[4] This population increase in the Plan Area would result in an increase in wastewater. According to the Public Infrastructure and Services analysis prepared for the Proposed Project by BKF Engineers, the *Buildout Program* would generate approximately 6.7 mgd of wastewater.[5]

As mentioned in Section 4.17.1, *Environmental Setting,* the current wastewater peak flow capacity from the MWTP is 320 mgd and secondary treatment for a maximum flow of 168 mgd. The average dry weather flow into the treatment plant from 2010 to 2019 was approximately 54 mgd and EBMUD's forecast for 2030 is 56 mgd. Thus, in 2030 there is an estimated 264 mgd remaining capacity at the MWTP. The 6.7 mgd generated by future development under the Proposed Project would represent a small incremental impact on available wastewater capacity.

As described above, wet weather flows are a concern. EBMUD has historically operated three WWF to manage peak wet weather flows that exceed the treatment capacity of EBMUD's MWTP. However, the Satellite Agencies are prohibited from causing or contributing to WWF discharges, RWQCB issued an order prohibiting further discharges from EBMUD's WWFs, and EBMUD can no longer rely on this system to manage peak wet weather flows. On July 22, 2009, a Stipulated Order for Preliminary Relief issued by EPA, SWRCB, and RWQCB became effective. This order requires EBMUD to perform work that will identify problem I/I areas, begin to reduce I/I through private sewer lateral improvements, and lay the groundwork for future efforts to eliminate discharges from the WWFs.

Development under the Proposed Project would be required to comply with the CALGreen Code (and SCA 85 or 86, Green Building Requirements/Green Building Requirements – Small Projects), which requires new construction to use high-efficiency plumbing fixtures, such as high-efficiency toilets, urinals, showerheads, and faucet fixtures. Implementation of water conservation and efficiency measures would reduce the wastewater generated. Additionally, SCA 87, Sanitary Sewer System, requires submission of a Sanitary Sewer Impact Analysis in accordance with the City of Oakland Sanitary Sewer Guidelines, which could result in payment of the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding improvements to the sanitary sewer system. Future development under the Proposed Project would be required to comply with EBMUD's Regional Private Sewer Lateral Ordinance including replacement and

[4] The estimated number of households assumes an average 0.5 percent vacancy rate, based on the City's projections.

[5] City of Oakland's "Sanitary Sewer Design Standards" dated 2018 established design flow rates based on basin area acreage. As the Plan Area acreage remains the same, the wastewater analysis is based on a conservative average of the water consumption rates identified for 1- and 2- bedroom apartment/condo. Projected wastewater generation was calculated using City of Oakland sanitary sewer generation rates of 170 gallons per day (gpd) per dwelling unit. The 39,377 households times 170 gpd would thus generate approximately 6,694,090 gpd or 6.7 mgd.

testing requirements to eliminate I/I from older sewer laterals and installation and testing of sewer laterals to document that no stormwater is entering the wastewater flows through I/I. Over time, these programs will reduce the non-wastewater components flowing into the system.

Although development under the Proposed Project would increase the amount of wastewater generated within the Plan Area, development would also contribute to efforts to reduce the non-wastewater components flowing into the system. Since the amount of wastewater generated by future development under the Proposed Project would be within the existing capacity of EBMUD's MWTP, allowing EBMUD to meet the RWQCB standards, the Proposed Project would not require or result in the construction of new wastewater treatment facilities or expansion of existing treatment facilities and implementation of the Proposed Project would not result in wastewater treatment capacity issues. Therefore, this impact would be less than significant.

Wastewater Conveyance

Adoption of the Proposed Project would occur within urbanized portions of the City and would connect to existing City sanitary sewer infrastructure. Prior to the approval of any construction-related permits, subsequent projects would be required to prepare and submit a Sanitary Sewer Impact Analysis in accordance with the City of Oakland Sanitary Sewer Design Guidelines and SCA 87, Sanitary Sewer System. If the Sanitary Sewer Impact Analysis indicates that the net increase in project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer system, the project applicant would be required to pay the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding improvements to the sanitary sewer system. Construction because of any necessary sanitary sewer system capacity improvements would be temporary and within existing rights of way, and no unusual significant environmental impact would be anticipated due to construction activity.

Mitigation: None required.

Summary

With adherence to SCA 85, 86, and 87, as well as other regulatory compliance, future development under the Proposed Project would result in a less than significant impact related to wastewater.

Impact UTL-2: Adoption of the Proposed Project would not require or result in construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Criterion 2) (*Less than Significant*)

The Plan Area is a highly urban and developed environment, with a large portion of impervious surface area. Given the developed condition of most of the City, future development is not expected to increase either the amount of impervious surface area or the volume of stormwater runoff. However, development under the Proposed Project would facilitate construction that could alter the composition and amount of impervious space.

In 2019, the City adopted the "Green Stormwater Infrastructure Plan" that outlines strategies, guidelines and requirements associated with implementing green infrastructure facilities into both

private and public projects (City of Oakland, 2019). Per the guidelines and requirements, new development within the City must add pervious area in both the public and private realm through the introduction of additional landscaping, open space, or permeable paving.

In 2021, the City began developing an updated Storm Drainage Master Plan that will provide recommendations for the rehabilitation of the existing storm drainage system, construction of new improvements, and the maintenance and care of the City's existing drainage assets. The City intends to use this study to establish and prioritize storm drainage capital improvement projects, identify permitting requirements, and develop improved maintenance and management practices and standards that address water quality issues consistent with the MRP and other associated stormwater management guidelines and regulations.

Future development would be required to implement storm water treatment as required by the Provision C.3 of the MRP and the Alameda Countywide Clean Water Program. These requirements include post-construction stormwater controls or LID regulations for incorporating storm water quality measures, and requirements related to stormwater runoff volumes and the quality and treatment of stormwater runoff entering existing storm drain infrastructure and downstream receiving water bodies.

Future development under the Proposed Project would be required by the City to evaluate the onsite and offsite condition and capacity of the existing stormwater collection system and implement necessary improvements, with improvement costs borne by the project applicants. Future projects that require new storm drain to be implemented would be required to conform to SCA 88, Storm Drain System, which requires project storm drainage systems to be designed in compliance with the City of Oakland Storm Drainage Design Guidelines (City of Oakland, 2014b). As explained in Section 4.9, *Hydrology and Water Quality,* project applicants would be subject to SCA 49, Erosion and Sedimentation Control Measures for Construction, requiring the submission of an Erosion and Sedimentation Control Plan that would prevent excessive erosion and stormwater runoff of solid materials as a result of construction activities, as well as SCA 54 and 55, NPDES C.3 Stormwater Requirements for Regulated Projects/Small Projects, requiring the applicant to comply with the requirements of Provision C.3 of the MRP issued under the NPDES. Additionally, construction of any necessary on- and offsite stormwater drainage infrastructure would be temporary and within existing rights of way, and no unusual significant environmental impact would be anticipated due to construction activity.

Summary

With adherence to SCAs 49, 54, 55, and 88, as well as other regulatory compliance, future development under the Proposed Project would result in a less than significant impact related to the relocation or construction of new or expanded storm water drainage facilities.

Impact UTL-3: Adoption of the Proposed Project would not exceed water supplies available to serve projected demand in addition to the provider's existing commitments from existing entitlements and resources and require or result in construction of water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Criterion 3) (*Less than Significant*)

Adoption of the *Buildout Program* would result in an increased demand for potable water. The scope of EBMUD's 2020 UWMP and 2020 Water Shortage Contingency Plan includes the Plan Area (EBMUD, 2021a and 2021b). According to the Utilities Analysis prepared for the Proposed Project by BKF Engineers, EBMUD's 2050 Demand Study identifies existing 2018 water demand within Oakland (North Oakland Hills, North Oakland, Oakland South, and South Oakland Hills) at approximately 38.8 mgd (BKF, 2022). By 2050, EBMUD forecasts that 63.6 mgd will be needed to support these same areas if recycled water and water conservation are not included, and 56.4 mgd when including recycled water and water conservation.

Considering residential uses, the 2050 Demand Study forecasts an increase in approximately 6,000 single-family residences (SFR) and approximately 120,000 multifamily residences (MFR) by 2050. Using a linear calculation over 32 years would yield approximately 188 SFR and 3,158 MFR per year. By 2030, this would equate to approximately 2,260 SFR and 37,900 MFR. EBMUD's forecast of approximately 40,160 housing units is in line with the *Buildout Program's* estimated 41,458 housing units.

To meet the demand, EBMUD strategies include using recycled water and implementing additional water conservation efforts. EBMUD's 2-19 Updated Recycled Water Master Plan (RWMP) guides future projects and priorities with a goal of serving 20 mgd of recycled water by 2040. As part of this effort, EBMUD has completed work in Oakland associated with the East Bayshore Recycled Water Project Phase 1A (0.15 mgd) and is looking to expand both the Phase 1A and Phase 2 by an additional 0.3 mgd in 2030. Additionally, EBMUD's Water Conservation program uses multiple strategies to achieve sustained water savings across customer categories. Some of these strategies include information technology, education and outreach, and using rebates and incentives.

As required by the Urban Water Management Planning Act – Section 10635, a water supply reliability assessment must compare future water demands and verifiable water supplies under multiple hydrologic conditions as both supply and demand can vary seasonally. As part of the UWMP, EBMUD modeled its system demands from 2020 to 2050. The Supply and Demand Assessment indicates that in 2030, during both the Base Condition and the Extreme Drought Scenario, no additional water was needed. Only during the High Demand Scenario was there a need for additional water (BKF, 2022; EBMUD, 2021a). As mentioned in Section 4.17.1, *Environmental Setting*, EBMUD holds a water service contract with the USBR to receive water from the CVP through the Freeport Regional Water Project in years when EBMUD's water supplies are relatively low.

Future development under the Proposed Project would be required to comply with SCA 85 and 86, Green Building Requirements/Green Building Requirements – Small Projects, which requires compliance with the CALGreen Code. As such, new construction would use high-efficiency

plumbing fixtures, such as high-efficiency toilets, urinals, showerheads, and faucet fixtures. For outdoor water use, the CALGreen Code requires that irrigation controllers be weather- or soil moisture–based and automatically account for rainfall or be attached to a rainfall sensor. Additionally, future projects would be required to comply with SCA 89, Recycled Water, requiring the project applicant provide for the use of recycled water in the project for feasible recycled water uses unless the City determines otherwise. Furthermore, SCA 90, Water Efficient Land Scape Ordinance (WELO), requires project applicants to comply with the State ordinance in order to reduce landscape water usage. Implementation of water conservation and efficiency measures would minimize the potable water demand generated. In addition, SB 221 applies to proposed residential developments of over 500 dwelling units and requires that the water supplier provide a written verification that the water supply for the project is sufficient, prior to issuance of the final permits.

Overall, EBMUD Supply and Demand Assessment and UWMP determine that the EBMUD water system has sufficient existing water supply to fully support projected growth through 2030 under normal, single dry, or multiple dry water years. Because the *Buildout Program* is consistent with UWMP projected growth and future development under the Proposed Project would minimize its water demand through conservation and efficiency measures, the impact related to water supply would be less than significant.

Water Distribution

Adoption of the Proposed Project would occur within urbanized portions of the City and would connect to existing EBMUD water infrastructure. Due to the proximity of exiting water infrastructure, construction of water system improvements would likely consist of upgrades to and minor extensions of water infrastructure to serve the sites and would not involve extensive extensions into unserved areas or extensive construction. Construction would be temporary and within existing right of way, and no unusual significant environmental impact would be anticipated due to construction activity.

Overall, the potential improvements or extension of water infrastructure to serve future development under the Proposed Project would be installed primarily in existing roadways and utility rights-of-way. Aside from short-term construction disturbance, no unusual or further environmental impacts would be generated beyond those identified elsewhere in this Draft EIR for overall construction activity. As such, adoption of the Proposed Project would not require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects. The impact would be less than significant.

Mitigation: None required.

Summary

With adherence to SCAs 85, 86, 89, and 90, as well as other regulatory compliance, future development under the Proposed Project would result in a less than significant impact related to water supply and water facilities.

Impact UTL-4: Adoption of the Proposed Project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. (Criterion 5) (*Less than Significant*)

Construction Impacts

As described in Section 4.17.3, *Regulatory Setting*, the City of Oakland requires development projects to achieve at least 65 percent diversion under the CALGreen Code and create and maintain a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) consistent with City SCA 82. The diversion requirements may be met through direct facility recycling, reuse of the materials on site, or donation to reuse and salvage businesses. The remaining residue from the materials that could not be recovered would be landfilled. The Altamont Landfill serves the City and accepts mixed construction and demolition waste. As described above The Altamont Landfill has an estimated 65.4 million cubic yards of remaining capacity (60 million tons) and an estimated closure date of 2049 (ACWMA, 2022). Construction of development projects under the Proposed Project is not expected to generate substantial amounts of solid waste relative to the remaining capacity of the Altamont landfill. Therefore, construction associated with development under the Proposed Project would not generate solid waste in excess of local infrastructure and would not impair the attainment of State-level or local waste reduction goals. This impact would be less than significant.

Operational Impacts

The *Buildout Program* includes up to 41,458 housing units accommodating growth of up to approximately 39,377 households and 100,411 residents which would generate solid waste.[6] Using the estimated number of residents and the average disposal rate for the City in 2020, new residential uses could generate up to approximately 175.7 tons of waste per day (64,120.5 tons per year).[7] The Altamont Landfill daily disposal is limited to a maximum of 11,150 tpd, and actual input averaged approximately 3,013 tpd. As described above, the Altamont Landfill has an estimated 65.4 million cubic yards of remaining capacity (60 million tons) and an estimated closure date of 2049 (ACWMA, 2022). The daily solid waste estimates associated with the *Buildout Program* would account for less than 1.6 percent of the permitted daily capacity and less than 2.2 percent of the unutilized daily disposal limit of the Altamont Landfill. As such, adoption of the Proposed Project would not generate substantial amounts of solid waste during operation relative to the capacity of local infrastructure.

Future development under the Proposed Project would be required to comply with existing solid waste reduction requirements, including applicable federal, State and local solid waste statutes and regulations during operation. Compliance with existing policies and regulations, including the CALGreen building and State recycling and organic material diversion requirements (reinforced through SCA 85 or 86), would reduce the non-renewable sources of solid waste, and minimize the solid waste disposal demand of the Proposed Project. Additionally, SCA 84 reinforces the City of Oakland Recycling Space Allocation Ordinance. Therefore, future development under the Proposed Project would not generate solid waste in excess of the local

6 The estimated number of households assumes an average 0.5 percent vacancy rate, based on the City's projections.

7 Solid waste generation = 100,411 residents x 3.50 pounds per day per person = 351,439 pounds per day (175.7 tons per day)

infrastructure and would not impair the attainment of State-level or local waste reduction goals. This impact would be less than significant.

Mitigation: None required.

Summary

With adherence to SCAs 82, 84, 85, and 86 as well as other regulatory compliance, future development under the Proposed Project would result in a less than significant impact related to solid waste generation.

Impact UTL-5: Adoption of the Proposed Project would comply with federal, State, and local management and reduction statutes and regulations related to solid waste. (Criterion 6) (*Less than Significant*)

Future development projects would be required to comply with federal, State, and local solid waste standards identified in Section 4.17.3, *Regulatory Setting*, such as the California Integrated Waste Management Act, AB 939, the CALGreen Code, AB 341 and AB 1826, and SB 1383. As previously discussed, future development would be required to comply with SCA 82, Construction and Demolition Waste Reduction and Recycling; SCA 84, Recycling Collection and Storage Space; and SCA 85 and 86, Green Building Requirements/Green Building Requirements – Small Projects. As a result, adoption of the Proposed Project would not conflict with applicable waste reduction policies and the impact regarding compliance with solid waste regulations would be less than significant.

Mitigation: None required.

Summary

With adherence to SCAs 82, 84, 85, and 86, as well as other regulatory compliance, future development under the Proposed Project would result in a less than significant impact related to federal, State, and local waste management and reduction statutes.

4.17.5 Cumulative Impacts

This section presents an analysis of the cumulative effects of future development under the Proposed Project in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to utilities and service systems could occur if the incremental impacts of future development under the Proposed Project combined with the incremental impacts of cumulative development would be significant and if the Proposed Project's contribution would be considerable.

Impact UTL-6: Adoption of the Proposed Project, when combined with other past, present, or reasonably foreseeable projects, would not contribute considerably to cumulative impacts on water supplies; the wastewater systems or stormwater conveyance capacity; or generation of solid waste. (*Less than Significant*)

Geographic Context

The geographic scope for cumulative effects on utilities and service systems is the service area for utility providers.

Cumulative Impacts

Wastewater generated by future development could combine with wastewater from cumulative development within the EBMUD service area. However, as discussed for Impact UTL-1, the MWTP has an estimated remaining capacity of 264 mgd (approximately 80 percent) in 2030. The *Buildout Program* would generate approximately 6.7 mgd of wastewater, representing a small incremental impact on available wastewater capacity of approximately 2.5 percent. Additionally, there are multiple programs in place to reduce the non-wastewater components flowing into the system and reduce peak wet weather flows that apply to the entire EMBUD service area in the City.

Regarding stormwater drainage, future development under the Proposed Project would combine with cumulative development to generate stormwater runoff. Future development under the Proposed Project and cumulative development would be required to be designed in accordance with the City of Oakland's Storm Drainage Design Guidelines, and to the maximum extent practicable, reduce peak stormwater runoff by at least 25 percent compared with pre-project conditions. Additionally, while it is noted that the City's stormwater collection system is aging and will require improvements to continue to serve the Plan Area, in 2021, the City began developing an updated Storm Drainage Master Plan that will provide recommendations for the rehabilitation of the existing storm drainage system, construction of new improvements, and the maintenance and care of the City's existing drainage assets. The City intends to use this study to establish and prioritize storm drainage capital improvement projects, identify permitting requirements, and develop improved maintenance and management practices and standards that address water quality issues consistent with the MRP and other associated stormwater management guidelines and regulations.

As noted under Impact UTL-3, as part of the UWMP, EBMUD modeled its supply demands from 2020 to 2050 and found that in 2030, during both the Base Condition and Extreme Drought Scenario, no additional water was needed. The Supply and Demand Assessment found that only the High Demand Scenario required a need for additional water (EBMUD, 2021a). However, as mentioned in Section 4.17.1, *Environmental Setting*, EBMUD holds a water service contract with the USBR to receive water from the CVP through the Freeport Regional Water Project in years when EBMUD's water supplies are relatively low. The contract enables EBMUD to receive CVP deliveries during dry and critically dry periods and will help the City manage water supply shortfalls during dry years. Additionally, to meet the demand, EBMUD strategies include using recycled water and implementing additional water conservation efforts.

Cumulative development within the City would be subject to applicable development and utilities fees that would be collected by the City as well as construction of system improvements to

address the new utility system demand. The potential improvement or extension of utility infrastructure to serve cumulative development would be installed primarily in existing roadways and utility rights-of-way. Aside from short-term construction disturbance, no unusual or further environmental impacts would be generated beyond those identified elsewhere in this Draft EIR for overall construction activity associated with future development under the Proposed Project. Change proposed to utilities infrastructure as part of future developments under the Proposed Project and/or cumulative development would be subject to review and permitting requirements, and applicable SCAs.

Regarding solid waste, as discussed above, as of 2018, the Altamont Landfill had an estimated remaining refuse capacity of 65.4 million cubic yards (60 million tons) while the permitted capacity at Altamont Landfill is 87 million cubic yards. The facility has capacity remaining and an estimated closure date of 2049 and the capacity to accommodate future development under the Proposed Project and cumulative development.

As with projects developed under the Proposed Project, cumulative development projects would be required to comply with federal, State, and local regulations including the CALGreen Code, which includes water conservation and efficiency requirements as well as solid waste standards; and Provision C.3 of the MRP, which includes measures for stormwater treatment in new development and redevelopment projects to address stormwater runoff pollutant discharges. Cumulative projects within the City would be required to comply with SCAs including SCA 49, Erosion and Sedimentation Control Measures for Construction; SCA 54 and 55, NPDES C.3 Stormwater Requirements for Regulated Projects/Small Projects; SCA 82, Construction and Demolition Waste Reduction and Recycling; SCA 83, Underground Utilities; SCA 84, Recycling Collection and Storage Space; SCA 85, Green Building Requirements; SCA 86, Green Building Requirements – Small Projects; SCA 87, Sanitary Sewer System; SCA 88, Storm Drain System; 89, Recycled Water; SCA 90, and Water Efficient Landscape Ordinance (WELO). When considered in the cumulative context, the Proposed Project's less-than-significant impacts related to utilities and services systems would not be cumulatively considerable. Cumulative impacts would, therefore, be less than significant

Mitigation: None required.

Summary

With adherence to the aforementioned SCAs as well as other regulatory compliance, future development under the Proposed Project, combined with cumulative development, would result in a less than significant impact related to utilities and service systems.

4.17.6 References – Utilities and Service Systems

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4.18 Wildfire

This section describes conditions and potential environmental effects of the Proposed Project pertaining to wildfire. The section discusses relevant existing environmental conditions of the Plan Area and regulations pertinent to this section, in addition to any applicable existing General Plan policies not addressed by the Proposed Project. The section then analyzes potential impacts to the physical environment that could result from implementation of the Proposed Project and its associated development. Applicable City policies and Standard Conditions of Approval (SCAs) that would reduce potential impacts to this environmental topic are identified; both existing and proposed updated/new General Plan policies and SCAs are considered. This section incorporates relevant information from the General Plan Update Map Atlas (see Appendix A) prepared in support of the Proposed Project. No scoping comments related to wildfire were received in response to the NOP (Notice of Preparation) of this Draft EIR.

4.18.1 Environmental Setting

4.18.1.1 Environmental Setting

A wildfire is any uncontrolled fire on undeveloped land that requires fire suppression. Fire behavior is primarily dependent upon fuels (e.g., vegetation), weather (e.g., wind, temperature, and humidity), and topography (e.g., slope, elevation, and aspect). The combination of these three factors, which are described in more detail below, can help or hinder the spread of a wildfire if one occurs.

Vegetation/Fuels

Fuel is the material that feeds a fire and is a key factor in wildfire behavior. Fuel sources are diverse and include dead tree leaves, twigs, branches, and standing trees; live trees; brush; and dry grasses. Additional fuel sources can include humanmade structures such as homes, buildings, and other associated combustible materials. Natural fuel types in the vicinity of the Plan Area are primarily made up of extensive grassland, oak woodland, and coastal scrub (see Section 4.3, *Biological Resources)*.

Topography

Topography describes the shape of the land and can include descriptions of elevation (height above sea level), slope (the steepness of the land), aspect (the direction a slope faces), and features such as canyons and valleys. Topography can strongly influence fire behavior, including how fast a fire moves through an area: fire typically moves more quickly as it travels uphill compared to either downhill or across flat terrain. As heat rises in front of the fire, it preheats and dries upslope fuels, resulting in their rapid combustion (Bennett, 2017).

Weather/Climate

Weather conditions such as wind, temperature, and humidity also contribute to fire behavior. Fuels located in hotter and drier temperatures are more susceptible to ignition and catch fire more readily than fuels located in moister and/or cooler temperature conditions. Climate change has

been a key factor in increasing the risk and severity of wildfires as weather conditions become hotter and drier (see Section 4.7, *Greenhouse Gas Emissions*).

In Oakland, summers are long, comfortable, arid, and mostly clear while the winters are short, cold, wet, and partly cloudy. Typically, over the course of the year, the temperature varies from 44 degrees Fahrenheit to 75 degrees Fahrenheit. The average hourly wind speed within Oakland ranges from 7.0 miles per hour to 9.4 miles per hour (Weather Spark, 2022).

Impacts of Wildfire on Air Quality

As wildfires burn fuel, large amounts of carbon dioxide, particulate matter, and ozone precursors are released into the atmosphere. Additionally, wildfires emit a substantial amount of volatile and semi-volatile organic materials and nitrogen oxides that form ozone and organic particulate matter. These emissions can lead to harmful exposures for first responders, nearby residents, and even populations in regions farther from the wildfires (NOAA, 2021). Exposure to these pollutants can cause asthma attacks, coughing, and shortness of breath. Chronic exposure to these pollutants can increase the risk of developing chronic health conditions such as heart disease, diabetes, and cancer (Hamers, 2018; Milman, 2018). These pollutants are described in more detail in Section 4.2, *Air Quality*.

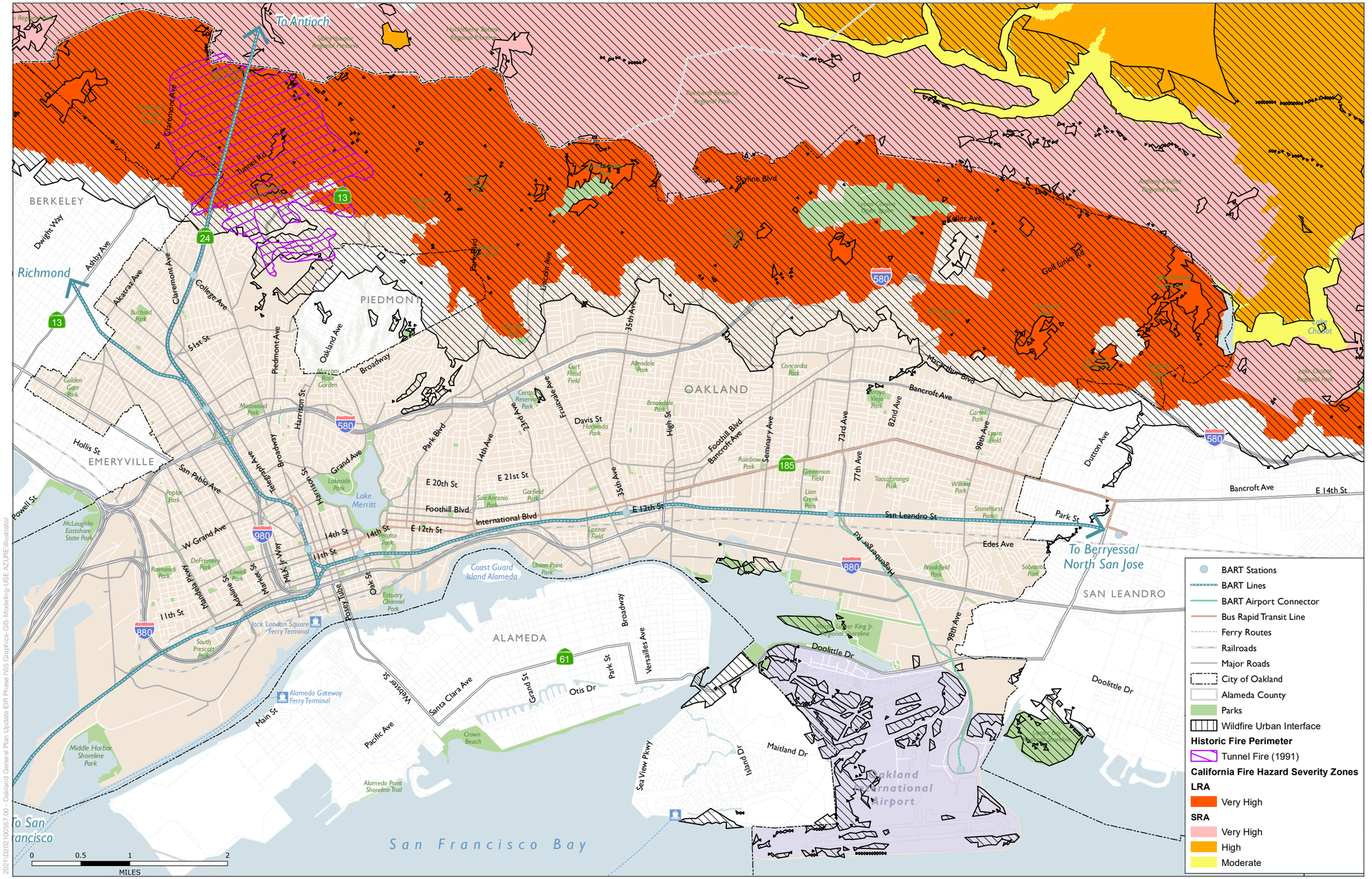
4.18.1.2 Regional/Local Conditions

Fire Protection Responsibility and Fire Hazard Severity Zones

The Oakland Fire Department (OFD) provides fire prevention and fire suppression services throughout the City and has primary legal and financial responsibility for fire protection within the City limits. The entire City of Oakland is within what is known as a Local Responsibility Area (LRA); this is in contrast to State Responsibility Areas (SRAs) where the State of California, through the California Department of Forestry and Fire Protection (CAL FIRE), has the primary legal and financial responsibility for the prevention and suppression of wildland fires.

CAL FIRE maps fire hazards within SRAs using Fire Hazard Severity Zones (FHSZs). FHSZs in SRAs may be Moderate, High, or Very High. CAL FIRE also makes recommendations on Very High FHSZs (VHFHSZs) within LRAs and has done so for the City of Oakland. **Figure 4.18-1** shows the areas of LRA, SRA, and the various mapped FHSZs in and adjacent to the City.

The City of Oakland is divided into flatlands and hills, and to the east of the hill areas is open space and forested area that is outside of City limits, and therefore within SRA. As shown in Figure 4.18-1, the eastern portion of the City in the Oakland Hills is an LRA designated as a VHFHSZ and is adjacent to SRAs also designated as VHFHSZ. This designation is based on the fuel load, weather, and terrain factors that influence fire likelihood and fire behavior on a recurring regular basis. Of note, CAL FIRE does not make recommendations for High or Moderate FHSZs in LRAs; therefore, the abrupt border of the VHFHSZ within Oakland should not be interpreted to mean that fire hazard is not present outside of that mapped zone.



SOURCE: Dyett & Bhatia, 2022

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Figure 4.18-1
Fire Threat and Historic Fire Boundaries

ESA

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Much of the fire hazard that the City faces is due to the proximity of dense residential communities and urban areas to areas with high fire risk due to steep slopes, vegetation that can act as fuel for fires, and seasonal winds that can spread fire. The wildland-urban interface (WUI) is a zone where structures and other human development meets or intermingles with undeveloped wildlands. As shown in Figure 4.18-1, the Oakland Hills are largely defined as part of the WUI. The mapped WUI includes the areas mapped as VHFHSZ and includes additional land area further west in the more developed areas of the City.

CAL FIRE last updated its FHSZ maps for SRA in Alameda County in 2022. This most recent FHSZ mapping is based on fuel loading, slope, fire weather, and other relevant factors present, including areas where winds have been identified by the department as a major cause of wildfire spread. These FHSZs classify a wildland zone as Moderate, High, or Very High fire hazard based on the average hazard across the area included in the zone (CAL FIRE 2022).

Tree mortality increases the level of dead wood that can act as fuel and increases the level of fire hazard for adjacent communities. As shown on **Figure 4.18-2**, tree die-back in non-urbanized areas managed by the East Bay Regional Park District (e.g., Reinhardt, Anthony Chabot) puts adjacent areas of Oakland at risk for wildfire impacts, including secondary impacts of air and water pollution, erosion, and landslides.

Section 4.13, *Public Services*, provides additional details regarding fire protection services. The OFD currently maintains 25 fire stations with six divisions throughout the City. The OFD, as the local responsible agency, would have primary responsibility for responding to fires in the Plan Area and surrounding area.

Wildfire History

Wildfire in the urban interface is an ongoing concern in Oakland and throughout the Bay Area. Larger fires in this ecosystem should be anticipated every 10-20 years (City of Oakland, 2017). While many of these fires are small and can be controlled, the proximity of dense residential communities to areas that are fire prone increases the hazard of wildfire in Oakland. In the past 70 years, the vicinity of the Plan Area has experienced two major (over 10 acres) wildfires; the 1991 Tunnel Fire, which burned 1,600 acres and is shown on Figure 4.18-1, and the 1998 Sibley #2 fire, which burned 200 acres and was located to the east of the areas shown in Figure 4.18-1, outside of the City limits (ABAG, 2022). The Tunnel Fire resulted in 25 deaths, 150 injuries, and the loss of almost 3,500 dwelling units (Parker, 1992). These fires also threatened infrastructure, air quality, water quality, and natural environments.

Evacuation Routes

Hazard areas, their overlap with residential development, and current evacuation routes are shown in **Figure 4.18-3**. City infrastructure surveys have shown that many streets in VHFHSZs are not built to current Municipal Code Standards and have narrow streets with dead ends that only allow for one route of escape. Many streets in the Oakland Hills are in steep areas without off-street parking; therefore, residents park on the street, making the streets even narrower and less accessible for emergency responders. Considering these factors, conditions related to emergency

response and evacuation are currently not adequate to serve the population living in the VHFHSZ (City of Oakland Planning Commission, 2021).

4.18.2 Regulatory Setting

4.18.2.1 Federal

There are no federal regulations pertaining to wildfire that are applicable to the Proposed Project.

4.18.2.2 State

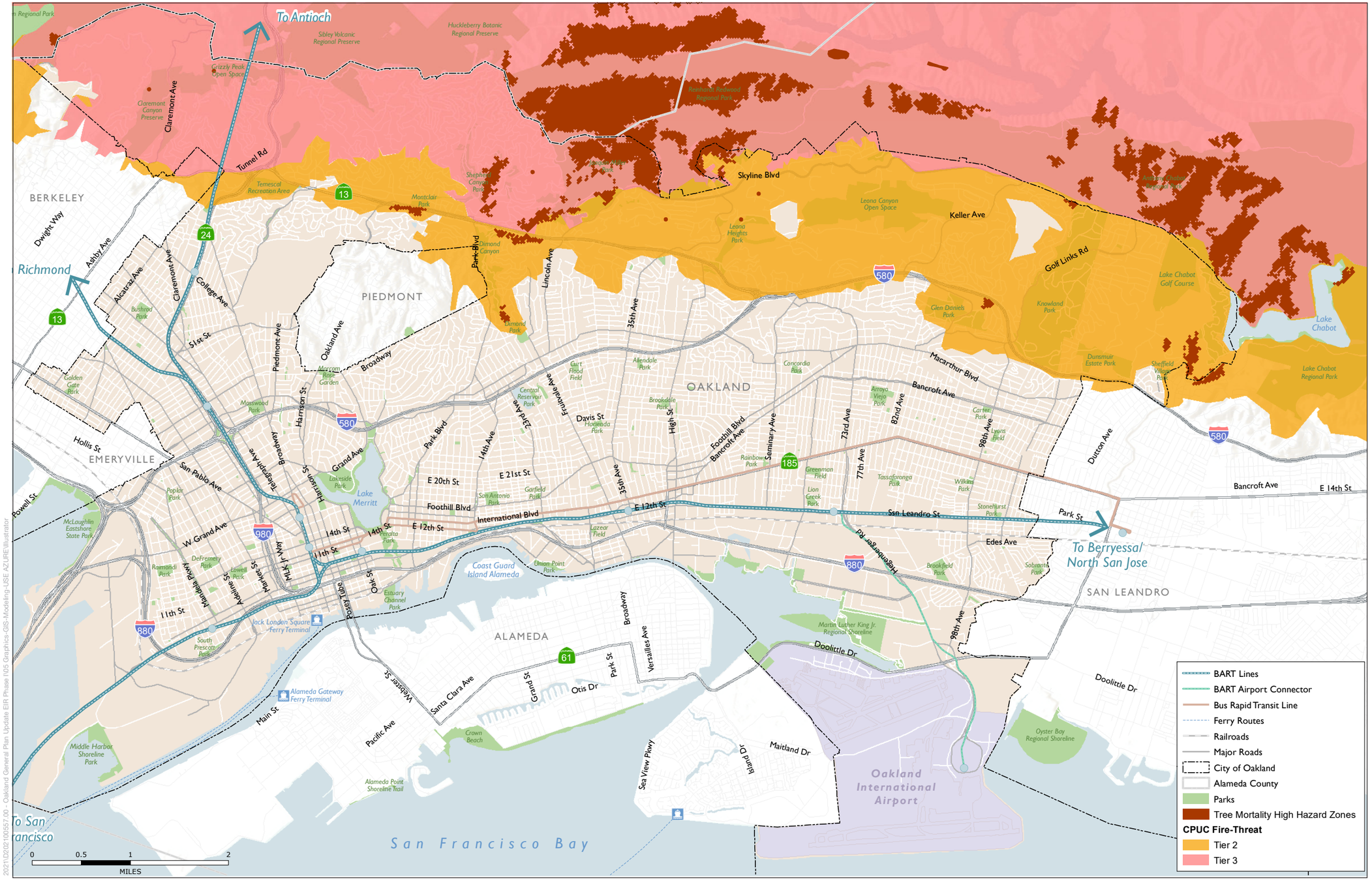
2019 Strategic Fire Plan for California

Developed by the California Board of Forestry and Fire Protection, the California Strategic Fire Plan (2019 Plan) outlines goals and objectives to implement CAL FIRE's overall policy direction and vision. The 2019 Plan demonstrates CAL FIRE's focus on: (1) improving their core capabilities; (2) enhancing their internal operations; (3) ensuring health and safety; and (4) building an engaged, motivated and innovative workforce. CAL FIRE provides direction for fire prevention and enforcement within the SRA using fire resource assessments, a variety of available data, mapping, and other tools. Pre-fire management activities, including prescribed burning, fuel breaks, forest health treatments, and removal of hazardous vegetation, are conducted at the unit level under the guidance of CAL FIRE program managers. Through the 2019 Strategic Plan, CAL FIRE also delivers Land Use Planning and Defensible Space Inspection programs to the local level across the State (CAL FIRE, 2019).

The 2019 Plan outlines 21 Operational Units. The Plan Area is located within the Santa Clara Unit and would follow goals and objectives outlined within the Santa Clara Unit 2022 Strategic Fire Plan, which was completed by a collaborative effort with various stakeholders. The Unit's Fire Plan is updated each year with addendums that reflect the unit's progress on meeting statewide and unit priority goals and objectives as identified in the 2019 Plan. The Unit's Fire plan is divided into battalions (geographical boundaries), where fuel, weather, topography, and fire history specific to each area are identified. The Plan Area is located within the jurisdictional area of Battalion 4, which covers Alameda County from Oakland to Tracy (CAL FIRE and Santa Clara Unit, 2022).

California Department of Forestry and Fire Protection

Title 14 of the California Code of Regulations (CCR), Division 1.5, establishes regulations for CAL FIRE in SRAs where CAL FIRE is responsible for wildfire protection. These regulations constitute the basic wildland fire protection standards of the California Board of Forestry and Fire Protection and have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction, and development in SRAs. Additionally, Title 14, Division 1.5, Chapter 7, Subchapter 2 sets forth the minimum standards for emergency access and egress (Article 2), signage (Article 3), water supply (Article 4), and fuel modification standards (Article 5) for lands within SRAs.



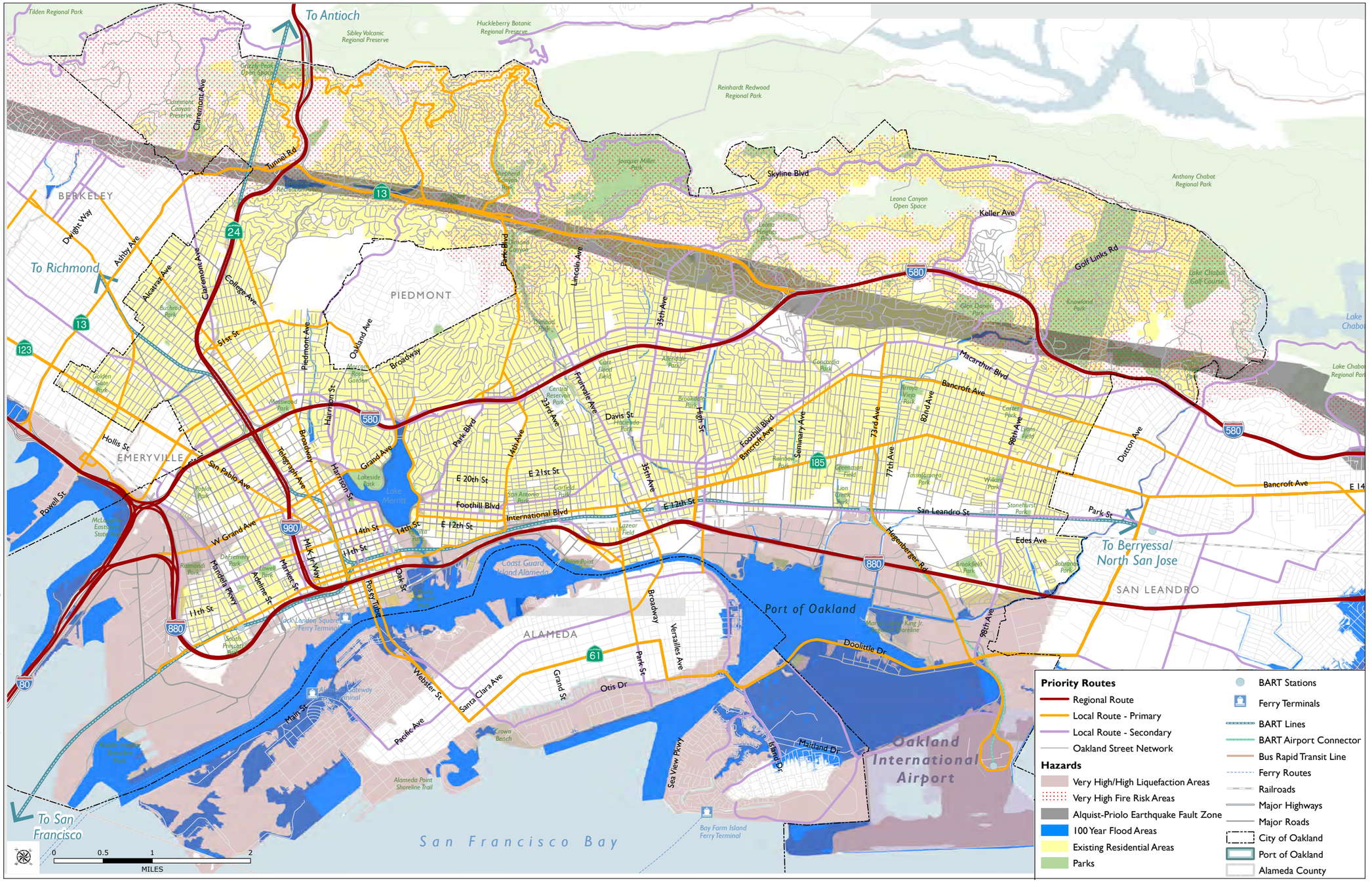
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SOURCE: Dyett & Bhatia, 2022

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Figure 4.18-2
Collaborative Fire Threat Management

ESA



SOURCE: Dyett & Bhatia, 2022

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Figure 4.18-3
Areas for Evacuation Analysis-Hazard Areas and Residential Zones

ESA

While the eastern portion of the City is an LRA, areas adjacent are within an SRA. For LRA lands where the OFD is the fire protection service provider (i.e., all lands within the City's corporate boundaries), OFD has its own requirements for fire protection, as described later in this section (see Figure 4.18-1).

Emergency Services Act

Under the Emergency Services Act, Government Code Section 8550, et seq., the State developed an emergency response plan to coordinate emergency services provided by federal, State, and local agencies. Rapid response to incidents involving wildfire and other natural and/or human-caused incidents is an important part of the plan, which is administered by the Governor's Office of Emergency Services (OES). The office coordinates the responses of other agencies, including the California Environmental Protection Agency (CalEPA), the California Highway Patrol (CHP), regional water quality control boards, air quality management districts, and county disaster response offices.

California Public Resources Code

Fire Hazards Severity Zones – Public Resources Code Sections 4201-4204

California Public Resources Code Sections 4201 through 4204 require CAL FIRE to prepare fire hazard severity zone maps for all lands within SRAs, and to make recommendations for such zones in LRAs. Each zone is to embrace relatively homogeneous lands and is to be based on fuel loading, slope, fire weather, and other relevant factors present, including areas where winds have been identified as a major cause of wildfire spread. CAL FIRE adopted a Fire Hazard Severity Zone map for the City of Oakland in 2008 showing areas along the eastern portion of the City designated as VHFHSZ (CAL FIRE, 2008) (see Figure 4.18-1).

California Building Code

In 2008, California adopted the International Building Code, which specifies construction standards to be used in WUI areas where there is an elevated threat of fire.

Assembly Bills 747 and 1409

Assembly Bill (AB) 747 (2019) requires safety elements to be reviewed and updated as necessary to identify evacuation routes and their capacity, safety, and viability under a range of emergency scenarios. The law authorizes a city or county that has adopted a local hazard mitigation plan, emergency operations plan, or other document that fulfills commensurate goals and objectives to use that information in the safety element to comply with this requirement by summarizing and incorporating by reference that other plan or document in the safety element. AB 1409 (2021) revised the law to add the requirement to identify evacuation locations and their capacity, safety, and viability under a range of emergency scenarios, in addition to evacuation routes.

Senate Bill 1241

Senate Bill (SB) 1241 (2012) requires cities and counties to address fire risk in SRA and VHFHSZs in the safety element of their general plans upon the next revision of the housing element.

SB 99

SB 99 (2019) requires a city or county, upon the next revision of the housing element on or after January 1, 2020, to review and update the safety element to include information identifying residential developments in hazard areas that do not have at least two emergency evacuation routes.

4.18.2.3 Local Plans, Ordinances and Policies

City of Oakland General Plan

The current Safety Element of the Oakland General Plan describes various existing policies and actions regarding fire hazards, adopted for the purpose of protecting the community from risk associated with emergency management and response, and that apply to the Proposed Project. The updated policies are provided below in Section 4.18.3, *Proposed 2045 General Plan Policies, Land Use and Zoning.*

Oakland Municipal Code

Chapter 15.12 of the City's Code of Ordinances contains the City's Fire Code (Title 15, Buildings and Construction; Chapter 15.12, Oakland Fire Code). The ordinance contains specific requirements for construction standards, mitigation requirements, vegetation management, landscaping, and other requirements in high fire hazard areas. All building projects located within high fire hazard areas of the City are required to comply with the ordinance's standards as a condition of permit issuance.

Oakland Emergency Operations Plan

The City of Oakland has an Emergency Operations Plan that would be implemented in the event of a disaster or emergency (City of Oakland, 2021a). The plan describes fundamental systems, strategies, policies, assumptions, responsibilities, and operational priorities that the City will follow to guide and support emergency management efforts, and describes discipline-specific emergency goals, objectives, capabilities, and responsibilities. The Wildfire Annex (City of Oakland, 2021b) describes the unique conditions, situation, and response and recovery actions that City departments will undertake during a wildland fire incident.

4.18.2.4 City of Oakland Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to reducing impacts related to wildfire are listed below. All SCAs would be adopted as enforceable conditions of approval and required, as applicable, to be implemented during construction and operation of future development under the Proposed Project to help ensure less-than-significant impacts related to wildfire. The SCAs are incorporated and required as part of the Proposed Project, so they are not listed as mitigation measures.

- **SCA 46: Fire Safety Phasing Plan**

  Applicability: All projects to be constructed in phases and the furthest structure is over 150 feet from the nearest fire hydrant.

  Requirement: The project applicant shall submit a Fire Safety Phasing Plan for City review and approval and shall implement the approved Plan. The Fire Safety Phasing Plan shall

include all the fire safety features and emergency vehicle access incorporated into each phase of the project and the schedule for implementation of the features.

- **SCA 47: Designated Very High Fire Severity Zone – Vegetation Management**

  Applicability: All projects involving construction of new facilities (e.g., new primary dwellings, new commercial buildings) located in the designated Very High FHSZ.

  a. Vegetation Management Plan Required

  Requirement: The project applicant shall submit a Vegetation Management Plan for City review and approval, and shall implement the approved Plan prior to, during, and after construction of the project. The Vegetation Management Plan may be combined with the Landscape Plan otherwise required by the Conditions of Approval. The Vegetation Management Plan shall include, at a minimum, the following measures:

  i. Removal of all tree branches and vegetation that overhang the horizontal building roof line and chimney areas within 10 feet vertically;

  ii. Removal of leaves and needles from roofs and rain gutters;

  iii. Planting and placement of fire-resistant plants around the house and phasing out flammable vegetation, however, ornamental vegetation shall not be planted within 5 feet of the foundation of the residential structure;

  iv. Trimming back vegetation around windows; Removal of flammable vegetation on hillside slopes greater than 20%; Defensible space requirements shall clear all hillsides of non-ornamental vegetation within 30 feet of the residential structure on slopes of 5% or less, within 50 feet on slopes on 5 to 20% and within 100 feet or to the property line on slopes greater than 20%.

  v. All trees shall be pruned up at least ¼ the height of the tree from the ground at the base of the trunk;

  vi. Clearing out ground-level brush and debris; and all non-ornamental plants, seasonal weeds, and grasses, brush, leaf litter and debris within 30 feet of the residential, structure shall be cut, raked, and removed from the parcel.

  vii. Stacking woodpiles away from structures at least 20 feet from residential structures.

  viii. If a biological report, prepared by a qualified biologist and reviewed by the Bureau of Planning, identifies threatened or endangered species on the parcel, the Vegetation Management Plan shall include islands of habitat refuge for the species noted on a site plan and appropriate fencing for the species shall be installed. Clearing of vegetation within these islands of refuge shall occur solely for the purpose of fire suppression within a designated Very High Fire Severity Zone and only upon the Fire Code Official approving specific methods and timeframes for clearing that take into account the specific flora and fauna species.

  b. Fire Safety Prior to Construction

  Requirement: The project plans shall specify that prior to construction, the project applicant shall ensure that the project contractor cuts, rakes and removes all combustible ground level vegetation project to a height of 6” or less from the construction, access and staging areas to reduce the threat of fire ignition per Sections 304.1.1 and 304.1.2 of the California Fire Code.

c. Fire Safety During Construction

Requirement: The project applicant shall require the construction contractor to implement spark arrestors on all construction vehicles and equipment to minimize accidental ignition of dry construction debris and surrounding dry vegetation. Per section 906 of the California Fire Code, during construction, the contractor shall have at minimum three (3) type 2A10BC fire extinguishers present on the job site, with current SFM service tags attached and these extinguishers shall be deployed in the immediate presence of workers for use in the event of an ignition.

d. Smoking Prohibition

Requirement: The project applicant shall require the construction contractor to implement a no smoking policy on the site and surrounding area during construction per Section 310.8 of the California Fire Code.

- **SCA 75: Construction Activity in the Public Right-of-Way**

  Applicability: All projects.

  a. Obstruction Permit Required

  Requirement: The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public-right-of-way, including City streets, sidewalks, bicycle facilities, and bus stops.

  b. Traffic Control Plan Required

  Requirement: In the event of obstructions to vehicle or bicycle travel lanes, bus stops, or sidewalks, a project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian accommodations (or detours, if accommodations are not feasible), including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The Traffic Control Plan shall be in conformance with the City's Supplemental Design Guidance for Accommodating Pedestrians, Bicyclists, and Bus Facilities in Construction Zones. The project applicant shall implement the approved plan during construction.

4.18.3 Environmental Analysis

4.18.3.1 Significance Criteria

The City of Oakland has established thresholds of significance for CEQA impacts, which incorporate those in Appendix G of the *CEQA Guidelines* (City of Oakland, 2020). The 2018 Comprehensive CEQA Guidelines Update, which added wildfire to the Appendix G checklist, directs lead agencies to answer these checklist questions for projects that would be located in or near SRAs and/or in or near lands classified as VHFHSZ. These conditions apply to the eastern portion of the City. For those areas where these conditions apply, the Proposed Project would have a significant adverse impact related to wildfire if it would:

1. Substantially impair an adopted emergency response plan or emergency evacuation plan.

2. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

3. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

4.18.3.2 Approach to Analysis / Methodology

This is a program-level Draft EIR that considers the potential impacts from adoption of the Proposed Project by assessing proposed policies and proposed amendments to the Oakland Planning Code, Zoning Map, and General Plan. Impacts relative to wildfire are evaluated using the criteria listed above and based on information included in the City of Oakland General Plan, Map Atlas (see Appendix A), and the documents listed in Section 4.18.6, *References – Wildfire*.

The Proposed Project does not propose specific private developments, but for the purposes of environmental review, establishes the *Buildout Program*. This represents the maximum feasible housing development that the City has projected can reasonably be expected to occur within the eight-year projection period ending in 2030. To capture the potential impact of future development under the Proposed Project, this Draft EIR utilizes the baseline existing conditions described in Chapter 3 and in the Map Atlas (see Appendix A) and analyzes the impacts of housing development through the projection period ending in 2030.

The methodology for analysis of wildfire impacts includes an assessment of both construction and operational impacts. Future development under the Proposed Project would be regulated by the various laws, regulations, and policies summarized in Section 4.18.2, *Regulatory Setting*. Compliance by the future development projects with applicable federal, State, and local laws and regulations is assumed in this analysis, and local and State agencies would be expected to continue to enforce applicable requirements to the extent that they do so now. Note that compliance with many of the laws and regulations is a condition of permit approval. Therefore, impacts associated with wildfire are evaluated within the context of the effectiveness of standard wildfire risk abatement methods as they relate to future development under the Proposed Project. The general rule employed in this analysis is that if wildfire risk can be effectively lessened through implementation of standard regulatory requirements, then the impact would be less than significant.

4.18.3.3 Proposed 2045 General Plan Policies, Land Use and Zoning

Safety Element

The following policies and actions pertaining to wildfire are proposed as a part of the Safety Element Update in the Proposed Project.

Policies:

SAF-2.1 Structural Fires. Continue, enhance, or implement programs that seek to reduce the risk of structural fires. Prioritize programs in redline communities at highest seismic and fire risk.

SAF-2.2: Vegetation and Urban Forest Management. Manage vegetation and the urban forest to reduce combustible load, erosion, and other risks exacerbated by climate change.

- Adopt and fully implement a Vegetation Management Plan for high-fire risk areas. Continue to update and enforce the Oakland Fire Code to require building owners in high-risk areas to maintain defensible space and implement fire prevention measures. As part of the Vegetation Management Plan, build partnerships with and consult indigenous groups on sacred burning and other traditional fire suppression techniques.

- Implement the Urban Forest Master Plan, a comprehensive, area-wide urban canopy and vegetation plan that identifies locations where trees can be added and maintained, such as parks, streets, and rights-of-way. As a follow-up action, proactively address soil sequestration of carbon and water in frontline communities most affected by wildfire and other climate risks.

SAF-2.3: Development in the Very High Fire Hazard Severity Zone (VHFHSZ). Manage vegetation and the urban forest to reduce combustible load, erosion, and other risks exacerbated by climate change.

Prioritize development in areas with existing adequate road networks, evacuation routes, and water infrastructure. Require any new development in Very High Fire Hazard Severity Zone to prepare a Fire Protection Plan that minimizes risks by:

- Assessing site-specific characteristics such as topography, slope, vegetation type, wind patterns etc.

- Siting and designing development to avoid hazardous locations (e.g. through fire breaks) to the extent feasible.

- Incorporating fuel modification and brush clearance techniques in accordance with applicable fire safety requirements and carried out in a manner which reduces impacts to environmentally sensitive habitat to the maximum feasible extent.

- Using fire-resistant building materials and design features, such as visible signage, consistent with the adopted Municipal Code and Fire and Building Code standards.

- Using fire-retardant, native plant species in landscaping.

- Complying with established standards and specifications for fuel modification, defensible space, access, and water facilities.

- Banning fuel storage (e.g. for generators) in VHFHSZ.

- Requiring street improvements to comply with minimum fire road access standards.

- Disallowing new subdivisions in areas with less than two evacuation routes (as shown in Figure SAF-1d), unless a development were to be able to provide additional connections to ameliorate this condition.

SAF-2.4: Slope-Density Regulations. Reduce permitted development densities and intensities by slope tiers—such as between 15 and 30 percent slope, and greater than 30 percent slope—in hills/hillside areas. This consideration would be considered and reflected as part of the LUTE update.

SAF-2.5: Financial Assistance. In high hazard areas, identify or develop programs to provide financial incentives or assistance to low-income households without vehicles and mobility-impaired residents for defensible space maintenance, home hardening, and other measures to reduce risk.

SAF-2.6: Agency Coordination. Continue to participate not only in general mutual-aid agreements but also in agreements with adjoining jurisdictions and other public agencies for cooperative response to fires, including multi-jurisdictional programs and task forces.

SAF-2.7: Protect against Smoke and Wildfire. Improve access to better indoor air quality to protect against smoke and wildfire through methods such as requiring installation of MERV filters in new developments and identifying additional clean air centers and resilience spaces within residential areas.

SAF-8.1: Emergency Response. Maintain and enhance the City's capacity for emergency response, fire prevention, and fire-fighting.

SAF-8.2: Emergency Services Review. Continue to engage the Police and Fire departments in the development review process to ensure that projects are designed and operated in a manner that minimizes the potential for public safety and fire hazards and maximizes the potential for responsive police and fire services.

SAF-8.5: Cohesive Evacuation Routes Network. Ensure the evacuation routes network is interconnected with adequate capacity and reflects ability to evacuate for multiple threats.

- Maintain adequate capacity along evacuation routes through methods such as limiting on-street parking where capacity may be needed.
- Maintain a higher level of tree and vegetation maintenance along evacuation routes and remove flammable trees adjacent to these routes.

SAF-8.6: Emergency Power. Participate in East Bay Community Energy's Critical Municipal Facility program with the goal of increasing resilience to power losses, including Public Safety Power Shutoffs (PSPS), and climate-driven extreme weather events for low income, medically dependent, and elderly populations through installation of renewable energy and onsite energy storage with islanding capabilities (such as microgrids).

SAF-8.7: Local Hazard Mitigation Plan. To comply with federal and state law, follow and periodically update the Oakland Local Hazard Mitigation Plan. Use the LHMP to guide mitigating actions to protect the whole community and environment from natural and humanmade hazards.

SAF-8.8: Risk Reduction Models. Integrate new risk reduction models (such as sea level rise modeling, wildfire mapping tools, etc.), tools, and methods into existing plans such as the General Plan, neighborhood and area plans, green infrastructure planning processes, etc., as may be appropriate.

SAF-8.10: Public Facilities for Resilience & Relief. Prioritize capital improvements and maintenance of public facilities such as fire stations, libraries, senior centers, cultural centers, parks, and recreation centers to ensure that they can function as essential service facilities, respite centers, and local assistance centers providing emergency social and medical services in times of distress (cooling and clean air stations, free air filtration mask distribution, food and vaccine distribution, clean water, testing centers, evacuation/ disaster shelters, etc.), and as neighborhood hubs that empower communities to build resilience. Clean energy microgrids should be prioritized at all community-serving facilities that are deemed critical during emergency events. In alignment with the ECAP, a minimum of three resilience hubs will be constructed in frontline communities by 2030. The City will continue pursuing resources to increase the number of resilience hubs beyond the minimum required, and to ensure that all frontline community members have access to a resilience hub.

SAF-8.11: Critical Facilities Locations. Locate critical facilities, such as hospitals and health care facilities, emergency shelters, fire stations, police stations, emergency command centers, and other emergency service facilities and utilities so as to minimize exposure to flooding, seismic, geologic, wildfire, and other hazards, except those facilities that provide frontline access, such as fire stations in areas of fire hazard. If critical facilities must be located in hazard zones, require building construction and materials that minimize hazard, safe access for emergency response vehicles, visible street signs, and adequate infrastructure for emergency scenarios, such as flooding, backup power and water supplies.

SAF-8.14: Emergency Notification. Use early warning notification systems (Zonehaven, text messages, etc.) to notify residents by wireless emergency alert of the need to evacuate in the event of an emergency and the location of evacuation routes, points, and critical facilities such as schools and day care centers, particularly residents of vulnerable areas and neighborhoods with constrained emergency access. Continue to collaborate with adjoining jurisdictions on the network of outdoor warning sirens, and to test the sirens on a monthly basis.

SAF-8.15: Traffic Signaling. Prioritize the connection to traffic signals along evacuation routes to the City's Traffic Management Center to allow for real-time modifications to signal timing that can speed evacuation in the event of an emergency.

SAF-8.16: Priority Route Coordination. Partner with Caltrans and neighboring jurisdictions on measures to protect critical evacuation routes and work with local agencies to develop contingency plans that address disconnected routes and explore roadway improvements that can provide better emergency access under emergency evacuation scenarios. Work with emergency response teams and transit providers to identify and support Oakland Residents without access to transportation in the event of an emergency.

Actions:

SAF-A.3: Regulate development by slope categories and continue to enforce provisions that require geotechnical reports and soil hazards investigations be made in areas prone to landslides as shown in Figure SAF-2 as part of project proposals.

SAF-A.7: Undertake a program to reduce fire load in VHFHSZ, such as through removal of non-native, highly combustible trees such as eucalyptus in fire susceptible areas. Consider methods—such as establishment of a progressive special vegetation

management zone fees—to provide ongoing revenue for additional efforts for vegetation management.

SAF-A.8: Adopt and amend as needed updated versions of the California building and fire codes and local housing code so that optimal fire-protection standards are used in construction and renovation projects. Projects in Very High Fire Hazard Severity zones and the Wildland Urban Interface are required to include higher fire-rated construction.

SAF-A.9: Continue to review development proposals to ensure that they incorporate required and appropriate fire-mitigation measures, including adequate provisions for occupant evacuation, and access by fire-fighting personnel and equipment.

SAF-A.10: Compile a list of high-rise and high-occupancy buildings which are deemed due to their age or construction materials to be particularly susceptible to fire hazards, and determine an expeditious timeline for the fire safety inspection of all such structures. Prioritize areas based on racial equity and vulnerability criteria, including lower income households, mobility-impaired residents, families with small children, and older adults.

SAF-A.11: Continue to conduct periodic fire-safety inspections of commercial, multi-family, and institutional buildings. Prioritize inspections among areas at high risk and high vulnerability, including lower-income households, areas with greater percentages of mobility-impaired residents, families with small children, and older adults.

SAF-A.30: Maintain adequate capacity along evacuation routes as shown in SAF-11, e.g., by limiting street parking where capacity may be needed.

SAF-A.31: Maintain a higher level of tree and vegetation maintenance along evacuation routes and remove flammable trees and others that could fall and block access adjacent to these routes.

SAF-A.33: Periodically assess the need for new or relocated fire stations, facilities, programs, and technologies.

SAF-A.34: Strive to meet a goal of responding to fires and other emergencies within seven minutes of notification 90 percent of the time.

SAF-A.35: Continue to participate in multi-jurisdictional programs and task forces, such as the Hills Emergency Forum and Diablo FireSafe Council, that work to reduce the threat of wildfires.

SAF-A.43: Consider roadway improvements for better emergency access as part of the LUTE, and identify any possible tradeoffs for everyday street safety.

4.18.3.4 Topics Considered and Determined to Have No Impact

All topics relating to wildfire are analyzed below.

4.18.4 Impacts of the Project

Impact WLD-1: Adoption of the Proposed Project could substantially impair an adopted emergency response plan or emergency evacuation plan. (Criterion 1) (*Significant and Unavoidable*)

Construction Impacts (*Less than Significant)*

The construction of future development under the Proposed Project would include the transportation and movement of equipment, materials, and construction workers. If located along evacuation routes or in areas subjected to limited or constrained access, these construction activities could impair or interfere with adopted emergency response plans or emergency evacuation plans, which could be potentially significant.

As discussed in Section 4.18.2, *Regulatory Setting*, SCA 75, Construction Activity in the Public Right-of-Way, outlines requirements for obstruction permits when development projects obstruct public rights-of-way prior to construction. Examples of obstruction could include temporary use of public rights-of-way for staging, construction, or traffic control purposes. Preparation and implementation of a construction Traffic Control Plan would also be required to set comprehensive traffic control measures for auto, transit, bicycle, and pedestrian accommodations or detours. This includes designating access routes for construction activity. For projects with multiple phases of development, SCA 46, Fire Safety Phasing Plan, project applicants would be required to incorporate all the fire safety features and emergency vehicle access into each phase of the project.

During the obstruction permit and Traffic Control Plan review process, a proposed project's potential impacts to key evacuation routes would be identified and addressed through compliance with the City's proposed 2045 Safety Element. Policies SAF-8.5, SAF-8.15, and SAF-8.16 and actions SAF-A.30, and SAF-A.43, address maintaining evacuation routes via interconnected routes, traffic signaling, and roadway improvements. Policy SAF-2.6 and Action SAF-A.35 encourage agency coordination and multi-jurisdictional programs related to fire response; Policy SAF-8.6 supports increased resilience to power losses under climate-driven impacts like wildfire; Policy SAF-8.7 promotes compliance with the Local Hazard Mitigation Plan; and Policy SAF-8.8 seeks to integrate risk reduction models into planning processes. In this manner, construction of future development under the Proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The impact would therefore be less than significant.

Mitigation: None required.

Operational Impacts (*Significant and Unavoidable)*

Although the *Buildout Program* includes over 41,000 new housing units, it is unlikely that a substantial number of these units would be located within the WUI or VHFHSZs, because these areas are within the S-9 Fire Safety Protection Combining Zone, which prohibits the addition of Category Two Secondary Units that would otherwise be able to substantially increase density in these areas. The exception to this is in a location south of Keller Avenue and east of I-580, where numerous housing units are under construction.

Additional traffic volumes could be expected with the construction of more housing anywhere in fire-threatened areas of the City. An Evacuation Congestion Analysis was prepared for the *Buildout Program* utilizing the Alameda County Transportation Commission Countywide Travel Demand Model that includes Plan Bay Area 2040 land use assumptions (see Sections 4.12, *Population and Housing*, and 4.15, *Transportation and Circulation*, and Appendix E). To assess constraints on roadway capacity, the Evacuation Congestion Analysis modeled the expected weekday PM peak-hour roadway congestion under 2030 build-out conditions and under three wildfire scenarios. The model determined that fire-related evacuation traffic would have a significant impact on area roadways. **Table 4.18-1** summarizes the main roadways that would be congested or over-capacity under each scenario.

TABLE 4.18-1
SUMMARY OF ROADWAY CONGESTION AND OVER-CAPACITY CONDITIONS UNDER WILDFIRE SCENARIOS (2030)

Normal Commute Peak-Hour Congestion/OC	Northern Hills Wildfire and Peak-Hour Congestion/OC	Central Hills Wildfire and Peak-hour Congestion/OC	South Oakland Hills Wildfire and Peak-Hour Congestion/OC
Southbound I-880 (towards San Jose); Southbound I-580 (towards Dublin and San Ramon); Southbound I-80 (from Berkeley towards Oakland); Fruitvale Avenue, between International Boulevard and MacArthur Boulevard; Northbound SR 24 between Telegraph Avenue to Broadway; Parts of SR 13 between Lincoln Ave and SR 24; Tunnel Road; West Grand Avenue, between Market Street and Frontage Road; High Street, between Foothill Boulevard and MacArthur Boulevard	Southbound I-880 (towards San Jose); Southbound I-580 (towards Dublin and San Ramon); Fruitvale Avenue, between International Boulevard and MacArthur Boulevard; High Street, between Foothill Boulevard and MacArthur Boulevard Southbound SR 13; SR 24, between Shattuck Avenue and College Avenue MacArthur Boulevard, between Lakeshore Avenue to 35th Avenue; West Grand Avenue, between Market Street and Frontage Road	Southbound SR 13; Southbound 880 (towards San Jose); Southbound I-80; Doolittle Drive, between Hegenberger Road and City limits; 35th Avenue, between Salisbury Street and School Street; Campus Drive, between Redwood Road and Keller Avenue; Coolidge Avenue, between Foothill Boulevard and Montana Street; 105th Avenue, between San Leandro Street and City limits	Southbound I-880 (towards San Jose); Southbound I-580 (towards Dublin and San Ramon); Northbound I-580 (towards Berkeley); SR 61, between Harbor Bay Parkway and Hegenberger Road; High Street, between Foothill Boulevard and MacArthur Boulevard; 105th Avenue, between San Leandro Street and City limits; Doolittle Drive, within City limits

SOURCE: Kittelson & Associates, 2022. *Oakland Housing Element Evacuation Analysis*, November 4, 2022 (see Appendix D).

In the event that increased housing density in VHFHSZ and/or WUI areas, such as that described above, impairs emergency evacuation during a wildfire because it causes congestion and over-capacity problems that preclude timely and safe evacuation, a significant impact would occur.

The City would be required to periodically update its emergency response and evacuation plan(s) as required under AB 747 and the City's Safety Element detailed in policies SAF-8.1, Emergency Response, and SAF-8.2, Emergency Services Review. In addition, policies SAF-8.10 and SAF-8.11 promote identification of public facilities and critical facilities to be used in emergencies requiring evacuation. However, the policies described above for the updated Safety Element would not clearly and adequately mitigate potential evacuation interference caused by congestion and over-capacity issues on I-580 that would result from increased density. No additional

mitigation has been identified that can feasibly reduce this impact to less than significant. Therefore, the impact would be significant and unavoidable.

Mitigation: None feasible.

Summary

With adherence to the aforementioned SCAs and other regulatory compliance, construction associated with future development under the Proposed Project would result in a less than significant impact related to emergency response and evacuation. With adherence to SCAs, periodic updates to the City's evacuation and emergency response plans as required by AB 747, and compliance with the City's Safety Element, adoption of the Proposed Project would result in a significant and unavoidable operational impact related to emergency response and evacuation.

Impact WLD-2: Future development under the Proposed Project located in or near State Responsibility Areas and/or lands classified as Very High Fire Hazard Severity Zones, would not exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. (Criterion 2) (*Less than Significant*)

Future development under the Proposed Project within a VHFHSZ could increase the risk of wildfire by introducing new sources of ignition (i.e., vehicles and residents). As described in Section 4.18.2, above, future development would be required to comply with the City's Fire Code; SCA 47, Designated Very High Fire Severity Zone – Vegetation Management; and the proposed Safety Element policies and actions (see Section 4.18.2, above). Policy SAF-2.3 requires a Fire Protection Plan for new developments in the VHFHSZ; Policy SAF-2.7 encourages protecting against indoor smoke; Action SAF-A.7 encourages reducing fire load in the VHFHSZ; Action SAF-A.8 requires projects in the VHFHSZ to include fire-rated construction; and Action SAF-A.9 supports review of development proposals to ensure they include fire-mitigation measures. Further requirements relate to emergency planning and preparedness, fire service features, building services and systems, access requirements, water supply, fire and smoke protection features, building materials, construction requirements, defensible space and vegetation management, and specific requirements for specialized uses involving flammable and hazardous materials. Each of these requirements has been developed over many decades to reduce the risks associated with wildfire, including potential impacts associated with accidental ignitions emanating from project sites and potential impacts associated with wildfires encroaching onto project sites from adjacent areas. The impact would therefore be less than significant.

Mitigation: None required.

Summary

With adherence to proposed policies, SCAs, and regulatory compliance, the Proposed Project would result in a less-than-significant impact related to exposing Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

Impact WLD-3: Future development under the Proposed Project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. (Criterion 3) (*Less than Significant*)

Adoption of the Proposed Project would occur within urbanized portions of the City and would rely on existing roadways and connect to existing utility infrastructure. Construction of roads, fuel breaks, emergency water sources, power lines, or other utilities is generally not required for future development in an area that is already urbanized, and in most cases would be neither practical nor necessary. The extent to which utility infrastructure could be required for future development under the Proposed Project is unknown at this time but would likely consist of upgrades to and minor extensions of existing infrastructure to serve the sites and would not involve extensive extensions into unserved areas or extensive construction. Construction would be temporary and within existing right of way, and no unusual significant environmental impact would be anticipated due to construction activity. Based on these considerations, the effect of the adoption of the Proposed Project would be less than significant.

Mitigation: None required.

Summary

With adherence to proposed policies and regulatory compliance, the Proposed Project would result in a less-than-significant impact related to installation or maintenance of associated infrastructure that may exacerbate fire risk or result in environmental impacts.

Impact WLD-4: Future development under the Proposed Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. (Criterion 4) (*Less than Significant*)

Most of the Plan Area is developed and urbanized, as discussed previously. Post-fire impacts such as slope instability and downstream flooding are more typically associated with steep wildland areas that burn and then erode or slide onto downslope area. These conditions do not apply to much of the Plan Area.

Areas at very high risk of wildfire are located in the eastern portion of the City within the WUI and VHFHSZ in the Oakland Hills. As stated in Impact WLD-1, with one exception, most of this wildfire-threatened area would not be expected to experience an appreciable increase in housing density. With any potential increase in housing in WUI and VHFHSZ areas, if the hilly areas behind them were to burn, the affected sloped areas could potentially erode onto the developed areas and create adverse effects. However, all future development under the Proposed Project would be subject to engineering and permit review as part of the City's approval process, and potential constraints associated with upslope areas or other factors would be evaluated at the time of application and appropriate design standards implemented prior to issuance of building permits. In addition, the Proposed Project includes Policy SAF-2.4, aimed at reducing permitted

development on certain slope grades, and Action SAF-A.3, which calls to regulate development by slope categories and support further geotechnical research in areas prone to landslides. Additional policies SAF-2.1, SAF-2.2, SAF-2.5, SAF.8-14, and actions SAF-A.10, SAF-A.11, SAF-A.31, and SAF-A.34 promote preventative measures such as reducing structural and vegetative based fire risks, conducting fire-safety inspections, emergency notifications, and improving fire response time. Based on these considerations, the effect of future development under the Proposed Project would be less than significant.

Mitigation: None required.

Summary

With adherence to proposed policies and regulatory compliance, the Proposed Project would result in a less-than-significant impact related to exposing people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes.

4.18.5 Cumulative Impacts

This section presents an analysis of the cumulative effects of future development under the Proposed Project in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to wildfire could occur if the incremental impacts of future development under the Proposed Project combined with the incremental impacts of cumulative development would be significant and if the Proposed Project's contribution would be considerable.

Impact WLD-5: Adoption of the Proposed Project, combined with cumulative development, could result in significant cumulative impacts related to wildfire. (*Significant and Unavoidable*)

Geographic Context

The geographic scope for potential cumulative impacts to wildfire encompasses the WUI and VHFHSZ areas within the Plan Area and the surrounding conditions that could contribute to the fire environment and impacts on nearby evacuation routes.

Cumulative Impacts – Construction

Construction for two or more projects that occur at the same time and use the same roads could interfere with an adopted emergency response plan or emergency evacuation plan. As discussed previously under Impact 4.18-1, the City has standard requirements in place to address potential impacts to emergency evacuation routes and traffic flow in general during the construction process. As with future development under the Proposed Project, cumulative projects would be required to receive an obstruction permit and to prepare and implement similar Traffic Control Plan to maintain traffic flow and prevent interference with emergency access. As such, as with future development under the Proposed Project, the construction of any cumulative projects would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Cumulative Impact – Operations

The *Buildout Program* represents the maximum feasible housing development that the City has projected can reasonably be expected to occur through the projection period ending in 2030. Therefore, the analysis of the Proposed Project's environmental impacts is largely a cumulative impact analysis by nature. The discussion of cumulative wildfire impacts assesses whether the future development under the Proposed Project, in conjunction with overall citywide growth and other cumulative projects, would significantly affect the network of evacuation routes or result in other wildfire-related impacts, and, if so, whether the Proposed Project's contribution to the cumulative impact would be considerable.

As discussed in Impact WLD-1, the Proposed Project would have a significant and unavoidable impact on specific evacuation routes at full buildout. Therefore, in combination with the existing and ongoing effects of past and present development, the Proposed Project would have a considerable contribution to a cumulative impact on evacuation routes.

Regarding the potential to exacerbate wildfire risks, cumulative development within the City would also be required to comply with the City's Fire Code; SCA 47, Designated Very High Fire Severity Zone – Vegetation Management; and the proposed Safety Element policies thereby reducing the risks associated with wildfire, including potential impacts associated with accidental ignitions emanating from project sites and potential impacts associated with wildfires encroaching onto project sites from adjacent areas, to a less-than-significant level.

Similar to future development under the Proposed Project, cumulative development would likely occur within urbanized portions of the City and would rely on existing roadways and connect to existing utility infrastructure. New utility infrastructure associated with future developments under the Proposed Project and/or cumulative development would likely consist of upgrades to and minor extensions of existing infrastructure to serve the sites, would not involve extensive extensions into unserved areas or extensive construction, and would be subject to review and permitting requirements, and applicable SCAs. Impacts associated with the potential to exacerbate fire risk would be less-than-significant.

Future development under the Proposed Project and/or cumulative development would be subject to engineering and permit review as part of the City's approval process, and potential constraints associated with upslope areas or other factors would be evaluated at the time of application and appropriate design standards implemented prior to issuance of building permits. Based on these considerations, the combined effects of future development under the Proposed Project and cumulative projects would not result in a significant cumulative impact.

Conclusion

Overall, the adoption of the Proposed Project with adherence to proposed City policies, in addition to aforementioned SCAs and other regulatory compliance, would not result in a significantly cumulative impact related to pollutant concentrations from a wildfire, the uncontrolled spread of a wildfire, runoff, post-fire slope instability, or drainage changes.

However, the Proposed Project would have a significant and unavoidable impact on specific evacuation routes at full buildout. Therefore, in combination with the existing and ongoing effects of past and present development, the Proposed Project would have a considerable contribution to a cumulative impact on evacuation routes.

4.18.6 References – Wildfire

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4.19 Effects Found Not to Be Significant

4.19.1 Introduction

This section presents information regarding impacts of the Proposed Project for environmental topic areas that were determined to have no impact by the City of Oakland. According to *CEQA Guidelines* Section 15128, an EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR.

Effects of the Proposed Project on the following environmental topic areas were found not to be significant during the EIR process: Agriculture and Forest Resources; and Mineral Resources. The following presents a brief summary of the Proposed Project effects found not to be significant, including a discussion of reasons they would not be significant.

4.19.2 Agriculture and Forestry Resources

The California Department of Conservation, Division of Land Resource Protection, has established the Farmland Mapping and Monitoring Program (FMMP), which monitors the conversion of the State's farmland to and from agricultural use. Four categories of farmland – Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance – are considered valuable. The entirety City of Oakland is identified as "Urban and Built-Up Land" by the FMMP and is also surrounded by lands designated as Urban and Built-Up Land. The areas not identified as Urban and Built-Up Land are located towards the East of Oakland and are designated as "Other Land". According to the FMMP map for Alameda County, there is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance designated on any portion of the planning area for the Project (DOC, 2018). Thus, the Proposed Project would have no impact on important farmland.

The City of Oakland's Zoning Code has no agricultural designations. Therefore, the Proposed Project would have no impact on agricultural designated zones (City of Oakland, 2022).

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to designate agricultural preserves and enter into contracts with private landowners for restricting specific parcels of land to agricultural, or related open space use. The City of Oakland does not contain an area subject to an agricultural preserve or a Williamson Act Contract (DOC, 2017). Thus, adoption of the Proposed Project would not interact with or conflict with existing agricultural zoning or a Williamson Act contract and would have no impact.

With respect to forestry resources, no existing timber harvest uses are located on or in the vicinity of the City. No areas of the City are designated or zoned for such use. As such, adoption of the Proposed Project would not result in the loss of forest land or conversion of forest land to non-forest uses, and would have no impact on forest land or timberland.

Based on these considerations, adoption of the Proposed Project would not result in conversion of farmland, on-site or off-site, to a non-agricultural use, nor would it result in conversion of forest

land to non-forest land. Therefore, no impact to agricultural and forestry resources would occur. Accordingly, this issue was not subjected to detailed analysis in the Draft EIR.

4.19.3 Mineral Resources

The Proposed Project is located within the Oakland East Quadrangle on land classified by the California Department of Conservation's (DOC's) Division of Mines and Geology as Mineral Resource Zone 1 (MRZ-1), or an area where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence (DOC, 1987; 2020). There are no known significant mineral resources in the Plan Area. Additionally, there are no areas designated or zoned as mineral resource zones by the City's General Plan (City of Oakland, 2015; 2022).

Adoption of the Proposed Project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State; and would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. As a result, adoption of the Proposed Project would not interfere with any mineral extraction operations and would not result in the loss of land designated for mineral resources. Therefore, no impact to mineral resources would occur. Accordingly, this issue was not subjected to detailed analysis in the Draft EIR.

4.19.4 References - Effects Found Not to Be Significant

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CHAPTER 5
Alternatives to the Proposed Project

5.1 CEQA Requirements

CEQA Guidelines Section 15126.6 requires that an EIR include an analysis of "a range of reasonable alternatives to the project, or to the location of the project," and indicates that alternatives should be crafted to accomplish most of the basic objectives of the project while avoiding or substantially lessening significant impacts of the project. The discussion of alternatives focuses on alternatives to the project or its location that 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 costlier (CEQA *Guidelines* Section 15126.6[b]). In Addition, *CEQA Guidelines* require the inclusion of a "no-project" alternative representing the maintenance of status quo. The no project alternative must be evaluated whether or not it is feasible. Discussion under Alternative 1 analyzes whether the No Project Alternative reduces any identified impacts of the Proposed Project and additionally finds that the No Project Alternative would not be feasible given the City of Oakland's legal obligation to adopt Planning Code amendments implementing its Housing Element, to amend its Safety Element, and to adopt an Environmental Justice Element.

Importantly, Section 15126.6(a) states that "an EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation." Therefore, alternatives must be "potentially feasible" as the term is broadly defined under CEQA. Whether an alternative is "actually feasible" is a different question for the decision makers at the time of approval.

Consistent with these requirements, this chapter reiterates the Proposed Project objectives outlined in Chapter 3, *Project Description;* summarizes significant impacts of the Proposed Project identified in Chapter 4, *Environmental Setting, Impacts, Standard Conditions of Approval, and Mitigation Measures*; and presents other factors considered in the selection of alternatives. The chapter then describes the following alternatives:

- Alternative 1: The No Project Alternative
- Alternative 2: The No Affordable Housing Overlay Buffer Zone on parcels in the Very High Fire Hazard Severity Zone.
- Alternative 3: The No Missing Middle Alternative

In addition to a description of the impacts of each alternative, this chapter presents a meaningful comparative analysis of the Proposed Project impacts, as identified in Chapter 4 (CEQA

Guidelines Section 15126.6[d]); and provides comparative evaluation of the Proposed Project with the No Project Alternative, the No Affordable Housing Overlay Buffer Zone on parcels in the Very High Fire Hazard Severity Zone (VHFHSZ), and the No Missing Middle Alternative (CEQA *Guidelines* Sections 15126.6[d] and 15126.6[e]). For each alternative, the degree (severity) of adverse impacts that would be caused by the alternative is identified and compared to the Proposed Project. At the conclusion of these comparisons, one Environmentally Superior Alternative is identified, taking into consideration all impacts identified.

This chapter also describes alternatives that were considered by the City, as lead agency, but were rejected for detailed analysis in this EIR (CEQA *Guidelines* Section 15126.6[c]); explaining the reasons for this decision.

5.2 Factors in the Selection of Alternatives

The nature and scope of the reasonable range of alternatives to be discussed is governed by the "rule of reason." The *CEQA Guidelines* recommend that an EIR should briefly describe the rationale for selecting the alternatives to be discussed (Section 15126.6[c]). This alternatives analysis considers the following factors:

- The extent to which the alternative would accomplish most of the basic objectives of the Proposed Project;
- The extent to which the alternative would avoid or lessen the identified significant and unavoidable environmental effects of the Proposed Project;
- The feasibility of the alternative, taking into account location, general plan consistency, and consistency with other applicable plans and regulatory limitations;
- The extent to which an alternative contributes to a "reasonable range" of alternatives necessary to permit a reasoned choice; and
- The *CEQA Guidelines* requirement to consider a "No Project" alternative, and to identify an "environmentally-superior" alternative in addition to the No Project alternative (Section 15126.6[e]).

5.2.1 Project Objectives

As stated in the first factor bulleted above, under 5.2, *Factors in the Selection of Alternatives*, the selection of alternatives shall consider the basic objectives of the Proposed Project. As previously presented in Chapter 3, *Project Description*, the following objectives have been identified for the Proposed Project:

1. Remove regulatory development constraints and provide development incentives so that the City can meet the housing needs of all Oaklanders for the 6th Housing Element cycle;
2. Reduce racial segregation and disparities in housing opportunities and outcomes;
3. Replace segregated living patterns with truly integrated and balanced living patterns, and transform racially and ethnically concentrated areas of poverty into areas of opportunity;

4. Encourage a diversity of housing types such as flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and accessory dwelling units in currently single-family-dominated neighborhoods, and along corridors, transit-proximate areas, and high resource neighborhoods and remove constraints on the development of housing;
5. Create and preserve affordable housing restricted for extremely low, very low, low, and/or moderate-income households;
6. Minimize risks posed by natural and human-caused hazards that may impact residents' health and welfare by protecting residents, workers, and visitors from seismic and geologic hazards, fire hazards, hazardous materials, flooding, and other potential hazards that risk life and property;
7. Reduce pollution exposure, including the improvement of air quality;
8. Promote equitable access to public facilities, healthy food, safe and sanitary homes, and physical activity;
9. Reduce barriers to inclusive engagement and participation in the public decision-making process; and
10. Prioritize improvements and programs that address the needs of Environmental Justice Communities.

5.2.2 Impacts of the Proposed Project

As stated above under 5.2, *Factors in the Selection of Alternatives*, in the second factor bulleted, the selection of alternatives shall consider the ability for each alternative to avoid or lessen the identified significant and unavoidable environmental effects of the Project. As presented in Chapter 4, *Environmental Setting, Impacts, Standard Conditions of Approval, and Mitigation Measures*, and summarized in Chapter 2, *Summary*, and Chapter 6, *Impact Overview and Growth Inducement*, the Proposed Project would result in a variety of significant impacts, most of which could be reduced to less than significant with adoption of identified mitigation measures. The following impacts of the Proposed Project would remain significant despite the implementation of identified feasible mitigation measures:

5.2.2.1 Aesthetics

Impact AES-4: Shadows – The Proposed Project could include mid- and high-rise buildings that may cast shadow on public open spaces, solar collectors, and/or historic resources. Given that there are not sufficient details available to analyze specific shadow impacts, it cannot be known with certainty that development facilitated by the Proposed Project would not cause significant shadow impacts that impairs the function of a building using passive solar collection; impairs the beneficial use of a public or quasi-public park, lawn, garden, or open space; impacts the integrity of an historic resource with sunlight-sensitive character defining features, or otherwise results in inadequate provision of light. The EIR analysis includes Mitigation Measure AES-1, which would require project sponsors to complete a site-specific shadow study when individual projects are proposed. The effectiveness of this measure cannot be determined with certainty because there are not sufficient details available to analyze specific impacts.

Impact AES-6: Wind Hazards – The Proposed Project could include structures that are 100 feet or greater in height and located in the Downtown area which requires a wind analysis for the proposed structures. The EIR analysis includes Mitigation Measure AES-2, which would require project sponsors complete a site-specific wind analysis when individual projects are proposed. Implementation of a wind analysis that includes design recommendations to reduce ground level wind speeds could reduce the severity of wind impacts. The effectiveness of this cannot be determined with certainty because there are not sufficient details available to analyze specific impacts, as such the impact is conservatively significant and unavoidable.

Impact AES-7: Cumulative Aesthetics, Wind, and Shadow – The Proposed Project, combined with cumulative sources in the Plan Area and areas in the immediate vicinity of City boundaries, could contribute to cumulative aesthetics, wind, and shadow impacts. Due to the uncertainty of effectiveness of available mitigation, the Proposed Project would result in significant cumulative impacts to shadow and wind.

5.2.2.2 Air Quality

Impact AIR-3: Criteria Pollutant Emissions from Construction and Operation of the Proposed Project – Construction and operation associated with future development under the Proposed Project could result in average daily emissions of criteria pollutants that would exceed the City's construction significance thresholds of 54 pounds per day of reactive organic gases (ROG), oxides of Nitrogen (NOX), and particulate matter with a diameter of less than 2.5 micrometers ($PM_{2.5}$), or 82 pounds per day of and particulate matter with a diameter of less than 10 micrometers (PM_{10}). Without specific details about future development under the Proposed Project it is impossible to know for certain whether individual projects could generate emissions of criteria air pollutants that would exceed the applicable thresholds of significance. Mitigation Measure AIR-1, proposed policies, and SCAs would reduce emissions, but not to less-than-significant levels.

Impact AIR-5: Toxic Air Contaminants – The Proposed Project could introduce sensitive receptors near existing major sources of TACs including major highways I-580, I-880, and I-980, the Oakland Ferry Terminal, the Oakland Airport, and the Port of Oakland. The impact would be addressed with adherence to Title 24 Building Code requirements, proposed policies, SCA 23, and the implementation of Mitigation Measure AIR-2; however, without specific details about where future projects would site new sensitive receptors and what the specific health risks would be at these locations, the impact would remain significant and unavoidable.

Impact AIR-6: Exposure of Sensitive Receptors to Substantial Pollutant Concentrations from Construction and Operation – Construction and operation associated with future development under the Proposed Project could generate TAC emissions that could cause significant health risk impacts. Project-specific information for future development under the Proposed Project is not yet available and health risk impacts cannot be evaluated at a project-specific level at this time. Mitigation Measures AIR-1, AIR-2, and AIR-3 as well as proposed policies and SCAs would reduce the health impacts from future projects, but not to a less-than-significant level.

Impact AIR-8: Cumulative Exposure of Sensitive Receptors to Substantial Levels of Fine Particulate Matter ($PM_{2.5}$) and TACs – The contribution of future projects that could be developed under the Proposed Project could combine with risks from existing TAC sources and the resulting community health risks could exceed BAAQMD cumulative risk thresholds. However, without specific details about future development under the Proposed Project, it is impossible to determine whether future projects would generate TAC emissions that could cause significant health risk impacts or whether health risks at new receptor locations would exceed the applicable thresholds of significance. Proposed policies in addition to Mitigation Measures AIR-1, AIR-2, and AIR-3 would reduce this impact but not to a less-than-significant level.

5.2.2.3 Cultural Resources

Impact CUL-1: Historic Architectural Resource – Development facilitated by streamlining actions and policies within the HEI could result in damage to or destruction of historic architectural resources. Similarly, the Safety Element would not directly approve any physical development but would implement policies that could result in structural improvements to existing historic-age buildings that may not be subject to discretionary review, which could result in damage to or destruction of historic architectural resources. General Plan policies, SCAs, and Mitigation Measure CUL-1 would reduce but not avoid this significant impact if these resources were permanently lost.

Impact CUL-4: Cumulative Historic Architectural Resource Impacts – Future development under the Proposed Project, combined with cumulative development citywide, could result in cumulatively considerable impacts to historic architectural resources. Mitigation Measure CUL-1 as well as SCAs would be incorporated into all development projects but would not reduce impacts to a less-than-significant level.

5.2.2.4 Hazards and Hazardous Materials / Wildfire

Impact HAZ-6 and Impact WLD-1: Impair Implementation of an adopted Emergency Response Plan or Emergency Evacuation Plan – Six evacuation scenarios (tsunami, dam failure, 100-year/500-year flooding, and three wildfire) were modeled and determined that in each scenario evacuation traffic would have a significant impact on area roadways The increased housing density throughout the City would impair emergency evacuation because it causes congestion and exacerbates over-capacity problems that preclude timely and safe evacuation. No additional mitigation has been identified that can feasibly reduce this impact to less than significant. Therefore, the Proposed Project would result in a significant and unavoidable impact related to emergency response plans or emergency evacuation plans.

5.3 Alternatives Considered but Rejected for Further Evaluation

CEQA Guidelines Section 15126.6(c) requires an EIR to identify and briefly discuss any alternatives that were considered by the lead agency and rejected from further evaluation. In identifying alternatives to the Project, primary consideration was given to alternatives that would reduce impacts while still meeting most of the basic objectives as well as the City's planning

goals and objectives, such as those articulated in the General Plan. Alternatives that would likely have impacts that are the same as or greater than the Proposed Project or that would not meet most of the basic objectives were rejected from further consideration.

5.3.1.1 Off-Site Alternative

The primary objective of the Proposed Project is to ensure the City's conformance with State law. There would be no way to meet this objective with an alternative that did not focus on the City itself, and therefore this alternative was not analyzed further.

5.3.1.2 Moratorium on Market-Rate Housing Development Alternative

As part of the planning and community engagement process, the City heard requests for consideration of a Moratorium on Market-Rate Housing Development Alternative. This alternative was ultimately determined to be infeasible due to State requirements for Housing Elements to provide for both affordable and market-rate housing development.

5.4 Description and Comparative Analysis of Selected Alternatives

Based on the screening process described above, the City has identified the following reasonable range of alternatives to be addressed in this Draft EIR:

- Alternative 1: The No Project Alternative
- Alternative 2: The No Affordable Housing Overlay Buffer Zone on parcels in the Very High Fire Hazard Severity Zone
- Alternative 3: The No Missing Middle Alternative

Table 5-1 presents a summary of each alternatives' anticipated development and provides for a comparison of alternatives and the Proposed Project. This section also describes each alternative and presents a discussion of the comparative environmental effects of each alternative compared to the effects of the Proposed Project.

As permitted by CEQA, the significant effects of the alternatives are discussed in this Draft EIR in less detail than are the effects of the Proposed Project (CEQA *Guidelines* Section 15126.6[d]). All impacts of the Proposed Project are described after implementation of any SCAs identified in Chapter 4, *Environmental Setting, Impacts, Standard Conditions of Approval, and Mitigation Measures,* of this Draft EIR.

TABLE 5-1
DESCRIPTION OF PROJECT AND ALTERNATIVES SELECTED FOR EVALUATION

	Proposed Project	Alternative 1: No Project Alternative	Alternative 2: No Affordable Housing Overlay Buffer Zone on parcels in the VHFHSZ	Alternative 3: No Missing Middle Alternative
Housing Units				
Corridor Height Changes	2,000	-	2,000	2,000
Upzoning	1,684	-	1,684	184
Affordable Housing Overlay	1,000	-	750	1,000
Downtown Oakland Specific Plan Zoning Changes	500	500	500	500
Subtotal	*5,184*	*500*	*4,934*	*3,684*
6th Cycle Housing Element Sites (including ADUs)	36,274	36,274	36,274	36,274
Total	**41,458**	**36,774**	**41,208**	**39,958**
Employment				
Jobs	+18,851 jobs	+18,851 jobs	+18,851 jobs	+18,851 jobs

NOTE:

[1] Since the time of EIR development, the California Department of Housing and Community Development requested several changes to the Housing Sites Inventory that reduced the overall existing capacity of development (34,831 units; a difference of 1,543 units) but distributed more housing units in areas of higher incomes and near transit. Thus, this EIR describes a modestly more intense buildout estimate and thus serves as a conservative analysis.

[2] The DOSP is reasonably expected be adopted within the projection period and thus the estimated additional capacity of 500 units is also reasonably expected occur within the projection period, with or without adoption of the Proposed Project.

SOURCE: Dyett & Bhatia; Alameda County Transportation Commission (ACTC) 2020 Regional Travel Demand Model

5.4.1 Alternative 1: No Project Alternative

The No Project Alternative is the circumstance under which the Proposed Project is not adopted and does not proceed. This alternative is analyzed consistent with Section 15126.6(e) of the *CEQA Guidelines*, which states that the No Project Alternative must include the assumption that conditions at the time the Notice of Preparation (NOP) of an EIR was circulated for public review would not be changed because the project would not be adopted. The No Project Alternative also considers the events or actions that would reasonably be expected to occur in the foreseeable future if the Proposed Project were not approved. Therefore, under the No Project Alternative, the goals and policies within the City's existing Safety Element would remain unchanged, and land use and zoning designations currently in place would continue. There would be no revisions to the design review process and no additional streamlining actions and entitlement reforms would occur. The proposed Environmental Justice Element would not be adopted.

Under the No Project Alternative, only the 6th Cycle Housing Element inventory would represent the *Buildout Program*, as these sites represent the number of units the City must plan for over the eight-year period and the number of units reasonably expected to be developed during the projection period ending in 2030. As described in Table 5-1, buildout of Alternative 1 is estimated to result in approximately 5,000 (12 percent) fewer units when compared with the Proposed Project *Buildout Program*. No new or more stringent policies related to environmental justice or safety would be adopted, and the City's 2004 Safety Element would apply.

This alternative would meet only some of the basic objectives of the Proposed Project. The No Project Alternative would still meet the housing needs of all Oaklanders for the 6th Housing Element cycle (objective 1); create and preserve affordable housing restricted for extremely low, very low, low, and moderate-income households (objective 5); and minimize risks posed by natural and human-caused hazards (objective 6). However, without adoption of the Proposed Project, Alternative 1 would not reduce racial segregation, facilitate integrated living patterns, or transform racially and ethnically concentrated areas of poverty (objectives 2 and 3); encourage a diversity of housing types in high resource neighborhoods (objective 4); reduce pollution exposure (objective 7); promote equitable access to public facilities, healthy food, safe and sanitary homes, and physical activity (objective 8); reduce barriers to inclusive engagement and participation in the public decision making process (objective 9); or prioritize improvements and programs that address needs of EJ communities (objective 10).

5.4.1.1 Alternative 1: No Project Alternative Comparative Analysis

The analysis of the No Project Alternative considers the existing conditions at the time the NOP was published, as well as what reasonably would be expected to occur in the foreseeable future if the Proposed Project were not approved, based on the current General Plan and Planning Code and consistent with available infrastructure and community services.

An estimated 36,774 residential units would be developed under the No Project Alternative during the projection period ending in 2030. This results in approximately 5,000 fewer units when compared with the Proposed Project *Buildout Program*. In addition, this development would occur without new or more stringent policies related to environmental justice or safety, and the City's 2004 Safety Element would apply. While this path is not considered feasible due to the obligations under State law to undertake these updates, they are nonetheless analyzed based on the requirements under CEQA to analyze a status quo no project alternative.

With less construction and fewer dwelling units, the reduced development under the No Project Alternative could result in reduced impacts compared with those of the Proposed Project with respect to all topic areas. However, future development under the No Project Alternative would not benefit from mitigation measures presented in this Draft EIR. Therefore, although the No Project Alternative development would be reduced, impacts related to shadow, wind, air quality, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality, and tribal cultural resources would not be reduced when compared with the impacts of the Proposed Project.

The No Project Alternative would not reduce any of the Proposed Project's significant and unavoidable impacts to a less than significant level. As with the Proposed Project, it cannot be said with certainty that future residential development in the City would avoid significant shadow impacts, result in wind hazards, or combine with cumulative development to result in a significant and unavoidable cumulative aesthetic impact. Similarly, future development under the No Project Alternative could result in significant and unavoidable air quality impacts including impacts related to criteria pollutant emissions. Although uncertain, it is possible that without the new or more stringent policies related to environmental justice, future development under the No Project Alternative could result in more severe significant and unavoidable air quality impacts related to

siting sensitive receptors near major sources of toxic air contaminants, exposure of sensitive receptors to substantial pollutant concentrations, and cumulative exposure of sensitive receptors to substantial levels of fine particulate matter and toxic air contaminants.

Significant and unavoidable impacts related to historical architectural resources would be reduced without the Proposed Project's streamlining actions and expanded availability of ministerial approvals. However, future development under the No Project Alternative would not benefit from mitigation measures presented in this Draft EIR and still could result in damage to, or destruction of, historic architectural resource.

The No Project Alternative would still result in increased housing density throughout the City. Therefore, it would not reduce the significant and unavoidable impacts related to wildfire-, tsunami-, dam failure-, or flooding-related evacuation.

This alternative would meet only some of the basic objectives of the Proposed Project, as described above.

5.4.2 Alternative 2: The No Affordable Housing Overlay Buffer Zone on parcels in the Very High Fire Hazard Severity Zone Alternative

The Proposed Project's Affordable Housing Overlay (AHO) would apply to several zoning areas in the City, including portions of the Very High Fire Hazard Severity Zone Area located within 1,000 feet of the Highway 13 and I-580 corridor that are outside of the S-9 Fire Safety Protection Combining Zone.[1] This is intended to incentivize 100 percent affordable housing development in some of Oakland's highest-resourced areas, as the Oakland Hills have historically remained largely exclusive to multifamily development, while balancing concerns for creating additional density within areas prone to fire risk. However, this 1,000-foot buffer area is limited as it overlaps substantially with the S-9 Fire Safety Protection Combining Zone, which would be excluded from the AHO Zone. Sites within the S-9 Fire Safety Protection Combining Zone would be prohibited from taking advantage of the AHO proposed property development standards. The Proposed Project would not, however, entirely exclude development in the VHFHSZ, which is also mostly in the Oakland Hills although not conterminous with the S-9 Zone (see Figures 3-14 and 4.18-1).

Alternative 2 would include all components of the Proposed Project, including most of the provisions of the AHO, with the exception of parcels in the VHFHSZ within the AHO 1,000-foot buffer area surrounding the Highway 13 and I-580 corridor (see **Figure 5-1**). In other words, the AHO would not apply to any portion of the VHFHSZ located within the City. As described in Table 5-1, buildout of Alternative 2 is estimated to result in 250 fewer affordable units when compared with the Proposed Project *Buildout Program*.

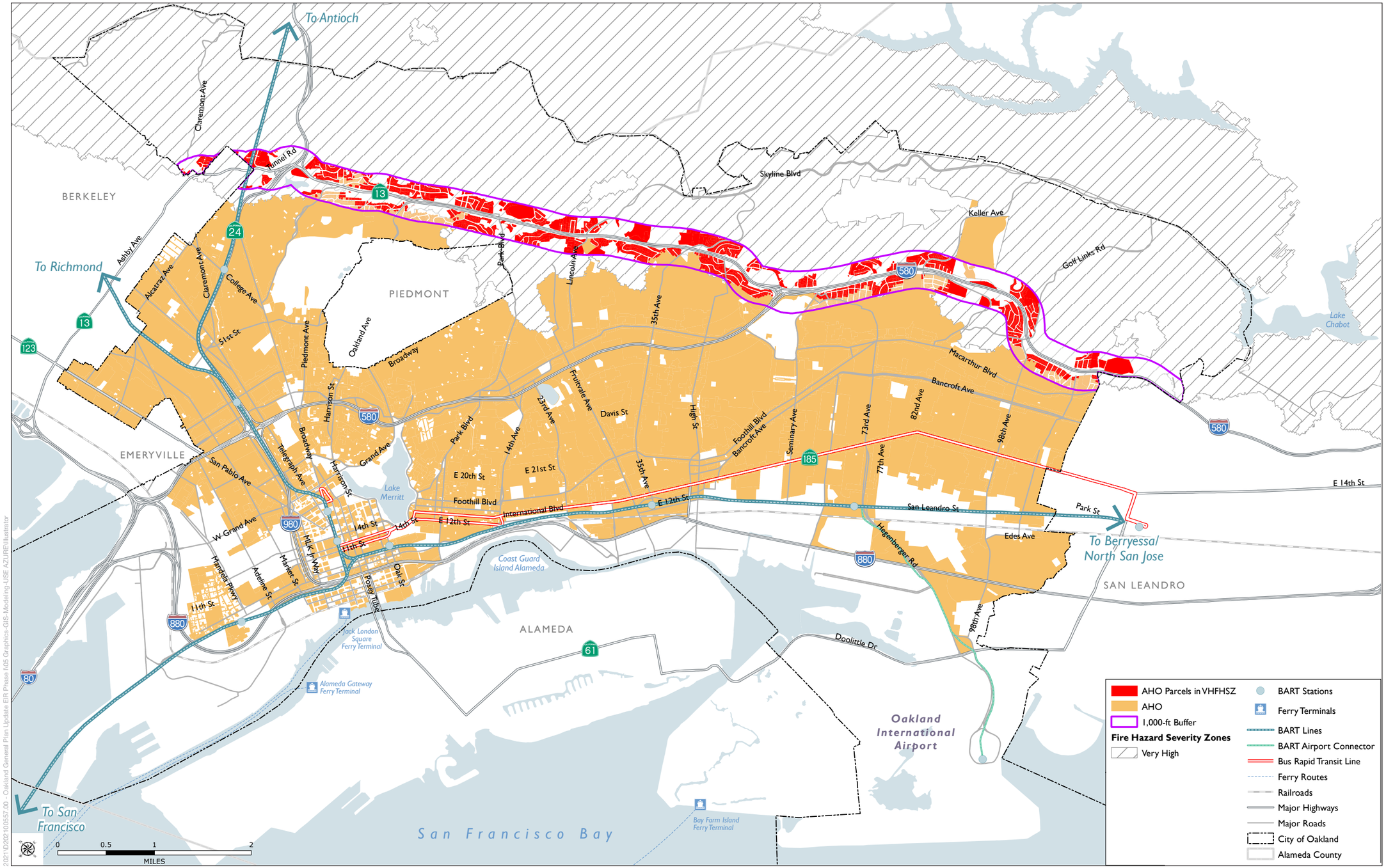
[1] The intent of the S-9 Fire Safety Protection Combining Zone is to promote the public health, safety and welfare by ensuring that activities that are located, in whole or part, within Very High Fire Hazard Severity Zones, and accessed from streets or cul-de-sacs that do not meet emergency access standards, develop in such a manner as not to be a serious threat to public health or safety.

This alternative would meet some of the project objectives more effectively than others. It would meet the housing needs of all Oaklanders for the 6th Housing Element cycle (objective 1); create and preserve affordable housing restricted for extremely low, very low, low, and moderate-income households (objective 5); reduce pollution exposure (objective 7); promote equitable access to public facilities, healthy food, safe and sanitary homes, an physical activity (objective 8); reduce barriers to inclusive engagement and participation in the public decision making process (objective 9); and prioritize improvements and programs that address needs of EJ communities (objective 10). However, it would be less effective in terms of reducing racial segregation, facilitating integrated living patterns, and transforming racially and ethnically concentrated areas of poverty (objectives 2 and 3); and encouraging a diversity of housing types in high resource neighborhoods (objective 4). Alternative 2 would be more effective in minimizing risks posed by natural and human-caused hazards (objective 6), as affordable housing would not be incentivized in the VHFHSZ.

5.4.2.1 Alternative 2: Comparative Analysis of No Affordable Housing Overlay Buffer Zone on parcels in the Very High Fire Hazard Severity Zone Alternative

The analysis of Alternative 2 considers all the components of the Proposed Project but removes the AHO in the portions in the VHFHSZ located within 1,000 Feet of the Highway 13 and I-580 corridor that are outside of the S-9 Fire Safety Protection Combining Zone. As described above, development projects within 1,000 feet of the Highway 13 and I-580 corridor through the Oakland Hills and outside the S-9 Fire Safety Protection Combining Zone would not be able to take advantage of the AHO property development standards. An estimated 41,208 residential units would be developed under Alternative 2 during the projection period ending in 2030, with approximately 250 fewer affordable units in the Oakland Hills when compared with the Proposed Project *Buildout Program*. As a project alternative, the future development under Alternative 2 would also be subject to the mitigation measures established in this Draft EIR.

Future residential development projects in the Oakland Hills are anticipated to be smaller in scale and density compared with future residential development in other parts of the City. Although Alternative 2's anticipated development is slightly reduced compared with the Proposed Project *Buildout Program*, eliminating 250 affordable units in the Oakland Hills from the projected development program is not anticipated to result in a notable reduction in the severity of significant impacts associated with the Proposed Project with the exception of potential impacts related to wildland fire. Alternative 2 would result in slightly less construction activity within a VHFHSZ and therefore a reduced risk of wildfire associated with introducing new sources of ignition (i.e., construction vehicles and equipment) into those areas. Reduced development in the VHFHSZ would reduce risks associated with installation or maintenance of infrastructure, impairment of an emergency response plan or emergency evacuation plan, and exposure of people or structures to wildfire associated risks. However, these impacts would not be reduced to a less-than-significant level. In addition, Alternative 2 would still result in increased housing density throughout the City and therefore, it would not reduce the significant and unavoidable impacts related to tsunami-, dam failure-, or flooding-related evacuation.



2021\D2021005\57.00 - Oakland General Plan Update EIR Phase I\05 Graphics-GIS-Modeling-USE AZ\IRE\Illustrator

SOURCE: Dyett & Bhatia, 2022

Phase I Oakland 2045 General Plan Update EIR

Figure 5-1
Alternative 2: The Proposed Project with No Affordable Housing Overlay Buffer Zone on Parcels in the Very High Fire Hazard Severity Zone

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Alternative 2 would not reduce any of the Proposed Project's significant and unavoidable impacts to a less than significant level. As with the Proposed Project, it cannot be said with certainty that future residential development in the City would avoid significant shadow impacts, not cause wind hazards, or combine with cumulative development to result in a significant and unavoidable cumulative aesthetic impact. Similarly, future development under Alternative 2 could result in significant and unavoidable air quality impacts including impacts related to criteria pollutant emissions, siting sensitive receptors near major sources of toxic air contaminants, exposure of sensitive receptors to substantial pollutant concentrations, and cumulative exposure of sensitive receptors to substantial levels of fine particulate matter and toxic air contaminants.

Significant and unavoidable impacts related to historical architectural resources would be the same as those identified for the Proposed Project including the potential to result in damage to, or destruction of, historic architectural resource.

This alternative would meet some of the Proposed Project objectives more effectively than others, as described above.

5.4.3 Alternative 3: The No Missing Middle Alternative

As indicated in the Project Description, the Proposed Project includes several changes to the Planning Code that include revised densities, maximum building heights, and minimum lot standards where appropriate throughout the City in Hillside Residential RH-4, all Detached Residential (RD) zones, all Residential Mixed Housing Type (RM) Zones, and Urban Residential RU-1 and RU-2 Zones. Alternative 3 would include all components of the Proposed Project with the exception of the proposed HEI Planning Code amendments to change development standards the existing lower density residential zoning districts (RD, RM, RU and RH-4). These zones have historically served as single-family neighborhoods in some of Oakland's highest-resourced areas that have historically remained largely exclusive to multifamily development. Alternative 3 would not encourage a diversity of housing types such as flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and accessory dwelling units (ADUs) in currently single-family-dominated neighborhoods nor allow for "missing middle" housing development (see Chapter 3, Section 3.5.1.1, Proposed Zoning Code Amendments). As described in Table 5-1, buildout of Alternative 3 is estimated result in approximately 1,500 fewer units when compared with the Proposed Project *Buildout Program*.

This alternative would meet some of the basic objectives of the Proposed Project. It would meet the housing needs of all Oaklanders for the 6th Housing Element cycle (objective 1); create and preserve affordable housing restricted for extremely low, very low, low, and moderate-income households (objective 5); reduce pollution exposure (objective 7); reduce barriers to inclusive engagement and participation in the public decision making process (objective 9); and prioritize improvements and programs that address needs of EJ communities (objective 10). However, it would be less effective in terms of reducing racial segregation, facilitating integrated living patterns, and transforming racially and ethnically concentrated areas of poverty (objectives 2 and 3); and promoting equitable access to public facilities, healthy food, safe and sanitary homes, and physical activity (objective 8). Without adoption of the Planning Code amendments targeted at facilitating missing middle development, this alternative would not encourage a diversity of

housing types in high resource neighborhoods (objective 4). Alternative 3 would be more effective in minimizing risks posed by natural and human-caused hazards (objective 6), as housing development would not be incentivized in historically single-family neighborhoods, many of which are in the Oakland Hills.

5.4.3.1 Alternative 3: Comparative Analysis of No Missing Middle Alternative

The analysis of Alternative 3 considers all the components of the Proposed Project but removes proposed HEI Planning Code amendments to change development standards in the existing lower density residential zoning districts (RD, RM, RU, and RH-4). An estimated 39,958 residential units would be developed under Alternative 3 during the projection period ending in 2030, with approximately 1,500 fewer medium density units in the single-family neighborhoods when compared with the Proposed Project *Buildout Program*. As a project alternative, the future development under Alternative 3 would also be subject to the mitigation measures established in this Draft EIR.

Similar to Alternative 2, Although Alternative 3's buildout program is slightly reduced compared with the Proposed Project *Buildout Program*, eliminating 1,500 medium density units in the low density residential neighborhoods from the projected development program is not anticipated to result in a notable reduction in the severity of significant impacts associated with the Proposed Project. As with the Proposed Project, it cannot be said with certainty that future residential development in the City would avoid significant shadow impacts, not cause wind hazards, or combine with cumulative development to result in a significant and unavoidable cumulative aesthetic impact. Future development under Alternative 3 could result in significant and unavoidable air quality impacts including impacts related to criteria pollutant emissions, siting sensitive receptors near major sources of toxic air contaminants, exposure of sensitive receptors to substantial pollutant concentrations, and cumulative exposure of sensitive receptors to substantial levels of fine particulate matter and toxic air contaminants. Significant and unavoidable impacts related to historical architectural resources would be the same as those identified for the Proposed Project including the potential to result in damage to, or destruction of, historic architectural resource.

Many of the historically single-family neighborhoods are in the Oakland Hills, Alternative 3 could result in slightly less construction activity within a VHFHSZ and therefore a reduced risk of wildfire associated with introducing new sources of ignition (i.e., construction vehicles and equipment) into those areas. Reduced development in the Oakland Hills would reduce risks associated with exposure of people or structures to wildfire associated risks. However, these impacts would not be reduced to a less-than-significant level. In addition, Alternative 3 would still result in increased housing density throughout the City and therefore, it would not reduce the significant and unavoidable impacts related to tsunami-, dam failure-, or flooding-related evacuation.

This alternative would meet some of the Proposed Project objectives more effectively than others, as described above.

5.5 Overall Comparison of Proposed Project with Alternatives

The analysis of alternatives to the Proposed Project is summarized and compared in two tables that provide a ready means for the reader to review and compare the alternatives with each other, and with the Proposed Project.

Table 5-2 provides a summary of impact levels within all environmental topic areas. Overall, this table shows that although the No Project Alternative would result in reduced environmental effects when compared with the Proposed Project, it would not benefit from the mitigation measures presented in this Draft EIR and thus would result in more severe significant impacts in many topic areas. The No Project Alternative would not reduce any of the Proposed Project's significant and unavoidable impacts to a less than significant level. The No Affordable Housing Overlay Buffer Zone on parcels in the Very High Fire Hazard Severity Zone and the No Missing Middle Alternative would result in the same significant and significant and unavoidable impacts as identified for the Proposed Project although risks associated with wildfire would be reduced (Hazards and Hazardous Materials, Wildfire).

Table 5-3 summarizes the ability of each alternative to meet the basic objectives for the Proposed Project. Table 5-3 indicates that the No Project Alternative would have the ability to meet eight of the basic objectives of the Proposed Project, although four to a lesser degree, and would not meet four of the basic objectives of the Proposed Project. The No Affordable Housing Overlay Buffer Zone on parcels in the Very High Fire Hazard Severity Zone Alternative would have the ability to meet all of the basic objectives of the Proposed Project, although four to a lesser degree. The No Missing Middle Alternative would meet nine of the basic objectives of the Proposed Project, although four to a lesser degree, and would not meet one of the basic objectives of the Proposed Project.

5.5.1 Environmentally Superior Alternative

CEQA Guidelines §15126.6(e)(2) requires an EIR to identify an environmentally superior alternative to the proposed project. If the environmentally superior alternative is the No Project Alternative, the EIR also must identify an environmentally superior alternative from among the other alternatives. In general, the environmentally superior alternative is defined as that alternative with the least adverse impacts to the Plan Area and its surrounding environment. *CEQA Guidelines* Section 15126.6(a) places emphasis on alternatives that "avoid or substantially lessen the significant effects" of a project.

Although the No Project Alternative development program is estimated to result in approximately 5,000 fewer residential units over the projection period, future development under this alternative would not be subject to the mitigation measures and revised SCAs presented in Chapter 4 of this Draft EIR. Therefore, although some aspects of significant impacts may be reduced under the No Project Alternative, other impacts may be more severe, and the overall effects of development under the No Project Alternative would not avoid or substantially lessen the significant effects of the Proposed Project.

TABLE 5-2
PROJECT ALTERNATIVES IMPACT SUMMARY AND COMPARISON

Impact	Alternative 1: No Project Alternative	Alternative 2: No Affordable Housing Overlay Buffer Zone on parcels in the Very High Fire Hazard Severity Zone	Alternative 3: No Missing Middle Alternative	Proposed Project
Aesthetics (Scenic Resources, Character, Light/Glare)	LTS with SCAs ⇩	LTS with SCAs	LTS with SCAs	LTS with SCAs
Aesthetics (Wind)	SU	SU	SU	SU
Aesthetics (Shadow)	SU	SU	SU	SU
Agriculture and Forestry Resources	No Impact	No Impact	No Impact	No Impact
Air Quality (emissions)	SU	SU	SU	SU
Air Quality (siting and exposure of sensitive receptors)	SU	SU	SU	SU
Biological Resources	LTS with SCA	LTS with Mitigation	LTS with Mitigation	LTS with Mitigation
Cultural (Historic Architectural Resources)	SU	SU	SU	SU
Cultural (Archaeological Resources)	LTS with SCA	LTS with Mitigation	LTS with Mitigation	LTS with Mitigation
Energy	Less than Significant ⇩	Less than Significant	Less than Significant	Less than Significant
Geology, Soils, and Paleontological Resources	LTS with SCAs ⇩	LTS with SCAs	LTS with SCAs	LTS with SCAs
Greenhouse Gas Emissions	LTS with SCA	LTS with Mitigation	LTS with Mitigation	LTS with Mitigation
Hazards and Hazardous Materials	SU ⇩	SU	SU	SU
Hydrology and Water Quality	LTS with SCA	LTS with Mitigation	LTS with Mitigation	LTS with Mitigation
Land Use and Planning	LTS with SCAs ⇩	LTS with SCAs	LTS with SCAs	LTS with SCAs
Mineral Resources	No Impact	No Impact	No Impact	No Impact
Noise	LTS with SCAs ⇩	LTS with SCAs	LTS with SCAs	LTS with SCAs
Population and Housing	LTS with SCAs ⇩	LTS with SCAs	LTS with SCAs	LTS with SCAs
Public Services	LTS with SCAs ⇩	LTS with SCAs	LTS with SCAs	LTS with SCAs
Recreation	LTS with SCAs ⇩	LTS with SCAs	LTS with SCAs	LTS with SCAs
Transportation and Circulation	LTS with SCAs ⇩	LTS with SCAs	LTS with SCAs	LTS with SCAs
Tribal Cultural Resources	LTS with SCA	LTS with Mitigation	LTS with Mitigation	LTS with Mitigation
Utilities and Service Systems	LTS with SCAs ⇩	LTS with SCAs	LTS with SCAs	LTS with SCAs
Wildfire	SU ⇩	SU ⇩	SU ⇩	SU

NOTES:

LTS with SCAs = Less than Significant with Standard Conditions of Approval
SU = Significant Unavoidable

⇧ - The impact is more severe than compared to the Proposed Project.

⇩ - The impact is /less severe than compared to the Proposed Project.

TABLE 5-3
ABILITY OF PROJECT ALTERNATIVES TO SATISFY BASIC OBJECTIVES OF THE PROJECT

Project Objective	Alternative 1: No Project Alternative	Alternative 2: No Affordable Housing Overlay Buffer Zone on parcels in the Very High Fire Hazard Severity Zone	Alternative 3: No Missing Middle Alternative
1. Remove regulatory development constraints and provide development incentives so that the City can meet the housing needs of all Oaklanders for the 6th Housing Element cycle.	Meets objective	Meets objective	Meets objective
2. Reduce racial segregation and disparities in housing opportunities and outcomes.	Does not meet objective	Meets objective ⇩	Meets objective ⇩
3. Replace segregated living patterns with truly integrated and balanced living patterns and transform racially and ethnically concentrated areas of poverty into areas of opportunity.	Does not meet objective	Meets objective ⇩	Meets objective ⇩
4. Encourage a diversity of housing types such as flats, duplexes, triplexes, fourplexes, townhomes/rowhouses, and accessory dwelling units in currently single-family-dominated neighborhoods, and along corridors, transit-proximate areas, and high resource neighborhoods; and remove constraints on the development of housing.	Does not meet objective	Meets objective ⇩	Does not meet objective
5. Create and preserve affordable housing restricted for extremely low, very low, low, and/or moderate-income households.	Meets objective	Meets objective	Meets objective
6. Minimize risks posed by natural and human-caused hazards that may impact residents' health and welfare by protecting residents, workers, and visitors from seismic and geologic hazards, fire hazards, hazardous materials, flooding, and other potential hazards that risk life and property.	Does not meet objective	Meets objective⇧	Meets objective⇧
7. Reduce pollution exposure, including the improvement of air quality.	Does not meet objective	Meets objective	Meets objective
8. Promote equitable access to public facilities, healthy food, safe and sanitary homes, and physical activity.	Does not meet objective	Meets objective	Meets objective ⇩
9. Reduce barriers to inclusive engagement and participation in the public decision-making process.	Does not meet objective	Meets objective	Meets objective
10. Prioritize improvements and programs that address the needs of Environmental Justice communities.	Does not meet objective	Meets objective	Meets objective

NOTES: ⇧/⇩ - The alternative is more (⇧) / less (⇩) aligned with the objective, compared to the Proposed Project.

The No Affordable Housing Overlay Buffer Zone on parcels in the Very High Fire Hazard Severity Zone Alternative and the No Missing Middle Alternative would not increase the severity of significant impacts but would neither avoid nor substantially lessen the significant effects of the Proposed Project. Both alternatives would reduce but not avoid significant impacts related to hazards and wildland fire. As described above, the No Affordable Housing Overlay Buffer Zone Alternative 2 would result in approximately 250 fewer affordable units in the Oakland Hills when compared with the Proposed Project *Buildout Program*, and the No Missing Middle Alternative would result in approximately 1,500 fewer medium density units in the single-family neighborhoods when compared with the Proposed Project *Buildout Program.* With a greater reduction in development, the No Missing Middle Alternative is estimated to result in a greater reduction to the Proposed Project hazards and wildfire impacts. Therefore, the City has identified the No Missing Middle Alternative as the environmentally superior alternative. Nonetheless, City decision-makers may weigh the relative benefits of the alternatives differently and with additional information received in or developed during the Proposed Project approval process.

CHAPTER 6
Impact Overview and Growth Inducement

Consistent with the *CEQA Guidelines* Section 15126.2, this chapter discusses significant impacts on the environment that cannot be avoided if the Proposed Project is adopted and implemented and identifies significant environmental changes that would be irreversible if the Proposed Project is adopted and implemented. Effects found not to be significant are discussed in Section 4.19 of Chapter 4. Cumulative impacts are separately discussed in Chapter 4, *Environmental Setting, Impacts, Standard Conditions of Approval, and Mitigation Measures*.

6.1 Significant and Unavoidable Environmental Effects

A significant and unavoidable impact would result if a project were to reach or exceed the defined threshold of significance and no feasible mitigation measures are available to reduce the impact to a less-than-significant level. Thresholds of significance and potential impacts of the Proposed Project are identified along with SCAs and feasible mitigation measures in Chapter 4, *Environmental Setting, Impacts, Standard Conditions of Approval, and Mitigation Measures*.

For each topic in Chapter 4, the analysis also identifies cumulative impacts, which Section 15355 of the State *CEQA Guidelines* defines as "two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts." This section of the State *CEQA Guidelines* goes on to state that "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." If a cumulative effect is identified, the analysis then evaluates whether the Proposed Project's contribution to the cumulative effect is *cumulatively considerable*, which is considered a significant impact.

Adoption of the Proposed Project would result in the following significant and unavoidable impacts, as identified in Chapter 4 of this Draft EIR.

Aesthetics

Impact AES-4: Shadows – The Proposed Project could include mid- and high-rise buildings that may cast shadow on public open spaces, solar collectors, and/or historic resources. Given that there are not sufficient details available to analyze specific shadow impacts, it cannot be known with certainty that development facilitated by the Proposed Project would not cause significant shadow impacts that impairs the function of a building using passive solar collection; impairs the beneficial use of a public or quasi-public park, lawn, garden, or open space; impacts the integrity of an historic resource with sunlight-sensitive character defining features, or otherwise results in

inadequate provision of light. The Draft EIR analysis includes Mitigation Measure AES-1, which would require project sponsors complete a site-specific shadow study when individual projects are proposed. The effectiveness of this measure cannot be determined with certainty because there are not sufficient details available to analyze specific impacts, as such the impact is conservatively significant and unavoidable.

Impact AES-6: Wind Hazards – The Proposed Project could include structures that are 100 feet or greater in height and located in the Downtown area which requires a wind analysis for the proposed structures. The EIR analysis includes Mitigation Measure AES-2, which would require project sponsors complete a site-specific wind analysis when individual projects are proposed. Implementation of a wind analysis that includes design recommendations to reduce ground level wind speeds could reduce the severity of wind impacts. The effectiveness of this cannot be determined with certainty because there are not sufficient details available to analyze specific impacts, as such the impact is conservatively significant and unavoidable.

Impact AES-7: Cumulative Aesthetics, Wind, and Shadow – The Proposed Project, combined with cumulative sources in the Plan Area and areas in the immediate vicinity of City boundaries, could contribute to cumulative aesthetics, wind, and shadow impacts. Due to the uncertainty of effectiveness of available mitigation, the Proposed Project would result in significant cumulative impacts to shadow and wind.

Air Quality

Impact AIR-3: Criteria Pollutant Emissions from Construction and Operation of the Proposed Project – Construction and operation associated with future development under the Proposed Project could result in average daily emissions of criteria pollutants that would exceed the City's construction significance thresholds of 54 pounds per day of reactive organic gases (ROG), oxides of Nitrogen (NOX), and particulate matter with a diameter of less than 2.5 micrometers (PM2.5), or 82 pounds per day of and particulate matter with a diameter of less than 10 micrometers (PM10). Without specific details about future development under the Proposed Project it is impossible to know for certain whether individual projects could generate emissions of criteria air pollutants that would exceed the applicable thresholds of significance. Mitigation Measure AIR-1, proposed policies, and SCAs would reduce emissions, but not to less-than-significant levels.

Impact AIR-5: Toxic Air Contaminants – The Proposed Project could introduce sensitive receptors near existing major sources of TACs including major highways I-580, I-880, and I-980, the Oakland Ferry Terminal, the Oakland Airport, and the Port of Oakland. The impact would be addressed with adherence to Title 24 Building Code requirements, proposed policies, SCA 23, and the implementation of Mitigation Measure AIR-2; however, without specific details about where future projects would site new sensitive receptors and what the specific health risks would be at these locations, the impact would remain significant and unavoidable.

Impact AIR-6: Exposure of Sensitive Receptors to Substantial Pollutant Concentrations from Construction and Operation – Construction and operation associated with future development under the Proposed Project could generate TAC emissions that could cause

significant health risk impacts. Project-specific information for future development under the Proposed Project is not yet available and health risk impacts cannot be evaluated at a project-specific level at this time. Mitigation Measures AIR-1, AIR-2, and AIR-3 as well as proposed policies and SCAs would reduce the health impacts from future projects, but not to a less-than-significant level.

Impact AIR-8: Cumulative Exposure of Sensitive Receptors to Substantial Levels of Fine Particulate Matter (PM2.5) and TACs – The contribution of future projects that could be developed under the Proposed Project could combine with risks from existing TAC sources and the resulting community health risks could exceed BAAQMD cumulative risk thresholds. However, without specific details about future development under the Proposed Project, it is impossible to determine whether future projects would generate TAC emissions that could cause significant health risk impacts or whether health risks at new receptor locations would exceed the applicable thresholds of significance. Proposed policies in addition to Mitigation Measures AIR-1, AIR-2, and AIR-3 would reduce this impact but not to a less-than-significant level.

Cultural Resources

Impact CUL-1: Historic Architectural Resource – Development facilitated by streamlining actions and policies within the HEI could result in damage to or destruction of historic architectural resources. Similarly, the Safety Element would not directly approve any physical development but would implement policies that could result in structural improvements to existing historic-age buildings that may not be subject to discretionary review, which could result in damage to or destruction of historic architectural resources. General Plan policies, SCAs, and Mitigation Measure CUL-1 would reduce but not avoid this significant impact if these resources were permanently lost.

Impact CUL-4: Cumulative Historic Architectural Resource Impacts – Future development under the Proposed Project, combined with cumulative development citywide, could result in cumulatively considerable impacts to historic architectural resources. Mitigation Measure CUL-1 as well as SCAs would be incorporated into all development projects but would not reduce impacts to a less-than-significant level.

Hazards and Hazardous Materials / Wildfire

Impact HAZ-6 and Impact WLD-1: Impair Implementation of an adopted Emergency Response Plan or Emergency Evacuation Plan – Six evacuation scenarios (tsunami, dam failure, 100-year/500-year flooding, and three wildfire) were modeled and determined that in each scenario evacuation traffic would have a significant impact on area roadways The increased housing density throughout the City would impair emergency evacuation because it causes congestion and exacerbates over-capacity problems that preclude timely and safe evacuation. No additional mitigation has been identified that can feasibly reduce this impact to less than significant. Therefore, the Proposed Project would result in a significant and unavoidable impact related to emergency response plans or emergency evacuation plans.

6.2 Significant Irreversible Environmental Changes

Section 15126.2(d) of the State *CEQA Guidelines* states that:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, because a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The project would involve a large commitment of nonrenewable resources or the proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Each of these three categories is discussed below.

6.2.1 Changes in Land Use Which Would Commit Future Generations

Adoption of the Proposed Project would result in growth and development within the City of Oakland. The Proposed Project includes changes to the Planning Code development standards such as increased heights along transit corridors, increased housing density, shifts in where additional density is allowed, affordable housing overlay, revisions to design review process, and other streamlining actions and entitlement reforms. These policy and Planning Code amendments are anticipated to alter the type of housing produced, as well as how and where housing is produced, such that it is more dispersed throughout the City. These policy and Planning Code amendments are also anticipated to result in an increase in housing development, and associated increase in residential population.

The *Buildout Program*, which is the maximum feasible housing development that the City has projected can reasonably be expected to occur under the Proposed Project through the projection period ending in 2030, would be consistent with *Plan Bay Area 2040* growth projections for the City and the region. Further, future development under the Proposed Project would occur within an urbanized area developed with existing buildings and infrastructure Although development under the Proposed Project would provide higher density development along transit corridors and near regional transit, and facilitate denser land use patterns throughout the City, it would not result in significant changes in the overall land use pattern and would not commit future generations to significant changes in land use.

6.2.2 Irreversible Changes from Environmental Accidents

As discussed in Section 4.8, *Hazards and Hazardous Materials*, future development under the Proposed Project would require the use and disposal of hazardous materials during construction and operation. No significant irreversible environmental damage, such as what might occur as a result of an accidental spill or explosion of hazardous materials, is anticipated from future development under the Proposed Project; however, whenever hazardous materials are present, the potential always exists for accidents that may damage the environment. The presence and use of hazardous materials and remediation of existing hazardous materials on project sites are described in Section 4.8, *Hazards and Hazardous Materials*, along with existing federal, State, and local regulations and City of Oakland Standard Conditions of Approval (SCAs) associated with hazards and hazardous materials that would reduce the possibility of significant environmental damage to less than significant. Based on this conclusion, any potential damage would not be irreversible.

6.2.3 Consumption of Non-renewable Resources

Consumption of non-renewable resources includes conversion of agricultural lands, loss of access to mining reserves, and use of non-renewable energy sources. As described in Section 4.19.2, *Agriculture and Forestry Resources*, the Plan Area does not include land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; agricultural designations; area subject to an agricultural preserve or a Williamson Act Contract; or area designated for timber harvest uses. Therefore, adoption of the Proposed Project would not result in conversion of farmland, on-site or off-site, to a non-agricultural use, nor would it result in conversion of forest land to non-forest land.

As discussed in Section 4.19.3, *Mineral Resources*, the Plan Area is classified by the California Department of Conservation's (DOC's) Division of Mines and Geology as Mineral Resource Zone 1 (MRZ-1), or an area where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. Therefore, adoption of the Proposed Project would not result in the loss of availability of a known mineral resource and would not result in the loss of a locally important mineral resource recovery site.

In an urban context where there are no agricultural or forest lands or minerals and mines, consumption of nonrenewable resources involves the use of nonrenewable building materials and energy sources, including fossil fuels, natural gas, and electricity. Future development under the Proposed Project would use building materials for construction of buildings and infrastructure and would use energy resources for construction, transportation, building heating and lighting, food preparation, and other activities. As described in Section 4.5, *Energy*, energy use associated with the construction and operation of development under the Proposed Project would not be considered unnecessary and wasteful and would be consistent with all applicable plans, policies, and regulations developed to encourage energy conservation and renewable energy use. Compliance with all applicable building codes, as well as City of Oakland SCAs, would limit consumption of nonrenewable energy; therefore, consumption of nonrenewable energy resources would be less than significant.

6.3 Growth-Inducing Impacts

This section addresses the ways that future development under the Proposed Project "could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment" (Section 15126.2(d) of the *CEQA Guidelines*). This section summarizes topics and impacts also addressed in Section 4.12, *Population and Housing*, which provides the context for evaluating growth-inducing impacts.

Under CEQA, a project is generally considered to be growth-inducing if it were to result in any one of the following:

1. Extension of urban services or infrastructure into a previously unserved area;
2. Extension of a transportation corridor into an area that may be subsequently developed; or
3. Removal of obstacles to population growth (such as provision of major new public services to an area where those services are not currently available).

A project can have direct and/or indirect growth-inducement potential. Direct growth inducement could result if a project involved construction of new housing. A project can have indirect growth-inducement potential if it would establish substantial new permanent employment opportunities (e.g., commercial, industrial or governmental enterprises) or if it would involve a substantial construction effort with substantial short-term employment opportunities and indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, under CEQA, a project would indirectly induce growth if it were to expand roadway capacity or remove an obstacle to additional growth and development, such as removing a constraint on a required public service or utilities (e.g., by adding a sewage treatment plant that has capacity to serve demand beyond the associated project).

As described in Chapter 3, *Project Description*, the Proposed Project is a planning document that identifies opportunities to improve and expand the City's housing stock; it does not, however, result in the actual construction or revitalization of housing units in the City. For the purposes of environmental review, the *Buildout Program* analyzed in this Draft EIR includes approximately 41,458 residential units, 100,411 new residents, and 18,851 new jobs that would be added to the City of Oakland between 2022 and 2030.

As discussed in Sections 4.12, *Public Services* and 4.13*, Recreation*, the Plan Area is an already-developed urban area served by City fire, police, school, and park services. Therefore, future development under the Proposed Project would not require the extension of urban services into a previously unserved area. Additionally, as described in Sections 4.15, *Transportation and Circulation* and 4.17, *Utilities and Service Systems*, the Plan Area is well-served by existing regional and local transportation and transit systems and other infrastructure and utilities, including water, sewer, and stormwater. Adoption of the Proposed Project would not result in an extension of transportation corridors into undeveloped areas resulting in growth-inducing impacts. Although future development may involve the installation of new utility infrastructure to connect to existing utility lines, extension of these facilities would not indirectly induce substantial population growth, because any required infrastructure improvements would primarily

occur in existing right of ways, would be limited in extent, and would not likely facilitate the development or redevelopment of other surrounding areas. Future development under the Proposed Project would focus on redevelopment and revitalization of areas already served by infrastructure and would not require extensions of roads or other infrastructure.

As discussed in Section 4.12, *Population and Housing*, construction of future development under the Proposed Project would directly, but temporarily, increase construction employment and could also stimulate production of associated products and services, which could also result in indirect and temporary jobs growth. However, the majority of construction workers are anticipated to originate from the local and regional labor pool and would not relocate within the City. Due to the size of construction and its temporary nature, the potential for direct and in-direct population growth from construction of future projects would be less than significant.

As also described in Impact POP-1, anticipated growth under the Proposed Project is consistent with *Plan Bay Area 2040* and would not constitute substantial unplanned population growth within the City. Rather, growth facilitated by the Proposed Project would be accommodative of projected growth rather than inducing new growth.

6.4 Cumulative Impacts

The approach used in this Draft EIR for cumulative impact analysis is described in the introduction to Chapter 4 (Section 4.0). The analysis of each environmental topic included in Chapter 4 evaluates possible cumulative impacts considering regional development in combination with development under the Proposed Project. As noted above, under Section 6.1, *Significant and Unavoidable Environmental Impacts*, construction and operation of future development under the Proposed Project, in combination with development in the surrounding area, would not result in significant and unavoidable impacts under cumulative conditions.

6.5 Effects Found Not to Be Significant

As required by CEQA, this Draft EIR focuses on expected significant environmental effects (CEQA *Guidelines* Section 15143). In accordance with Section 15128 of the CEQA *Guidelines*, an EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. Effects found not to be significant are specifically discussed under each applicable environmental topic section in Chapter 4 and in Section 4.19.

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CHAPTER 7
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